P-Bibliography

July 14, 2010

References

[1] P. A. Abdulla, G. Delzanno, and L. Begin. On the qualitative analysis of conformon P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 78–94, 2009.

[2] O. Agrigoroaiei and G. Ciobanu. Dual P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 95–107, 2009.

[3] J. Aguado, T. Balanescu, T. Cowling, M. Gheorghe, M. Holcombe, and F. Ipate. P systems with replicated rewriting and stream X-Machines (Eilenberg, machines). *Fundamenta Informaticae*, 49(1-3):17–33, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[4] J. Aguado, T. Balanescu, T. Cowling, M. Gheorghe, and F. Ipate. P systems with replicated rewriting and stream X-Machines. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[5] J. Aguado, T. Balanescu, T. Cowling, M. Gheorghe, and F. Ipate. P systems with replicated rewriting and stream X-Machines. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[6] S. Aguzzoli, I. Ardelean, D. Besozzi, B. Gerla, and C. Manara. P systems under uncertainty: the case of transmembrane proteins. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[7] S. Aguzzoli, D. Besozzi, B. Gerla, and C. Manara. P systems with vague boundaries: the t-norm approach. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[8] M. Alfonseca, C. C. Marroquin, M. D. L. C. Echeandia, R. Nunez-Hervas, and A. O. de la Puente. Multithread java P systems running on a cluster of computers. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 94–101, 2005.

[9] G. Alford. Membrane systems with heat control. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[10] A. Alhazov. Generating classes of languages by P systems and other devices. In M. Cavaliere, C. Martín-Vide, and Gh. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 18–22, Tarragona, February 5-11 2003.

[11] A. Alhazov. Minimizing evolution-communication P systems and EC P automata. In M. Cavaliere, C. Martín-Vide, and Gh. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 23–31, Tarragona, Spain, February 5-11 2003.

[12] A. Alhazov. Minimizing evolution-communication P systems and automata. *New Generation Computing*, 22(4):299–310, August 2004.

[13] A. Alhazov. A note on P systems with activators. In Gh. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing Sevilla, Spain, February 2-7 2004*, pages 16–19, Sevilla, Spain, February 2-7 2004.

[14] A. Alhazov. On determinism of evolution-communication P systems. *Journal of Universal Computer Science*, 10(5):502–508, May 2004.

[15] A. Alhazov. On the power of deterministic EC P Systems. In Gh. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing Sevilla, Spain, February 2-7 2004*, pages 11–15, Sevilla, Spain, February 2-7 2004.

[16] A. Alhazov. Maximally parallel multiset-rewriting systems: Browsing the configurations. In M.-A. Gutiérrez-Naranjo, A. Riscos-Núñez, F.-J. Romero-Campero, and D. Sburlan, editors, *Proceedings of the Third Brainstorming Week on Membrane Computing*, pages 1–10, Sevilla, Spain, 2005. Fénix Editora.

[17] A. Alhazov. Number of proton/bi-stable catalysts and membrane in P systems. Time freeness. In R. Freund, G. Lojka, M. Oswald, and Gh. Păun, editors, *Pre-Proc. of the Sixth Workshop on Membrane Computing*, pages 102–122, Vienna, Austria, 2005.

[18] A. Alhazov. Solving SAT by symport/antiport P systems with membrane division. In M.-A. Gutiérrez-Naranjo, Gh. Păun, and M. J. Pérez-Jiménez, editors, *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects)*, pages 1–6, Sevilla, Spain, 2005. Fénix Editora.

[19] A. Alhazov. *Communication in Membrane Systems with Symbol Objects*. PhD thesis, University of Sevilla, Spain, Sevilla, Spain, 2006.

[20] A. Alhazov. Minimal parallelism and number of membrane polarizations. In H.-J. Hoogeboom, Gh. Păun, and G. Rozenberg, editors, *Preproceedings of Membrane Computing, International Workshop, WMC7*, pages 74–87, Leiden, The Netherlands, 2006.

[21] A. Alhazov. Number of proton/bi-stable catalysts and membrane in P systems. Time freeness. In R. Freund, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 6th International Workshop, WMC 2005, Vienna, Austria, July 18-21, 2005, Revised Selected and Invited Papers*, volume 3850 of *Lecture Notes in Computer Science*, pages 79–95. Springer, 2006.

[22] A. Alhazov. P systems without multiplicities of symbol-objects. *Information Processing Letters*, 100(3), November 2006.

[23] A. Alhazov. Ciliate operations without context in a membrane computing framework. *Romanian Journal of Information Science and Technology*, 10(4):315–322, 2008.

[24] A. Alhazov, E. Boian, S. Cojocaru, and Yu. Rogozhin. Modelling inflections in Romanian language by P systems with string replication. *Computer Science Journal of Moldova*, 17(2(50)):160–178, 2009.

[25] A. Alhazov, E. Boian, S. Cojocaru, and Yu. Rogozhin. Modelling inflections in Romanian language by P systems with string replication. In Gh. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez, editors, *Preproceedings of the Tenth Workshop on Membrane Computing*, pages 116–128, Curtea de Argeş, Romania, 2009.

[26] A. Alhazov, C. Bonchiş, G. Ciobanu, and C. Izbaşa. Encodings and arithmetic operations in P systems. In M. A. Gutiérrez-Naranjo, Gh. Păun, A. Riscos-Núñez, and F.-J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla January 30 - February 3, 2006. Volume I*, pages 1–28. Fénix Editora, 2006.

[27] A. Alhazov, L. Burtseva, S. Cojocaru, and Yu. Rogozhin. Computing solutions of #P-complete problems by P systems with active membranes. In P. Frisco, D. W. Corne, and Gh. Păun, editors, *Preproceedings of the Ninth Workshop on Membrane Computing*, pages 59–70, Edinburgh, UK, 2008.

[28] A. Alhazov, L. Burtseva, S. Cojocaru, and Yu. Rogozhin. Solving PP-complete and #P-complete problems by P systems with active membranes. In D. W. Corne, P. Frisco, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 108–117. Springer, 2009.

[29] A. Alhazov and M. Cavaliere. Proton pumping P systems. In A. Alhazov, C. Martín-Vide, and Gh. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 1–16, Tarragona, July 17-22 2003.

[30] A. Alhazov and M. Cavaliere. Proton pumping P systems. In C. Martín-Vide, G. Mauri, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 1–18. Springer, July 2004.

[31] A. Alhazov and M. Cavaliere. Evolution-communication P systems: Time-freeness. In *Proceedings of the Third Brainstorming Week on Membrane Computing*, pages 11–18, Sevilla, Spain, 2005. Fénix Editora.

[32] A. Alhazov, C. Ciubotaru, Yu. Rogozhin, and S. Ivanov. The membrane systems language class. In *2009 LA Winter Symposium*, pages 12–1–12–9, Kyoto, Japan, 2010.

[33] A. Alhazov, S. Cojocaru, L. Malahova, and Yu. Rogozhin. Dictionary search and update by P systems with string-objects and active membranes. *International Journal of Computers, Communications and Control*, IV(3):206–213, 2009.

[34] A. Alhazov, S. Cojocaru, L. Malahova, and Yu. Rogozhin. Dictionary search and update by P systems with string-objects and active membranes. In R. Gutiérrez-Escudero, M.-A. Gutiérrez-Naranjo, Gh. Păun, I. Pérez-Hurtado, and A. Riscos-Núñez, editors, *Seventh Brainstorming Week on Membrane Computing*, volume 1, pages 1–8, Sevilla, Spain, February 2-6 2009.

[35] A. Alhazov and M. de Jesús Pérez-Jiménez. Uniform solution to QSAT using polarizationless active membranes. In M. A. Gutiérrez-Naranjo, Gh. Păun, A. Riscos-Núñez, and F.-J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla January 30 - February 3, 2006. Volume I*, pages 29–40. Fénix Editora, 2006.

[36] A. Alhazov and M. de Jesús Pérez-Jiménez. Uniform solution of QSAT using polarizationless active membranes. In J. O. Durand-Lose and M. Margenstern, editors, *Machines, Computations, and Universality, 5th International Conference, MCU 2007, Orléans, France, September 10-13, 2007, Proceedings*, volume 4664 of *Lecture Notes in Computer Science*, pages 122–133. Springer, 2007.

[37] A. Alhazov and R. Freund. On the efficiency of P systems with active membranes and two polarizations. In G. Mauri, Gh. Păun, and C. Zandron, editors, *Pre-proceedings of the Fifth Workshop on Membrane Computing*, pages 81–94, Milano, Italy, June 2004.

[38] A. Alhazov and R. Freund. On the efficiency of P systems with active membranes and two polarizations. In G. Mauri, Gh. Păun, M. J. Pérez-Jiménez, G. Rozenberg, and A. Salomaa, editors, *International Workshop WMC5, Milano, Italy, 2004*, volume 3365 of *Lecture Notes in Computer Science*, pages 146–160. Springer, 2005.

[39] A. Alhazov and R. Freund. P systems with one membrane and symport/antiport rules of five symbols are computationally complete. In *Proceedings of the Third Brainstorming Week on Membrane Computing*, pages 19–28, Sevilla, Spain, 2005. Fénix Editora.

[40] A. Alhazov, R. Freund, A. Leporati, M. Oswald, and C. Zandron. (tissue) P systems with unit rules and energy assigned to membranes. *Fundamenta Informaticae*, 74(4):391–408, December 2006.

[41] A. Alhazov, R. Freund, and K. Morita. Reversibility and determinism in sequential multiset rewriting. In C. S. Calude, M. Hagiya, K. Morita, G. Rozenberg, and J. Timmis, editors, *Unconventional Computation: 9th International Conference, UC 2010, Tokyo, Japan, June 21-25, 2010. Proceedings*, volume 6079 of *Lecture Notes in Computer Science*, pages 21–31. Springer, 2010.

[42] A. Alhazov, R. Freund, and M. Oswald. Symbol / membrane complexity of P systems with symport / antiport rules. In R. Freund, G. Lojka, M. Oswald, and Gh. Păun, editors, *Pre-Proc. of the Sixth Workshop on Membrane Computing*, pages 123–146, Vienna, Austria, 2005.

[43] A. Alhazov, R. Freund, and M. Oswald. Tissue P systems with antiport rules and small numbers of symbols and cells. In C. de Felice and A. Restivo, editors, *Developments in Language Theory, 9th International Conference, DLT 2005, Palermo, Italy, July 4-8, 2005, Proceedings*, volume 3572 of *Lecture Notes in Computer Science*, pages 100–111. Springer, 2005.

[44] A. Alhazov, R. Freund, and M. Oswald. Tissue P systems with antiport rules and small numbers of symbols and cells. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects)*, pages 7–22, Sevilla, Spain, 2005. Fénix Editora.

[45] A. Alhazov, R. Freund, and M. Oswald. Cell/symbol complexity of tissue P systems with symport/antiport rules. *International Journal of Foundations of Computer Science*, 17(1):3–25, February 2006.

[46] A. Alhazov, R. Freund, and M. Oswald. Symbol/membrane complexity of P systems with symport/antiport rules. In R. Freund, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 6th International Workshop, WMC 2005, Vienna, Austria, July 18-21, 2005, Revised Selected and Invited Papers*, volume 3850 of *Lecture Notes in Computer Science*, pages 96–113. Springer, 2006.

[47] A. Alhazov, R. Freund, M. Oswald, and M. Slavkovik. Extended spiking neural P systems. In H.-J. Hoogeboom, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 7th International Workshop, WMC 2006, Leiden, The Netherlands, July 17-21, 2006, Revised, Selected, and Invited Papers*, volume 4361 of *Lecture Notes in Computer Science*, pages 123–134. Springer, 2006.

[48] A. Alhazov, R. Freund, M. Oswald, and M. Slavkovik. Extended spiking neural p systems generating strings and vectors of non-negative integers. In H.-J. Hoogeboom, Gh. Păun, and G. Rozenberg, editors, *Preproceedings of Membrane Computing, International Workshop, WMC7*, pages 88–101, Leiden, The Netherlands, 2006.

[49] A. Alhazov, R. Freund, M. Oswald, and S. Verlan. Partial halting in P systems using membrane rules with permitting contexts. In J. O. Durand-Lose and M. Margenstern, editors, *Machines, Computations, and Universality, 5th International Conference, MCU 2007, Orléans, France, September 10-13, 2007, Proceedings*, volume 4664 of *Lecture Notes in Computer Science*, pages 110–121. Springer, 2007.

[50] A. Alhazov, R. Freund, M. Oswald, and S. Verlan. Partial versus total halting in P systems. In M.-A. Gutiérrez-Naranjo, Gh. Păun, A. Romero-Jiménez, and A. Riscos-Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 1–20, Sevilla (Spain), January 29th - February 2 2007. Fénix Editora.

[51] A. Alhazov, R. Freund, M. Oswald, and S. Verlan. Partial halting and minimal parallelism based on arbitrary rule partitions. *Fundamenta Informaticae*, 91(1):17–34, April 2009.

[52] A. Alhazov, R. Freund, and Gh. Păun. P systems with active membranes and two polarizations. In Gh. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing Sevilla, Spain, February 2-7 2004*, pages 20–36, Sevilla, Spain, February 2-7 2004.

[53] A. Alhazov, R. Freund, and Gh. Păun. Computational completeness of P systems with active membranes and two polarizations. In M. Margenstern, editor, *Machines, Computations, and Universality: 4th International Conference, MCU2004, Saint Petersburg, Russia, September 21-24, 2004, Revised Selected Papers*, volume 3354 of *Lecture Notes in Computer Science*, pages 178–189. Springer, 2005.

[54] A. Alhazov, R. Freund, and A. Riscos-Núñez. One and two polarizations, membrane creation and objects complexity in P systems. In *Seventh International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, SYNASC 05*, pages 385–394. IEEE Computer Society, 2005.

[55] A. Alhazov, R. Freund, and A. Riscos-Núñez. One and two polarizations, membrane creation and objects complexity in P systems. In G. Ciobanu and Gh. Păun, editors, *Pre-Proc. of First International Workshop on Theory and Application of P Systems*, pages 9–18, Timişoara, Romania, 2005.

[56] A. Alhazov, R. Freund, and A. Riscos-Núñez. Membrane division, restricted membrane creation and object complexity in P systems. *International Journal of Computer Mathematics*, 83(7):529–548, 2006.

[57] A. Alhazov, R. Freund, and Yu. Rogozhin. Some optimal results on symport/antiport P systems with minimal cooperation. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects)*, pages 23–36, Sevilla, Spain, 2005. Fénix Editora.

[58] A. Alhazov, R. Freund, and Yu. Rogozhin. Computational power of symport/antiport: History, advances and open problems. In R. Freund, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 6th International Workshop, WMC 2005, Vienna, Austria, July 18-21, 2005, Revised Selected and Invited Papers*, volume 3850 of *Lecture Notes in Computer Science*, pages 1–30. Springer, 2006.

[59] A. Alhazov and Ts.-O. Ishdorj. Membrane operations in P systems with active membranes. In Gh. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing Sevilla, Spain, February 2-7 2004*, pages 37–44, Sevilla, Spain, February 2-7 2004.

[60] A. Alhazov, A. Krassovitskiy, Yu. Rogozhin, and S. Verlan. A note on p systems with small-size insertion and deletion. In Gh. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez, editors, *Preproceedings of the Tenth Workshop on Membrane Computing*, pages 534–537, Curtea de Argeş, Romania, 2009.

[61] A. Alhazov, A. Krassovitskiy, Yurii Rogozhin, and S. Verlan. P systems with minimal insertion and deletion. In R. Gutiérrez-Escudero, M.-A. Gutiérrez-Naranjo, Gh. Păun, I. Pérez-Hurtado, and A. Riscos-Núñez, editors, *Seventh Brainstorming Week on Membrane Computing*, volume 1, pages 9–21, Sevilla, Spain, February 2-6 2009.

[62] A. Alhazov, M. Margenstern, V. Rogozhin, Yu. Rogozhin, and S. Verlan. Communicative P systems with minimal cooperation. In G. Mauri, Gh. Păun, M. J. Pérez-Jiménez, G. Rozenberg, and A. Salomaa, editors, *International Workshop WMC5, Milano, Italy, 2004*, volume 3365 of *Lecture Notes in Computer Science*, pages 146–160. Springer, 2005.

[63] A. Alhazov, M. Margenstern, and S. Verlan. Fast synchronization in P systems. In P. Frisco, D. W. Corne, and Gh. Păun, editors, *Preproceedings of the Ninth Workshop on Membrane Computing*, pages 71–84, Edinburgh, UK, 2008.

[64] A. Alhazov, M. Margenstern, and S. Verlan. Fast synchronization in P systems. In D. W. Corne, P. Frisco, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 118–128. Springer, 2009.

[65] A. Alhazov, C. Martín-Vide, and L. Pan. Solving a PSPACE-complete problem by recognizing P systems with restricted active membranes. *Fundamenta Informaticae*, 58(2):67–77, 2003.

[66] A. Alhazov, C. Martín-Vide, and L. Pan. *Solving Graph Problems by P Systems with Restricted Elementary Active Membranes*, volume 2950 of *Lecture Notes in Computer Science*, pages 1–22. Springer, 2004.

[67] A. Alhazov, C. Martín-Vide, and Gh. Păun, editors. *Preproceedings of the Workshop on Membrane Computing Tarragona, July 17-22 2003*, 2003.

[68] A. Alhazov and K. Morita. On reversibility and determinism in P systems. In Gh. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez, editors, *Preproceedings of the Tenth Workshop on Membrane Computing*, pages 129–140, Curtea de Argeş, Romania, 2009.

[69] A. Alhazov and K. Morita. A short note on reversibility in P systems. In R. Gutiérrez-Escudero, M.-A. Gutiérrez-Naranjo, Gh. Păun, I. Pérez-Hurtado, and A. Riscos-Núñez, editors, *Seventh Brainstorming Week on Membrane Computing*, volume 1, pages 23–28, Sevilla, Spain, February 2-6 2009.

[70] A. Alhazov and K. Morita. On reversibility and determinism in P systems. In Gh. Păun, M. J. Pérez-Jiménez, A. Riscos-Núñez, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 10th International Workshop, WMC 2009, Curtea de Argeş, Romania, August 24-27, 2009. Revised Selected and Invited Papers*, volume 5957 of *Lecture Notes in Computer Science*, pages 158–168. Springer, 2010.

[71] A. Alhazov and L. Pan. Polarizationless P systems with active membranes. *Grammars*, 7:141–159, 2004.

[72] A. Alhazov, L. Pan, and Gh. Păun. Trading polarizations for labels in P systems with active membranes. *Acta Informatica*, 41(2-3):111–144, December 2004.

[73] A. Alhazov and Yu. Rogozhin. Minimal cooperation in symport/antiport P systems with one membrane. In *Proceedings of the Third Brainstorming Week on Membrane Computing*, pages 29–34, Sevilla, Spain, 2005. Fénix Editora.

[74] A. Alhazov and Yu. Rogozhin. Generating languages by P systems with minimal symport/antiport. *The Computer Science Journal of Moldova*, 14(3):299–323, 2006.

[75] A. Alhazov and Yu. Rogozhin. Towards a characterization of P systems with minimal symport/antiport and two membranes. In H.-J. Hoogeboom, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 7th International Workshop, WMC 2006, Leiden, The Netherlands, July 17-21, 2006, Revised, Selected, and Invited Papers*, volume 4361 of *Lecture Notes in Computer Science*, pages 135–153. Springer, 2006.

[76] A. Alhazov and Yu. Rogozhin. Towards a characterization of P systems with minimal symport/antiport and two membranes. In H.-J. Hoogeboom, Gh. Păun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 102–118, Leiden, The Netherlands, 2006.

[77] A. Alhazov and Yu. Rogozhin. Skin output in P systems with minimal symport/antiport and two membranes. In G. Eleftherakis, P. Kefalas, Gh. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, 8th International Workshop, WMC 2007, Thessaloniki, Greece, June 25-28, 2007 Revised Selected and Invited Papers*, volume 4860 of *Lecture Notes in Computer Science*, pages 97–112. Springer, 2007.

[78] A. Alhazov and Yu. Rogozhin. Skin output in P systems with minimal symport/antiport and two membranes. In G. Eleftherakis, P. Kefalas, and Gh. Păun, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 99–110, Thessaloniki, Greece, 2007.

[79] A. Alhazov, Yu. Rogozhin, and S. Verlan. Symport/antiport tissue P systems with minimal cooperation. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects)*, pages 37–52, Sevilla, Spain, 2005. Fénix Editora.

[80] A. Alhazov, Yu. Rogozhin, and S. Verlan. Minimal cooperation in symport/antiport tissue P systems. *International Journal of Foundations of Computer Science*, 18(1):163–180, February 2007.

[81] A. Alhazov and D. Sburlan. Static sorting algorithms for P systems. In A. Alhazov, C. Martín-Vide, and Gh. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 17–40, Tarragona, July 17-22 2003.

[82] A. Alhazov and D. Sburlan. (Ultimately confluent) parallel multiset-rewriting systems with context. In Gh. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing Sevilla, Spain, February 2-7 2004*, pages 45–52, Sevilla, Spain, February 2-7 2004.

[83] A. Alhazov and D. Sburlan. (Ultimately confluent) parallel multiset-rewriting systems with permitting context. In G. Mauri, Gh. Păun, and

C. Zandron, editors, *Pre-proceedings of the Fifth Workshop on Membrane Computing*, pages 95–103, Milano, Italy, June 2004.

[84] A. Alhazov and D. Sburlan. *Static Sorting P Systems*, pages 215–252. Springer-Verlag, 2005.

[85] A. Alhazov and D. Sburlan. Ultimately confluent rewriting systems. Parallel multiset-rewriting with permitting or forbidding contexts. In G. Mauri, Gh. Păun, M. J. Pérez-Jiménez, G. Rozenberg, and A. Salomaa, editors, *International Workshop WMC5, Milano, Italy, 2004*, volume 3365 of *Lecture Notes in Computer Science*, pages 178–189. Springer, 2005.

[86] A. Alhazov and S. Verlan. Sevilla carpets of deterministic non-cooperative P systems. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects)*, pages 53–60, Sevilla, Spain, 2005. Fénix Editora.

[87] A. Alhazov and S. Verlan. Minimization strategies for maximally parallel multiset rewriting systems. Technical Report 862, Turku Centre for Computer Science, 2008.

[88] S. Alonso, F. A. Luis Fernández, and J. Gil. Main modules design for a HW implementation of massive parallelism in transition P systems. In M. Sugisaka and H. Tanaka, editors, *13th International Symposium on Artificial Life and Robotics*, pages 500–504, 2008.

[89] B. Aman and G. Ciobanu. Translating mobile ambients into p systems. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[90] B. Aman and G. Ciobanu. On the reachability problem in P systems with mobile membranes. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 111–123, Thessaloniki, Greece, 2007.

[91] B. Aman and G. Ciobanu. Membrane systems with surface objects. In E. Csuhaj-Varjú, R. Freund, M. Oswald, and K. Salomaa, editors, *International Workshop on Computing with Biomolecules*, pages 17–28, 2008.

[92] B. Aman and G. Ciobanu. Resource competition and synchronization in membranes. In T. Jebelean, V. Negru, D. Petcu, and D. Zaharie, editors, *Proceedings of the 10th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing*, 2008.

[93] O. Andrei, G. Ciobanu, and D. Lucanu. Rewriting P systems in maude. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 104–118, Milano, Italy, June 2004.

[94] O. Andrei, G. Ciobanu, and D. Lucanu. Operational semantics and rewriting logic in membrane computing. In *Proceedings SOS Workshop (to appear in ENTCS)*, 2005.

[95] O. Andrei, G. Ciobanu, and D. Lucanu. Expressing control mechanisms in p systems by rewriting strategies. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 119–131, Leiden, The Netherlands, 2006.

[96] O. Andrei, G. Ciobanu, and D. Lucanu. Strategies in membrane computing. In *BWMC4*, Sevilla, 2006.

[97] O. Andrei, G. Ciobanu, and D. Lucanu. A rewriting logic framework for operational semantics of membrane systems. *Theoretical Computer Science*, 373(3):163–181, 2007.

[98] S. Annadurai, T. Kalyani, V. R. Dare, and D. G. Thomas. P systems generating iso-picture languages. *Progress in Natural Science*, 18(5):617–622, 2008.

[99] S. Annadurai, T. Kalyani, V. R. Dare, and D. G. Thomas. Trajectory P systems. *Progress in Natural Science*, 18(5):611–616, 2008.

[100] I. Antoniou, C. Calude, and M. J. Dinneen, editors. *Unconventional Models of Computation, UMC'2K, Proceedings of the Second International Conference, Brussel, Belgium, 13-16 December 2000*. Springer, 2001.

[101] A. Apostolos. Generalized fuzzy multisets and P systems. Submitted, 2005.

[102] I. Ardelean. Could p systems model energy-sensing behavior in bacteria? In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 19–26, 2005.

[103] I. Ardelean. Biological roots and applications of p systems. further suggestions. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 1–7, Leiden, The Netherlands, 2006.

[104] I. Ardelean, M. Cavaliere, and D. Sburlan. Computing using signals: from cells to p systems. *Soft Computing*, 9(9):631–639, September 2005.

[105] I. Ardelean, M. Ignat, and C. Moisescu. Magnetotactic bacteria and their significance for p systems and nanoactuators. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 21–32, Sevilla (Spain), January 29th - February 2 2007.

[106] I. I. Ardelean. The relevance of cell membranes for P systems. General aspects. *Fundamenta Informaticae*, 49(1-3):35–43, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[107] I. I. Ardelean. The relevance of microbiology for P systems. a discussion of some concepts used in microbiology and P Systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[108] I. I. Ardelean. Molecular biology of bacteria and its relevance for P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 1–18, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[109] I. I. Ardelean and D. Besozzi. Mechanosensitive channels, a hot topic in (micro)biology: any excitement for P systems? Technical Report 26, Rovira i Virgili University, 2003.

[110] I. I. Ardelean and D. Besozzi. Mechanosensitive channels, a hot topic in (micro)Biology: any excitement for P systems? In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 32–36, Tarragona, February 5-11 2003.

[111] I. I. Ardelean and D. Besozzi. New proposals for the formalization of membrane proteins. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[112] I. I. Ardelean and D. Besozzi. New proposals for the formalization of membrane proteins. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 53–59, Sevilla, Spain, February 2-7 2004.

[113] I. I. Ardelean and D. Besozzi. On modelling ion fluxes across biological membranes with P systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 35–42, 2005.

[114] I. I. Ardelean and D. Besozzi. Some notes on the interplay between P systems and chemotaxis in bacteria. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 41–48. Fénix Editora, 2006.

[115] I. I. Ardelean, D. Besozzi, M. Garzon, G. Mauri, and S. Roy. *P System Models for Mechanosensitive Channels*, pages 43–80. Springer-Verlag, 2005.

[116] I. I. Ardelean, D. Besozzi, and C. Manara. Aerobic respiration is a biologic circuit containing molecular logic gates. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 119–125, Milano, Italy, June 2004.

[117] I. I. Ardelean and M. Cavaliere. Modelling biological processes by using a probabilistic P system software. *Natural Computing*, 2(2):173–197, July 2003.

[118] I. I. Ardelean and M. Cavaliere. Playing with a probabilistic P system simulator: Mathematical and biological problems. Technical Report 26, Rovira i Virgili University, 2003.

[119] I. I. Ardelean and M. Cavaliere. Playing with a probabilistic P system simulator: Mathematical and biological problems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 37–45, Tarragona, February 5-11 2003.

[120] I. I. Ardelean, M. Cavaliere, and D. Sburlan. Computing using signals: From cells to P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[121] I. I. Ardelean, M. Cavaliere, and D. Sburlan. Computing using signals: From cells to P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 60–73, Sevilla, Spain, February 2-7 2004.

[122] F. Arroyo, A. Baranda, J. Castellanos, and G. Păun. Membrane computing: The power of (rule) creation. *Journal of Universal Computer Science*, 8(3):369–381, 2002.

[123] F. Arroyo, A. V. Baranda, J. Castellanos, C. Luengo, and L. F. Mingo. A recursive algorithm for describing evolution in transition P systems. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[124] F. Arroyo, A. V. Baranda, J. Castellanos, C. Luengo, and L. F. Mingo. A recursive algorithm for describing evolution in transition P systems. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[125] F. Arroyo, A. V. Baranda, J. Castellanos, C. Luengo, and L. F. Mingo. Structures and bio-language to simulate transition P systems on digital computers. In C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Multiset Processing: Mathematical, Computer Science, and Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, pages 1–16. Springer-Verlag, 2001.

[126] F. Arroyo, J. Castellanos, L. Fernandez, V. Martinez, and L. Mingo. Software tools/ p system simulators interoperability. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 147–161, 2005.

[127] F. Arroyo, J. Castellanos, C. Luengo, and L. F. Mingo. A binary data structure for membrane processors: Connectivity arrays. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 19–30. Springer, July 2003.

[128] F. Arroyo, C. Luengo, A. V. Baranda, and L. de Mingo. A software simulation of transition P systems in Haskell. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[129] F. Arroyo, C. Luengo, A. V. Baranda, and L. F. de Mingo. A software simulation of transition P systems in Haskell. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 19–32, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[130] F. Arroyo, C. Luengo, J. Castellanos, and L. de Mingo. A binary data structure for membrane processors: Connectivity arrays. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 41–52., Tarragona, July 17-22 2003.

[131] F. Arroyo, C. Luengo, J. Castellanos, and L. de Mingo. Representing multisets and evolution rules in membrane processors. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 126–137, Milano, Italy, June 2004.

[132] F. Arroyo, C. Luengo, L. Fernandez, L. F. de Mingo, and J. Castellanos. Simulating membrane systems in digital computers. *International Journal "Information Theories & Applications"*, 11(1):29–34, 2004.

[133] F. Arroyo-Montoro. *Structures and Biolanguage to Simulate Membrane Computing*. PhD thesis, Departamento de Inteligencia Artificial. Facultad de Informática. Universidad Politécnica de Madrid, Madrid, Spain, June 2004.

[134] J. J. Arulanandham. Implementing bead-sort with P systems. In C. Calude, M. J. Dinneen, and F. Peper, editors, *Unconventional Models of Computation: Third International Conference, UMC 2002, Kobe, Japan, October 15-19, 2002. Proceedings*, volume 2509 of *Lecture Notes In Computer Science*, pages 115–125, London, UK, October 15–19 2002. Springer-Verlag Heidelberg.

[135] A. Atanasiu. Authentication of messages using P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[136] A. Atanasiu. Authentication of messages using P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 33–42, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[137] A. Atanasiu and C. Martín-Vide. P systems and context-free languages. Technical Report 14/00, Rovira i Virgili University, Tarragona, Spain, 2000. Technical Report 14/00 of Research Group on Mathematical Linguistics.

[138] A. Atanasiu and C. Martín-Vide. Arithmetic with membranes. *Romanian Journal of Information Science and Technology*, 4(1-2):5–20, 2001.

[139] A. Atanasiu and C. Martín-Vide. Recursive calculus with membranes. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[140] A. Atanasiu and C. Martín-Vide. Recursive calculus with membranes. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[141] A. Atanasiu and C. Martín-Vide. Recursive calculus with membranes. *Fundamenta Informaticae*, 49(1-3):45–59, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[142] J. Auld, L. Bianco, G. Ciobanu, M. Gheorghe, D. Pescini, and F. Remero-Campero. The use of p systems for the study of colonies. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 15–20, Leiden, The Netherlands, 2006.

[143] T. Balanescu, M. Gheorghe, M. Holcombe, and F. Ipate. A variant of EP systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[144] T. Balanescu, M. Gheorghe, M. Holcombe, and F. Ipate. Eilenberg P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 43–57, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[145] D. Balbotin-Noval, M. J. P. Jiménez, and F. S. Caparrini. A MzScheme implementation of transition P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 58–73, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[146] D. Balbotin-Noval, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. A MzScheme implementation of transition P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[147] A. V. Baranda, J. Castellanos, F. Arroyo, and R. Gonzalo. Towards an electronic implementation of membrane computing: A formal description of nondeterministic evolution in transition P systems. In N. Jonoska and N. Seeman, editors, *Proc. 7th Intern. Meeting on DNA Based Computers*, pages 273–282, Tampa, Florida, USA, 2001.

[148] A. V. Baranda, J. Castellanos, F. Arroyo, and C. Luengo. Bio-language for computing with membranes. In J. Kelemen and P. Sosik, editors, *Advances in Artificial Life : 6th European Conference, ECAL 2001, Prague, Czech Republic, September 10-14, 2001, Proceedings.*, volume 2159 of *LNAI*, pages 176–185, Praga, September 2001. Springer-Verlag.

[149] A. V. Baranda, J. Castellanos, R. Gonzalo, F. Arroyo, and L.-F. Mingo. Data structures for implementing transition P systems in silico. *Romanian Journal of Information Science and Technology*, 4(1-2):21–32, 2001.

[150] N. Barbacari, A. Profir, and C. Zelinschi. Gene regulatory network modelling by means of membrane systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 162–178, 2005.

[151] R. Barbuti, G. Caravagna, A. Maggiolo-Schettini, P. Milazzo, and G. Pardini. The calculus of looping sequences. In M. Bernardo, P. Degano, and G. Zavattaro, editors, *Formal Methods for Computational Systems Biology*, volume 5016 of *Lecture Notes in Computer Science*, pages 387–423, 2008.

[152] R. Barbuti, A. Maggiolo-Schettini, P. Milazzo, and L. Tesei. Timed P automata. In G. Ciobanu, editor, *Second International Meeting on*

Membrane Computing and Biologically Inspired Process Calculi, pages 53–67, 2008.

[153] R. Barbuti, A. Maggiolo-Schettini, P. Milazzo, and S. Tini. Compositional semantics and behavioral equivalences for P systems. *Theoretical Computer Science*, 395(1):77–100, 2008.

[154] R. Barbuti, A. Maggiolo-Schettini, P. Milazzo, and S. Tini. A P systems flat form preserving step-by-step behaviour. *Fundamenta Informaticae*, 87(1):1–34, 2008.

[155] R. Barbuti, A. Maggiolo-Schettini, P. Milazzo, and A. Troina. The calculus of looping sequences for modeling biological membranes. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 57–80, Thessaloniki, Greece, 2007.

[156] R. Barbuti, A. Maggiolo-Schettini, P. Milazzo, and A. Troina. Bisimulations in calculi modelling membranes. *Formal Aspects of Computing*, 20(4-5):351–377, 2008.

[157] J. Bartosik. Heaps of pieces and paun's systems. In *Proceedings of the Second Conference on Tools and Methods of Data Transformation*. WSU Kielce, 2004.

[158] J. Bartosik. Paun's systems in modeling of human resource management. In *Proceedings of the Second Conference on Tools and Methods of Data Transformation*. WSU Kielce, 2004.

[159] J. Bartosik. Membrany dynamicsne w modelowaniu systemow ekonomicznych. In *Conf. Bad. Oper. i Syst.*, 2006.

[160] J. Bartosik and W. Korczynski. Systemy membranowe jako modele hierarchicznych struktur zarzadzania. In *Mat. Pokonferencyjne Ekonomia, Informatyka, Zarzadzanie. Teoria i Praktyka*. Wydzial Zarzadzania AGH, Tom II, AGH, 2002.

[161] G. Bel-Enguix. P systems, a preliminary application to linguistics. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[162] G. Bel-Enguix. Preliminaries about some possible applications of P systems in linguistics. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 74–89, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[163] G. Bel-Enguix. Analyzing P systems structure: Working, predictions, and some linguistic suggestions. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 138–150, Milano, Italy, June 2004.

[164] G. Bel-Enguix, M. Cavaliere, R. Ceterchi, R. Gramatovici, and C. Martín-Vide. An application of dynamic P systems: Generating context-free languages. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 90–106, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[165] G. Bel-Enguix, M. Cavaliere, R. Ceterchi, and C. Martín-Vide. Generating context-free languages with dynamic P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[166] G. Bel-Enguix and R. Gramatovici. Active P automata and natural language processing. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 61–71, Tarragona, July 17-22 2003.

[167] G. Bel-Enguix and R. Gramatovici. Parsing with active P automata. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 31–42. Springer, July 2003.

[168] G. Bel-Enguix and M. D. Jiménez-López. Dynamic meaning membrane systems. Submitted.

[169] G. Bel-Enguix and M. D. Jiménez-López. Membrane systems for conversation modeling. Submitted. Gemma Bel-Enguix, Introducing Parallelism in Conversation Modeling with Membrane Systems (submitted).

[170] G. Bel-Enguix and M.-D. Jiménez-López. Explaining language change with membranes. In *Pre-Proceedings of Workshop on Grammar Systems, Computer and Automation Research Institute (SZTAKI) of the Hungarian Academy of Sciences (MTA)*, pages 31–46, Budapest, July 5-9 2004.

[171] G. Bel-Enguix and M. D. Jiménez-López. Linguistic membrane systems and applications. Submitted, 2004. Gemma Bel-Enguix and M. Dolores Jiménez-López, Linguistic membrane systems and applications, in G. Ciobanu and Gh. Păun and M.J. Pérez-Jiménez (eds.) Applications of Membrane Computing, Berlin, Springer-Verlag (in press).

[172] L. Bernardinello, N. Bonzanni, M. Mascheroni, and L. Pomello. Modeling symport/antiport P systems with a class of hierarchical petri nets.

In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 123–138, Thessaloniki, Greece, 2007.

[173] F. Bernardini. *Membrane Systems for Molecular Computing and Biological Modelling*. PhD thesis, University of Sheffield, Sheffield, UK, 2005.

[174] F. Bernardini and R. Freund. Tissue p systems with communication modes. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Preproceedings of Membrane Computing, International Workshop, WMC7*, pages 132–144, Leiden, The Netherlands, 2006.

[175] F. Bernardini and M. Gheorghe. Language generating by means of P systems with active membranes. Technical Report 26, Rovira i Virgili University, 2003.

[176] F. Bernardini and M. Gheorghe. Language generating by means of P systems with active membranes. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 46–60, Tarragona, February 5-11 2003.

[177] F. Bernardini and M. Gheorghe. Molecular/Cellular X Machines. In *EMCC Workshop*, Vienna, November 2003.

[178] F. Bernardini and M. Gheorghe. On the power of minimal symport/antiport. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 72–83, Tarragona, July 17-22 2003.

[179] F. Bernardini and M. Gheorghe. Cell communication in tissue P systems and cell division in population P Systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[180] F. Bernardini and M. Gheorghe. Cell communication in tissue P systems and cell division in population P Systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 74–91, Sevilla, Spain, February 2-7 2004.

[181] F. Bernardini and M. Gheorghe. Computing at population level in P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 151–153, Milano, Italy, June 2004.

[182] F. Bernardini and M. Gheorghe. Languages generated by P systems with active membranes. *New Generation Computing*, 22(4):311–329, August 2004.

[183] F. Bernardini and M. Gheorghe. Population P systems. *Journal of Universal Computer Science*, 10(5):509–539, May 2004.

[184] F. Bernardini and M. Gheorghe. Cell communication in tissue p systems: universality results. *Soft Computing*, 9(9):640–649, September 2005.

[185] F. Bernardini, M. Gheorghe, and M. Holcombe. PX systems = P systems + X machines. *Natural Computing*, 2(3):201–213, August 2003.

[186] F. Bernardini, M. Gheorghe, and M. Holcombe. *Eilenberg P systems with Symbol-Objects*, volume 2950 of *Lecture Notes in Computer Science*, pages 49–60. Springer, 2004.

[187] F. Bernardini, M. Gheorghe, and N. Krasnogor. Quorum sensing p systems. Submitted, 2005.

[188] F. Bernardini, M. Gheorghe, and N. Krasnogor. Population P systems and quorum sensing in bacteria. *Theoretical Computer Science*, 2006. ?

[189] F. Bernardini, M. Gheorghe, N. Krasnogor, and J.-L. Giavitto. On self-assembly in population p systems. UC05, accepted, 2005.

[190] F. Bernardini, M. Gheorghe, N. Krasnogor, and J.-L. Giavitto. On self-assembly in population P systems. In *Unconventional Computation 4th International Conference, UC 2005, Sevilla, Spain, October 3-7, 2005. Proceedings*, volume 3699 of *Lecture Notes in Computer Science*. Springer Berlin / Heidelberg, 2005.

[191] F. Bernardini, M. Gheorghe, N. Krasnogor, R. Muniyandi, M. P. Jimenez, and F. R. Campero. On p systems as a modelling tool for biological systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 193–213, 2005.

[192] F. Bernardini, M. Gheorghe, N. Krasnogor, and G. Păun. Turing machines with cells on the tape. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 61–74, 2005.

[193] F. Bernardini, M. Gheorghe, N. Krasnogor, and G. Terrazas. Membrane computing. current results and future problems, new computational paradigms. In B. L. S. Barry Cooper and L. Torenvliet, editors, *First Conf. on Computability in Europe, CiE2005, Amsterdam*, LNCS 3536, pages 49–53. Springer, 2005.

[194] F. Bernardini, M. Gheorghe, and V. Manca. On P systems and almost periodicity. *Fundamenta Informaticae*, 2005. To appear.

[195] F. Bernardini, M. Gheorghe, M. Margenstern, and S. Verlan. How to synchronize the activity of all components of a P system? In G. Vaszil, editor, *Proceedings of the International Workshop on Automata for Cellular and Molecular Computing*, pages 11–22, 2007.

[196] F. Bernardini, M. Gheorghe, M. Margenstern, and S. Verlan. Networks of cells and petri nets. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 33–62, Sevilla (Spain), January 29th - February 2 2007.

[197] F. Bernardini, M. Gheorghe, M. Margenstern, and S. Verlan. How to synchronize the activity of all components of a P system? *International Journal of Foundations of Computer Science*, 19(5):1183–1198, 2008.

[198] F. Bernardini, M. Gheorghe, F. Romero-Campero, and N. Walkinshaw. A hybrid approach to modelling biological systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 139–164, Thessaloniki, Greece, 2007.

[199] F. Bernardini and V. Manca. P systems with boundary rules. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[200] F. Bernardini and V. Manca. Dynamical aspects of P systems. *BioSystems*, 70(2):85–93, July 2003.

[201] F. Bernardini and V. Manca. P systems with boundary rules. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 107–118, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[202] F. Bernardini and A. Paun. Universality of minimal symport/antiport: Five membranes suffice. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 43–54. Springer, July 2003.

[203] F. Bernardini, F. J. Romero-Campero, M. Gheorghe, M. J. Perez-Jimenez, M. Margenstern, S. Verlan, and N. Krasnogor. On p systems with bounded parallelism. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 31–36, 2005.

[204] D. Bertinshaw. Algorithmic learning applications to P Systems. Submitted, 2004.

[205] D. Besozzi. P Systems with gemmation. Master's thesis, Universita' degli Studi di Milano, 2000.

[206] D. Besozzi. *Computational and modelling power of P systems*. PhD thesis, Universita' degli Studi di Milano, Milano, Italy, 2004.

[207] D. Besozzi, I. I. Ardelean, and G. Mauri. The potential of P systems for modelling the activity of mechanosensitive channels. In *EMCC Workshop*, Vienna, November 2003.

[208] D. Besozzi, I. I. Ardelean, and G. Mauri. The potential of P systems for modelling the activity of mechanosensitive channels. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 84–102, Tarragona, July 17-22 2003.

[209] D. Besozzi, N. Busi, G. Franco, R. Freund, and G. Paun. Two universality results for (mem)brane systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 49–62. Fénix Editora, 2006.

[210] D. Besozzi, P. Cazzaniga, D. Pescini, and G. Mauri. Seasonal variance in p system models for metapopulations. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 27–36, Wuhan, China, September 2006.

[211] D. Besozzi, P. Cazzaniga, D. Pescini, and G. Mauri. Seasonal variance in p systems models for metapopulations. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[212] D. Besozzi, P. Cazzaniga, D. Pescini, and G. Mauri. Seasonal variance in P system models for metapopulations. *Progress in Natural Science*, 17(4):392–400, 2007.

[213] D. Besozzi, P. Cazzaniga, D. Pescini, and G. Mauri. Modelling metapopulations with stochastic membrane systems. *Biosystems*, 91(3):499–514, 2008.

[214] D. Besozzi and G. Ciobanu. A P systems description of the sodium-potassium pump. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 154–160, Milano, Italy, June 2004.

[215] D. Besozzi, E. Csuhaj-Varjú, G. Mauri, and C. Zandron. Size and power of extended gemmating p systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 92–101, Sevilla, Spain, February 2-7 2004.

[216] D. Besozzi, E. Csuhaj-Varjú, G. Mauri, and C. Zandron. Size and power of extended gemmating P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[217] D. Besozzi, E. Csuhaj-Varju, G. Mauri, and C. Zandron. On the power and size of extended gemmating p systems. *Soft Computing*, 9(9):650–6, September 2005.

[218] D. Besozzi, C. Ferretti, G. Mauri, and C. Zandron. P systems with deadlock. *BioSystems*, 70(2):95–105, July 2003.

[219] D. Besozzi, C. Ferretti, G. Mauri, and C. Zandron. Parallel rewriting P systems with deadlock. In M. Hagiya and A. Ohuchi, editors, *DNA Computing: 8th International Workshop on DNA-Based Computers, DNA8 Sapporo, Japan, June 10-13, 2002. Revised Papers*, volume 2568 of *Lecture Notes In Computer Science*, pages 302–314. Springer-Verlag Heidelberg, 2003.

[220] D. Besozzi, G. Mauri, G. Păun, and C. Zandron. Gemmating P systems: collapsing hierarchies. *Theoretical Computer Science*, 296(2):253–267, March 2003.

[221] D. Besozzi, G. Mauri, D. Pescini, and C. Zandron. Membrane systems in systems biology. In *9th International Workshop on Discrete Event Systems*, pages 275–280, 2008.

[222] D. Besozzi, G. Mauri, G. Vaszil, and C. Zandron. Collapsing hierarchies of parallel rewriting P systems without target conflicts. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 55–69. Springer, July 2003.

[223] D. Besozzi, G. Mauri, G. Vaszil, and C. Zandron. Collapsing hierarchies of parallel rewriting P systems without target conflicts. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 103–116, Tarragona, July 17-22 2003.

[224] D. Besozzi, G. Mauri, and C. Zandron. Parallel rewritint P systems without target conflicts. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[225] D. Besozzi, G. Mauri, and C. Zandron. Hierarchies of parallel rewriting P systems. Technical Report 26, Rovira i Virgili University, 2003.

[226] D. Besozzi, G. Mauri, and C. Zandron. Hierarchies of parallel rewriting P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 61–74, Tarragona, February 5-11 2003.

[227] D. Besozzi, G. Mauri, and C. Zandron. Parallel rewriting P systems without target conflicts. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 119–133, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[228] D. Besozzi, G. Mauri, and C. Zandron. Hierarchies of parallel rewriting P systems. a survey. *New Generation Computing*, 22(4):331–347, August 2004.

[229] D. Besozzi, G. Mauri, and C. Zandron. *A survey of latest results on P systems with deadlock*, pages 17–46. Kronos Editorial, Sevilla, 2004. To appear.

[230] D. Besozzi and G. Rozenberg. Extended p systems for the analysis of (trans)membrane proteins. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 8–9, Leiden, The Netherlands, 2006.

[231] D. Besozzi and C. Zandron. Dynamical probabilistic P Systems. Submitted, 2004. DNA10 poster?

[232] D. Besozzi, C. Zandron, G. Mauri, and N. Sabadini. P systems with gemmation of mobile membranes. In A. Restivo, S. Ronchi-Della-Rocca, and L. Roversi, editors, *Theoretical Computer Science. 7th Italian Conference, ICTCS 2001, Torino, Italy, October 4-6, 2001. Proceedings.*, volume 2202 of *Lecture Notes in Computer Science*, pages 136–153, Turin, October 2001. Springer-Verlag.

[233] M. Beyreder and R. Freund. Membrane systems using noncooperative rules with unconditional halting. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 129–136, 2009.

[234] L. Bianco. *Membrane Models of Biological Systems.* PhD thesis, Universita' degli Studi di Verona, Italy, Verona, Italy, 2007.

[235] L. Bianco. Psim: A computational platform for metabolic P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 1–20, Thessaloniki, Greece, 2007.

[236] L. Bianco and F. Fontana. Towards an hybrid metablic algorithm. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 145–158, Leiden, The Netherlands, 2006.

[237] L. Bianco, F. Fontana, G. Franco, and V. Manca. P Systems in bio systems. Submitted, 2004. in G. Paun, P systems: Applications and Perspectives, to appear, 2004.

[238] L. Bianco, F. Fontana, and V. Manca. Metabolic algorithm with time-varying reaction maps. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 43–62, 2005.

[239] L. Bianco, F. Fontana, and V. Manca. P systems and the modeling of biochemical oscillations. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 214–225, 2005.

[240] L. Bianco, F. Fontana, and V. Manca. Reaction-driven membrane systems. In *ICNC'05, Changsha, China*, August 2005.

[241] L. Bianco, F. Fontana, and V. Manca. Computation of biochemical dynamics using mp systems. Computational Methods in Systems Biology, International Conference (poster), 2006.

[242] L. Bianco, F. Fontana, and V. Manca. P systems with reaction maps. *International Journal of Foundations of Computer Science*, 17(1):27–48, February 2006.

[243] L. Bianco and V. Manca. Metabolic algorithms and signal transduction dynamical networks. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[244] L. Bianco and V. Manca. Encoding-decoding classes of p systems for the methabolic algorithm. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 226–234, 2005.

[245] L. Bianco and V. Manca. Symbolic generation and representation of complex oscillations. *International Journal of Computer Mathematics*, 83(7):549–568, 2006.

[246] L. Bianco, V. Manca, and S. Zorzan. Symbolic representations of biological oscillations. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 37–44, 2005.

[247] L. Bianco, D. Pescini, P. Siepmann, N. Krasnogor, F. Romero-Campero, and M. Gheorghe. Towards a p systems pseudomonas quorum sensing model. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 159–176, Leiden, The Netherlands, 2006.

[248] A. Binder, R. Freund, G. Lojka, and M. Oswald. Implementation of catalytic P Systems. Submitted, 2004. CIAA 2004, Ninth Intern. Conf. on Implementation and Application of Automata, Kingston, Canada, 2004, 24–33.

[249] A. Binder, R. Freund, G. Lojka, and M. Oswald. Implementation of catalytic P systems. In *Ninth International Conference on Implementation and Application of Automata Queen's University, Kingston, Ontario, Canada, July 22-24, 2004*, pages 24–33, Ontario, Canada, July 22-24 2004.

[250] A. Binder, R. Freund, G. Lojka, and M. Oswald. Applications of membrane systems in distributed systems. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[251] A. Binder, R. Freund, G. Lojka, and M. Oswald. Applications of membrane systems in distributed systems. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 37–50, Wuhan, China, September 2006.

[252] A. Binder, R. Freund, G. Lojka, and M. Oswald. Applications of membrane systems in distributed systems. *Progress in Natural Science*, 17(4):401–409, 2007.

[253] A. Binder, R. Freund, and M. Oswald. Extended spiking neural P systems with astrocytes – Variants for modelling the brain. In M. Sugisaka and H. Tanaka, editors, *13th International Symposium on Artificial Life and Robotics*, pages 520–524, 2008.

[254] A. Binder, R. Freund, M. Oswald, and L. Vock. Extended spiking neural p systems with excitatory and inhibitory astrocytes. In M. Gutiérrez-Naranjo, G. Păaun, A. Romero-Jimenez, and A. Riscos-Nunez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 63–72, Sevilla (Spain), January 29th - February 2 2007.

[255] C. Bonchiş, C. Izbaşa, and G. Ciobanu. Information theory over multisets. *Computing and Informatics*, 27(3+):441–451, 2008.

[256] C. Bonchis, G. Ciobanu, C. Isbasha, and D. Petcu. A web-based p system simulator and its parallelization. UC05, accepted, 2005.

[257] C. Bonchis, G. Ciobanu, C. Izbasa, and D. Petcu. A web-based P systems simulator and its parallelization. In *Unconventional Computation 4th International Conference, UC 2005, Sevilla, Spain, October 3-7, 2005. Proceedings*, volume 3699 of *Lecture Notes in Computer Science*. Springer Berlin / Heidelberg, 2005.

[258] C. Bonchis, C. Isbasa, and G. Ciobanu. Compositional asynchronous membrane systems. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 51–59, Wuhan, China, September 2006.

[259] C. Bonchis, C. Isbasa, and G. Ciobanu. Compositional asynchronous membrane systems. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[260] C. Bonchis, C. Isbasa, D. Petcu, and G. Ciobanu. WebPS: A web-based P system simulator with query facilities. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 63–72, 2005.

[261] C. Bonchis, C. Izbasa, and G. Ciobanu. Compositional asynchronous membrane systems. *Progress in Natural Science*, 17(4):411–416, 2007.

[262] C. Bonchis, C. Izbasa, and G. Ciobanu. Information theory over multisets. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Riscos-Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 73–86, Sevilla (Spain), January 29th - February 2 2007.

[263] C. Bonchis, C. Izbasa, and G. Ciobanu. Information theory over multisets. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 165–172, Thessaloniki, Greece, 2007.

[264] R. Borrego-Ropero, D. Diaz-Pernil, and J. Nepomuceno. Visualtissue: A friendly tool to study tissue p systems solutions for graph problems. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 87–96, Sevilla (Spain), January 29th - February 2 2007.

[265] R. Borrego-Ropero, D. Díaz-Pernil, and M. J. Pérez-Jiménez. Tissue simulator: A graphical tool for tissue P systems. In G. Vaszil, editor, *Proceedings of the International Workshop on Automata for Cellular and Molecular Computing*, pages 23–34, 2007.

[266] P. Bottoni, A. Labella, C. Martín-Vide, and G. Păun. Rewriting P systems with conditional communication. In W. Brauer, H. Ehrig, J. Karhumäki, and A. Salomaa, editors, *Formal and Natural Computing: Essays Dedicated to Grzegorz Rozenberg*, volume 2300 of *Lecture Notes in Computer Science*, pages 325–353, Berlin, 2002. Springer-Verlag.

[267] P. Bottoni, C. Martín-Vide, G. Păun, and G. Rozenberg. Membrane systems with promoters/inhibitors. Submitted, 2000.

[268] P. Bottoni, C. Martín-Vide, G. Păun, and G. Rozenberg. Membrane systems with promoters/inhibitors. *Acta Informatica*, 38(10):695–720, September 2002.

[269] G. Bravo, L. Fernández, and M. A. Pena. Hierarchical master-slave architecture for membrane systems implementation. In M. Sugisaka and H. Tanaka, editors, *13th International Symposium on Artificial Life and Robotics*, pages 485–490, 2008.

[270] R. Brijder. *Models of Natural Computation: Gene Assembly and Membrane Systems*. PhD thesis, Leiden University, Netherlands, 2008.

[271] R. Brijder, M. Cavaliere, A. Riscos-Núñez, G. Rozenberg, and S. Dragoş. Membrane systems with proteins embedded in membranes. *Theoretical Computer Science*, 404(1-2):26–39, 2008.

[272] R. Brijder, M. Cavaliere, A. Riscos-Nunez, G. Rozenberg, and D. Sburlan. Membrane systems with external control. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 177–195, Leiden, The Netherlands, 2006.

[273] R. Brijder, G. Rozenberg, M. Cavaliere, A. Riscos-Nunez, and D. Sburlan. Communication membrane systems with active symports. Submitted, 2005.

[274] N. Busi. On the computational power of the mate/bud/drip brane calculus: Interleaving vs. maximal parallelism. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 235–252, 2005.

[275] N. Busi. Decidability of divergence for catalytic p systems. Submitted, 2006.

[276] N. Busi. Decidability of divergence for catalytic P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 63–80. Fénix Editora, 2006.

[277] N. Busi. Causality in membrane systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 173–184, Thessaloniki, Greece, 2007.

[278] N. Busi. Towards a causal semantics for brane calculi. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 97–112, Sevilla (Spain), January 29th - February 2 2007.

[279] N. Busi. Using well-structured transition systems to decide divergence for catalytic P systems. *Theoretical Computer Science*, 372(2-3):125–135, 2007.

[280] N. Busi and M. Gutiérrez-Naranjo. A case study in (mem)brane computation: Generating $\{n^2 \mid n \geq 1\}$. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 196–212, Leiden, The Netherlands, 2006.

[281] N. Busi and M.-A. Gutiérrez-Naranjo. A case study in (mem)brane computation: Generating $\{n^2 \mid n \geq 1\}$. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 81–98. Fénix Editora, 2006.

[282] N. Busi and C. Zandron. Computing with genetic gates, proteins and membranes. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 213–228, Leiden, The Netherlands, 2006.

[283] N. Busi and C. Zandron. Modeling and analysis of biological processes by mem(brane) calculi and systems. In *Proc. of the 2006 Winter Simulation Conference, Monterey, CA, Usa*, 2006.

[284] M. Buzzi. Calcolo con membrane. P Sistemi probabilistici. Master's thesis, Univ. of Como, 2003.

[285] C. Calude, M. J. Dinneen, and G. Păun, editors. *Pre-Proceedings of Workshop on Multiset Processing, Curtea de Arges, Romania, August 2000*, August 2000.

[286] C. Calude, M. J. Dinneen, and G. Păun, editors. *Technical Report 140, CDMTCS, Univ. Auckland, New Zealand, 2000*, 2000. 320 pages.

[287] C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors. *Multiset Processing. Mathematical, Computer Science, Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, Berlin, 2001. Springer-Verlag. 360 + viii pages.

[288] C. S. Calude and G. Păun. Computing with cells and atoms in a nutshell. *Complexity*, 6(1):38–48, 2000.

[289] C. S. Calude and G. Păun. *Computing with Membranes*, chapter 3. Taylor and Francis, London, 2000.

[290] C. S. Calude and G. Păun. Bio-steps beyond Turing. *BioSystems*, 77(1-3):175–194, November 2004.

[291] C. S. Calude and G. Păun. Computing with cells and atoms: After five years. Technical Report R 246, Univ. of Auckland, 2004. CDMTCS Tech. Rep. R 246.

[292] C. S. Calude, G. Păun, and M. Tatarâm. A glimpse into natural computing. Technical Report 117, CDMTCS University of Auckland, 2000.

[293] C. S. Calude, G. Păun, and M. Tatarâm. A glimpse into natural computing. *Journal of Multi-Valuate Logic*, 7:1–28, 2001.

[294] M. Camara and Q. Sensing. A cell-cell signaling mechanism used to coordinate behavioural changes in bacterial populations. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 10–14, Leiden, The Netherlands, 2006.

[295] L. Cardelli. Abstract machines of systems biology (extended abstract). In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 73–86, 2005.

[296] L. Cardelli and G. Păun. An universality result for a (mem)brane calculus based on mate/drip operations. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 75–94, 2005.

[297] L. Cardelli and G. Paun. An universality result for a (mem)brane calculus based on mate/drip operations. *International Journal of Foundations of Computer Science*, 17(1):49–68, February 2006.

[298] M. Cardona, M. Colomer, M. Perez-Jimenez, and A. Zaragoza. Classifying states of a finite markov chain with membrane computing. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 229–241, Leiden, The Netherlands, 2006.

[299] M. Cardona, M. Colomer, M. Perez-Jimenez, and A. Zaragoza. Hierarchical clustering with membrane computing. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 185–204, Thessaloniki, Greece, 2007.

[300] M. Cardona, M. Colomer, M.-J. Pérez-Jiménez, and A. Zaragoza. Handling markov chains with membrane computing. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 99–112. Fénix Editora, 2006.

[301] M. Cardona, M. A. Colomer, M. Perez-Jimenez, and A. Zaragoza. Handling markov chains with membrane computing. Submitted, 2005.

[302] J. Casasnovas, M. Moya, J. Miro, and F. Rossello. A fuzzy approach to membrane computing with approximate copies. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[303] J. Casasnovas and F. Rossello. Counting the contents of fuzzy membranes... and related problem. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[304] G. Casiraghi, C. Ferretti, A. Gallini, and G. Mauri. A membrane computing system mapped on an asynchronous distributed computational environment. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 253–260, 2005.

[305] J. Castellanos, G. Păun, and A. Rodríguez-Patón. P systems with worm-objects. Technical Report 123, University of Auckland, 2000. www.cs.auckland.ac.nz/CDMTCS.

[306] J. Castellanos, G. Păun, and A. Rodríguez-Patón. P systems with worm-objects. In *Proceedings of the Seventh International Symposium on String Processing Information Retrieval (SPIRE'00)*, pages 64–74, A Coruña, Spain, September 2000. IEEE Computer Society.

[307] A. Castellini, G. Franco, and V. Manca. Hybrid functional Petri nets as MP systems. *Natural Computing*, to appear.

[308] A. Castellini and V. Manca. MetaPlab: A computational framework for metabolic P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 157–168, 2009.

[309] M. Cavaliere. Evolution, communication and observation. from biology to membrane systems and back. Submitted. RNGC Report 03/2004, Sevilla University.

[310] M. Cavaliere. Evolution-communication P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 134–145, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[311] M. Cavaliere. Evolution, communication and observation. from biology to membrane systems and back. Technical Report 03/2004, Sevilla University, 2004. RNGC Report 03/2004.

[312] M. Cavaliere. Modelling biological processes in P systems: Handling imprecision and constructing new models. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[313] M. Cavaliere. Towards asynchronous P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 161–173, Milano, Italy, June 2004.

[314] M. Cavaliere. *Evolution, communication, observation: From biology to membrane computing and back*. PhD thesis, University of Sevilla, Sevilla, Spain, 2006.

[315] M. Cavaliere and I. I. Ardelean. Modelling respiration in bacteria and respiration/photosynthesis interaction in cyanobacteria by using a P System simulator. Submitted, 2004.

[316] M. Cavaliere and V. Deufemia. On time-free P Systems. Submitted, 2004.

[317] M. Cavaliere and V. Deufemia. Further results on time-free P systems. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 95–116, 2005.

[318] M. Cavaliere and V. Deufemia. Specifying dynamic software architectures by using membrane systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 87–106, 2005.

[319] M. Cavaliere and V. Deufemia. Further results on time-free P systems. *International Journal of Foundations of Computer Science*, 17(1):69–89, February 2006.

[320] M. Cavaliere, O. Egecioglu, O. Ibarra, S. Woodworth, M. Ionescu, and G. Paun. Asynchronous spiking neural P systems technical report 9/2007, microsoft research - university of trento, centre for computational and systems biology. Technical Report 9-2007, Microsoft Research University of Trento, 2007.

[321] M. Cavaliere, R. Freund, A. Leitsch, and G. Păun. Event-related outputs of computations in P systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 107–122, 2005.

[322] M. Cavaliere, R. Freund, M. Oswald, and D. Sburlan. Multiset random context grammars, checkers, and transducers. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 113–132. Fénix Editora, 2006.

[323] M. Cavaliere, R. Freund, M. Oswald, and D. Sburlan. Multiset random context grammars, checkers, and transducers. *Theoretical Computer Science*, 372(2-3):136–151, 2007.

[324] M. Cavaliere and D. Genova. P systems with symport/antiport of rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[325] M. Cavaliere and D. Genova. P systems with symport/antiport of rules. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 102–116, Sevilla, Spain, February 2-7 2004.

[326] M. Cavaliere and D. Genova. P systems with symport/antiport of rules. *Journal of Universal Computer Science*, 10(5):540–558, May 2004.

[327] M. Cavaliere, M. Ionescu, and T.-O. Ishdorj. Inhibiting/de-inhibiting rules in P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 174–183, Milano, Italy, June 2004.

[328] M. Cavaliere, M. Ionescu, and T.-O. Ishdorj. Inhibiting/de-inhibiting P systems with active membranes. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 117–130, 2005.

[329] M. Cavaliere and N. Jonoska. Forbidding and enforcing in membrane computing. Technical Report 26, Rovira i Virgili University, 2003.

[330] M. Cavaliere and N. Jonoska. Forbidding and enforcing in membrane computing. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 75–84, Tarragona, February 5-11 2003.

[331] M. Cavaliere and N. Jonoska. Forbidding and enforcing in membrane computing. *Natural Computing*, 2(3):215–228, August 2003.

[332] M. Cavaliere and P. Leupold. Evolution and observation - a new way to look at membrane systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 117–132, Tarragona, July 17-22 2003.

[333] M. Cavaliere and P. Leupold. Evolution and observation: A new way to look at membrane systems. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 70–87. Springer, July 2003.

[334] M. Cavaliere and P. Leupold. Evolution and observationa non-standard way to generate formal languages. *Theoretical Computer Science*, 321(2-3):233–248, August 2004.

[335] M. Cavaliere and R. Mardare. Playing with partial knowledge in membrane systems: A logical approach. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 242–260, Leiden, The Netherlands, 2006.

[336] M. Cavaliere, R. Mardare, and S. Sedwards. Colonies of synchronizing agents technical report 11-2007, microsoft research university of trento, centre for computational and systems biology. Technical Report 11-2007, Microsoft Research University of Trento, 2007.

[337] M. Cavaliere, R. Mardare, and S. Sedwards. A multiset-based model of synchronizing agents: Computability and robustness. *Theoretical Computer Science*, 391(3):216–238, 2008.

[338] M. Cavaliere, C. Martín-Vide, and G. Păun, editors. *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, 2003.

[339] M. Cavaliere and I. Mura. Experiments on the reliability of stochastic spiking neural P systems. *Natural Computing*, 7(4):453–470, 2008.

[340] M. Cavaliere and I. Mura. Experiments on the reliability of stochastic spiking neural p systems. *Natural Computing*, to appear, 2008.

[341] M. Cavaliere, A. Riscos-Nunez, R. Brijder, and G. Rozenberg. Membrane systems with marked membranes. Submitted, 2005.

[342] M. Cavaliere, A. Riscos-Nunez, R. Brijder, and G. Rozenberg. Membrane systems with marked membranes. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[343] M. Cavaliere, A. Riscos-Nunez, G. Rozenberg, and D. Sburlan. Membrane systems with external control. Submitted, 2005.

[344] M. Cavaliere and D. Sburlan. Time-independent P systems. In G. Mauri, G. Păun, M. J. Pérez-Jiménez, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing. International Workshop WMC5, Milano, Italy, 2004 (TO APPEAR).*

[345] M. Cavaliere and S. Sburlan. Time and synchronization in membrane systems. *Fundamenta Informaticae*, 2005. To appear.

[346] M. Cavaliere and S. Sedwards. Modelling cellular processes using membrane systems with peripheral and integral proteins. Technical Report 07/2006, Microsoft Research - University of Trento, Centre for Computational and Systems Biology, Trento, Italy. Technical Report 7/2006, Microsoft Research - University of Trento, Centre for Computational and Systems Biology.

[347] M. Cavaliere and S. Sedwards. Modelling cellular processes using membrane systems with peripheral and integral proteins. In *Fourth International Conference on Computational Methods in Systems Biology, CMSB2006*, Lecture Notes In Bioinformatics. Springer-Verlag.

[348] M. Cavaliere and S. Sedwards. Decision problems in membrane systems with peripheral proteins, transport and evolution. Technical Report 12/2006, Microsoft Research - University of Trento, Centre for Computational and Systems Biology, Trento, Italy, 2006. Microsoft Research - University of Trento, Centre for Computational and Systems Biology.

[349] M. Cavaliere and S. Sedwards. Membrane systems with peripheral proteins: transport and evolution. Technical Report 04/2006, Microsoft Research - University of Trento, Centre for Computational and Systems Biology, Trento, Italy, 2006. Microsoft Research - University of Trento, Centre for Computational and Systems Biology.

[350] M. Cavaliere and S. Sedwards. Membrane systems with peripheral proteins: transport and evolution. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[351] M. Cavaliere and C. Zandron. Time-driven computations in P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 133–144. Fénix Editora, 2006.

[352] P. Cazzaniga, A. Leporati, G. Mauri, and C. Zandron. P systems with memory. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 261–281, 2005.

[353] P. Cazzaniga, D. Pescini, D. Besozzi, and G. Mauri. Tau leaping stochastic simulation method in p systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 261–273, Leiden, The Netherlands, 2006.

[354] P. Cazzaniga, D. Pescini, D. Besozzi, G. Mauri, S. Colombo, and E. Martegani. Modeling and stochastic simulation of the ras/camp/pka pathway in the yeast saccharomyces cerevisiae evidences a key regulatory function for intracellular guanine nucleotides pools. *Journal of Biotechnology*, 133(3):377–385, 2008.

[355] P. Cazzaniga, D. Pescini, F.-J. Romero-Campero, D. Besozzi, and G. Mauri. Stochastic approaches in P systems for simulating biological systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 145–164. Fénix Editora, 2006.

[356] R. Ceterchi. Rewriting in P systems: An algebreic approach. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 165–168. Fénix Editora, 2006.

[357] R. Ceterchi, R. Gramatovici, and N. Jonoska. P systems for tiling rectangular pictures. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 133–144, Tarragona, July 17-22 2003.

[358] R. Ceterchi, R. Gramatovici, and N. Jonoska. Tiling rectangular pictures with P systems. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 88–103. Springer, July 2003.

[359] R. Ceterchi, R. Gramatovici, N. Jonoska, and K. Subramanian. Generating picture languages with P systems. Technical Report 26, Rovira i Virgili University, 2003.

[360] R. Ceterchi, R. Gramatovici, N. Jonoska, and K. Subramanian. Generating picture languages with P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 85–100, Tarragona, February 5-11 2003.

[361] R. Ceterchi, M. Madhu, G. Păun, and K. Subramanian. Array-rewriting P systems. Technical Report 26, Rovira i Virgili University, 2003.

[362] R. Ceterchi, M. Madhu, G. Păun, and K. Subramanian. Array-rewriting P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 118–134, Tarragona, February 5-11 2003.

[363] R. Ceterchi, M. Madhu, G. Păun, and K. Subramanian. Array-rewriting P systems. *Natural Computing*, 2(3):229 – 249, August 2003.

[364] R. Ceterchi and C. Martín-Vide. Generating P systems with contextual grammar. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[365] R. Ceterchi and C. Martín-Vide. Dynamic P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 146–186, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[366] R. Ceterchi and C. Martín-Vide. P systems with communication for static sorting. Technical Report 26, Rovira i Virgili University, 2003.

[367] R. Ceterchi and C. Martín-Vide. P systems with communication for static sorting. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 101–117, Tarragona, February 5-11 2003.

[368] R. Ceterchi, M. Perez-Jimenez, and A. Tomescu. Simulating the bitonic sort on a 2D-mesh with P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 205–226, Thessaloniki, Greece, 2007.

[369] R. Ceterchi and M. J. Pérez-Jiménez. A perfect shuffle algorithm for reduction processes and its simulation with P systems. In *International Conference on Computers and Communications-ICCC 2004, Baile Felix Spa, Oradea, ROMANIA*, Oradea, ROMANIA, May 27-29 2004.

[370] R. Ceterchi and M. J. Pérez-Jiménez. Simulating parallel architectures with P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 184–185, Milano, Italy, June 2004.

[371] R. Ceterchi and M. J. Pérez-Jiménez. Simulating Shuffle-Exchange networks with P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[372] R. Ceterchi and M. J. Pérez-Jiménez. Simulating shuffle-exchange networks with P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 117–129, Sevilla, Spain, February 2-7 2004.

[373] R. Ceterchi and M. J. Pérez-Jiménez. Simulating a class of parallel architectures: A broader perspective. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 131–148, 2005.

[374] R. Ceterchi, M. J. Pérez-Jiménez, and A. I. Tomescu. Sorting omega networks simulated with P systems: Optimal data layouts. In E. Csuhaj-Varjú, R. Freund, M. Oswald, and K. Salomaa, editors, *International Workshop on Computing with Biomolecules*, pages 29–42, 2008.

[375] R. Ceterchi and M. J. PÚrez-JimÚnez. On simulating a class of parallel architectures. *International Journal of Foundations of Computer Science*, 17(1):91–110, February 2006.

[376] R. Ceterchi and D. Sburlan. Simulating boolean circuits with P systems. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC*

2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers, volume 2933 of *Lecture Notes in Computer Science*, pages 104–122. Springer, July 2003.

[377] R. Ceterchi and D. Sburlan. Simulating boolean circuits with P systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 145–160, Tarragona, July 17-22 2003.

[378] R. Ceterchi and A. I. Tomescu. Implementing sorting networks with spiking neural P systems. *Fundamenta Informaticae*, 87(1):35–48, 2008.

[379] P. Chandra and K. Subramanian. On picture arrays generated by p systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 282–288, 2005.

[380] H. Chen, R. Freund, M. Ionescu, G. Păun, and M. Perez-Jimenez. On string languages generated by spiking neural p systems. Submitted, 2006.

[381] H. Chen, R. Freund, M. Ionescu, G. Paun, and M.-J. Pérez-Jiménez. On string languages generated by spiking neural P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 169–194. Fénix Editora, 2006.

[382] H. Chen, M. Ionescu, and T.-O. Ishdorj. On the efficiency of spiking neural P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 195–206. Fénix Editora, 2006.

[383] H. Chen, M. Ionescu, A. Paun, G. Păun, and B. Popa. On trace languages generated by spiking neural p systems. Submitted, 2006.

[384] H. Chen, M. Ionescu, A. Paun, G. Paun, and B. Popa. On trace languages generated by spiking neural P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 207–224. Fénix Editora, 2006.

[385] H. Chen, T.-O. Ishdorj, and G. Paun. Computing along the axon. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 60–70, Wuhan, China, September 2006.

[386] H. Chen, T.-O. Ishdorj, and G. Paun. Computing along the axon. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing,*

Sevilla, January 30 - February 3, 2006. Volume I, pages 225–240. Fénix Editora, 2006.

[387] H. Chen, T.-O. Ishdorj, G. Paun, and M. Perez-Jimenez. Handling languages with spiking neural p systems with extended rules. *Romanian Journal of Information Science and Technology*, 2006. Accepted.

[388] H. Chen, T.-O. Ishdorj, G. Paun, and M. Perez-Jimenez. Handling languages with spiking neural p systems with extended rules. *Romanian Journal of Information Science and Technology*, 9(3):151–162, 2006.

[389] H. Chen, T.-O. Ishdorj, G. Paun, and M.-J. Pérez-Jiménez. Spiking neural P systems with extended rules. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 241–266. Fénix Editora, 2006.

[390] H. Chen, G. Păun, and M. Perez-Jimenez. Spiking neural p systems with extended rules. Submitted, 2006.

[391] S. Cheruku, A. Paun, F. Romero-Campero, M. Perez-Jimenez, and O. Ibarra. Simulating fas-induced apoptosis by using p systems. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 71–81, Wuhan, China, September 2006.

[392] S. Cheruku, A. Paun, F. Romero-Campero, M. Perez-Jimenez, and O. Ibarra. Simulating fas-induced apoptosis by using p systems. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[393] S. Cheruku, A. Păun, F. J. Romero-Campero, M. J. Pérez-Jiménez, and O. H. Ibarra. Simulating FAS-induced apoptosis by using P systems. *Progress in Natural Science*, 17(4):424–431, 2007.

[394] L. Cienciala. P automata with priorities working in sequential and maximally parallel mode. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 186–195, Milano, Italy, June 2004.

[395] L. Cienciala. *P automata*. PhD thesis, University of Ostrava, Ostrava, Czech Republic, 2005.

[396] L. Cienciala and L. Ciencialova. P automata with priorities. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 161–168, Tarragona, July 17-22 2003.

[397] L. Cienciala and L. Ciencialova. Membrane automata with priorities. *Journal of Computer Science and Technology*, 19(1):89–97, 2004.

[398] L. Cienciala and L. Ciencialova. Membrane automata with priorities. *Journal of Computer Science and Technology*, 19(1):89–97, 2004.

[399] L. Cienciala and L. Ciencialová. Membrane automata with priorities. *Journal of Computer Science and Technology*, 19(1):89–97, January 2004. Special issue on bioinformatics.

[400] L. Cienciala, L. Ciencialova, P. Frisco, and P. Sosik. On the power of deterministic and sequential communicating P systems. *International Journal of Foundations of Computer Science*, 18(2):415–431, 2007.

[401] L. Cienciala, L. Ciencialova, and A. Kelemenova. On the number of agents in P colonies. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 227–242, Thessaloniki, Greece, 2007.

[402] L. Cienciala, L. Ciencialová, and A. Kelemenová. Homogeneous p colonies. *Computing and Informatics*, 27(3+):481–496, 2008.

[403] L. Cienciala and A. Kelemenova. *Zivot ve svete symbolu: pocitani pomoci membran.* Slezska Univ., Opava, 2002. in vol "Kognice a umely zivot II".

[404] L. Ciencialova and L. Cienciala. Variations on the theme: P colonies. In D. Kol and A. Meduna, editors, *Proc. First Intern. Workshop WFM06*, pages 27–34, Ostrava, 2007.

[405] G. Ciobanu. A programming perspective of the membrane computing. In *Proc. of ICCCC 2006, Oradea, Romania, June 2006*, pages 13–22.

[406] G. Ciobanu. Distributed computing in P Systems with antiport communication. Submitted, 2002.

[407] G. Ciobanu. Distributed algorithms over communicating membrane systems. *BioSystems*, 70(2):123–133, July 2003.

[408] G. Ciobanu. Cellular meta-programming. In *Pre-Proc. Unconventional Programming Paradigms, UPP04, Le Mont Saint-Michel*, pages 55–63, September 2004.

[409] G. Ciobanu. Pumps systems of membranes. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[410] G. Ciobanu. Pumps systems of membranes. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 130–133, Sevilla, Spain, February 2-7 2004.

[411] G. Ciobanu. *Modeling Cell–Mediated Immunity by Means of P Systems*, pages 157–178. Springer-Verlag, 2005.

[412] G. Ciobanu and B. Aman. On the relationship between membranes and ambients. *Biosystems*, 91(3):515–530, 2008.

[413] G. Ciobanu, O. Andrei, and D. Lucanu. Structural operational semantics of p systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 1–23, 2005.

[414] G. Ciobanu, V. Ciubotariu, and B. Tanasa. A computational model of membrane transportation. Submitted.

[415] G. Ciobanu and L. Cornăcel. Probabilistic transitions for p systems. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006 Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[416] G. Ciobanu and L. Cornăcel. Probabilistic transitions for p systems. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 82–92, Wuhan, China, September 2006.

[417] G. Ciobanu and L. Cornacel. Probabilistic transitions for P systems. *Progress in Natural Science*, 17(4):431–441, 2007.

[418] G. Ciobanu, R. Desai, and A. Kumar. Membrane systems and distributed computing. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[419] G. Ciobanu, R. Desai, and A. Kumar. Membrane systems and distributed computing. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 187–202, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[420] G. Ciobanu, D. Dumitriu, D. Huzum, G. Moruz, and B. Tanasa. Client-server P systems in modeling molecular interaction. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 203–218, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[421] G. Ciobanu and M. Gontineac. Mealy membrane automata and P systems complexity. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 149–164, 2005.

[422] G. Ciobanu and M. Gontineac. Mealy multiset automata. *International Journal of Foundations of Computer Science*, 17(1):111–126, February 2006.

[423] G. Ciobanu and M. Gontineac. P machines: An automata approach to membrane computing. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 274–289, Leiden, The Netherlands, 2006.

[424] G. Ciobanu and M. Gontineac. Networks of mealy multiset automata. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 243– 254, Thessaloniki, Greece, 2007.

[425] G. Ciobanu and M. Gontineac. Multisets and their encodings. In O. H. Ibarra and P. Sosík, editors, *Proceedings of Prague International Workshop on Membrane Computing*, pages 1–10, 2008.

[426] G. Ciobanu and V. Gontineac. Algebraic and coalgebraic aspects of membrane computing. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 289–311, 2005.

[427] G. Ciobanu and D. Lucanu. What is an event for membrane systems? In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 255–266, Thessaloniki, Greece, 2007.

[428] G. Ciobanu, L. Pan, G. Păun, and M. J.Pérez-Jiménez. P systems with minimal parallelism. *Theoretic Computer Science*, 378:117–130, 2007.

[429] G. Ciobanu and D. Paraschiv. Membrane software. a P system simulator. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[430] G. Ciobanu and D. Paraschiv. Membrane software. A P system simulator. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[431] G. Ciobanu and D. Paraschiv. P system software simulator. *Fundamenta Informaticae*, 49(1-3):61–66, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[432] G. Ciobanu and G. Păun. The minimal parallelism is still universal (for p systems with symport/antiport rules), 2005.

[433] G. Ciobanu, G. Păun, and M. J. Pérez-Jiménez, editors. *Applications of Membrane Computing*. Springer-Verlag, 2005. (442 + viii pages) - in press.

[434] G. Ciobanu, G. Păun, and M. J. Pérez-Jiménez. On the branching complexity of P systems. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 165–176, 2005.

[435] G. Ciobanu, G. Păun, and G. Stefanescu. Sevilla carpets associated with P systems. Technical Report 26, Rovira i Virgili University, 2003.

[436] G. Ciobanu, G. Păun, and G. Stefanescu. Sevilla carpets associated with P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 135–140, Tarragona, February 5-11 2003.

[437] G. Ciobanu, G. Păun, and G. Stefanescu. P transducers. *New Generation Computing*, 2004. To appear.

[438] G. Ciobanu and D. Petcu. P accelerators: Parallelization of sequential simulators. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 177–186, 2005.

[439] G. Ciobanu and A. Resios. Computational complexity of simple P systems. *Fundamenta Informaticae*, 87(1):49–59, 2008.

[440] G. Ciobanu and B. Tanasa. Gene expression by software mechanisms. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[441] G. Ciobanu and B. Tanasa. Gene expression by software mechanisms. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[442] G. Ciobanu and B. Tanasa. Gene expression by software mechanisms. *Fundamenta Informaticae*, 49(1-3):67–80, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[443] G. Ciobanu, B. Tanasa, D. Dumitriu, D. Huzum, and G. Moruz. Molecular networks as communicating membranes. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[444] G. Ciobanu and G. Wenyuan. P systems running on a cluster of computers. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 123–139. Springer, July 2003.

[445] G. Ciobanu and G. Wenyuan. A parallel implementation of transition P systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 169–184, Tarragona, July 17-22 2003.

[446] M. C. M. A. Colomer, M. J. Pérez-Jiménez, D. Sanuy, and A. Margalida. Modeling ecosystems using P systems: The bearded vulture, a case study. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 137–156, 2009.

[447] A. Cordon-Franco, M. Gutiérrez-Naranjo, M. Perez-Jimenez, and A. Riscos-Nunez. Cellular solutions to some numerical np-complete problems. a prolog implementation molecular computational models. Unconventional Approaches (M. Gheorghe, ed.), 2004. Idea-Group, London 2004, 115–149.

[448] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, and M. J. Pérez-Jiménez. Looking for P Truth. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[449] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, and M. J. Pérez-Jiménez. Looking for P truth. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 134–138, Sevilla, Spain, February 2-7 2004.

[450] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Exploring computation trees associated with P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 196–204, Milano, Italy, June 2004.

[451] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Weak metrics on configurations of a P system. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[452] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Weak metrics on configurations of a P system. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 139–151, Sevilla, Spain, February 2-7 2004.

[453] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, A. Riscos-Núñez, and F. Sancho-Caparrini. Implementing in Prolog an effective cellular solution for the Knapsack, problem. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 185–196, Tarragona, July 17-22 2003.

[454] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, A. Riscos-Núñez, and F. Sancho-Caparrini. Implementing in Prolog an effective cellular solution to the Knapsack problem. In C. Martín-Vide,

G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 140–152. Springer, July 2003.

[455] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. A Prolog simulator for deterministic P systems with active membranes. Technical Report 26, Rovira i Virgili University, 2003.

[456] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. A Prolog simulator for deterministic P systems with active membranes. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 141–154, Tarragona, February 5-11 2003.

[457] A. Cordón-Franco, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. A Prolog simulator for deterministic P systems with active membranes. *New Generation Computing*, 22(4):349–363, August 2004.

[458] A. Cordón-Franco and F. Sancho-Caparrini. Non-discrete P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 205–207, Milano, Italy, June 2004.

[459] A. Cordón-Franco and F. Sancho-Caparrini. A note on complexity measures for probabilistic P systems. *Journal of Universal Computer Science*, 10(5):559–568, May 2004.

[460] M. Cordona, M. A. Colomer, M. J. P. Jiménez, and A. Zaragoza. Hierarchical clustering with membrane computing. *Computing and Informatics*, 27(3+):497–513, 2008.

[461] D. W. Corne and P. Frisco. Dynamics of HIV infection studied with cellular automata and conformon-P systems. *Biosystems*, 91(3):531–544, 2008.

[462] C. Csuhaj-Varjú, A. D. Nola, G. Păun, M. J. Pérez-Jiménez, and G. Vaszil. Editing configurations of P systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 131–154, 2005.

[463] E. Csuhaj-Varjú. On gemmating P systems. In *EMCC Workshop*, Vienna, November 2003.

[464] E. Csuhaj-Varjú. P automata: Models, results, and research topics. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 1–11, Milano, Italy, June 2004.

[465] E. Csuhaj-Varjú. EP-colonies: Micro-organisms in a cell-like environment. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 123–130, 2005.

[466] E. Csuhaj-Varju, R. Freund, and D. Sburlan. Modeling the dynamical parallelism of bio-systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 290–310, Leiden, The Netherlands, 2006.

[467] E. Csuhaj-Varju, R. Freund, and D. Sburlan. Modeling the dynamical parallelism of bio-systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 290–310, Leiden, The Netherlands, 2006.

[468] E. Csuhaj-Varjú, O. H. Ibarra, and G. Vaszil. On the computational complexity of P automata. Submitted, 2004. DNA 10.

[469] E. Csuhaj-Varju, M. Margenstern, and G. Vaszil. P colonies with a bounded number of cells and programs. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 311–322, Leiden, The Netherlands, 2006.

[470] E. Csuhaj-Varjú, M. Margenstern, G. Vaszil, and S. Verlan. Small computationally complete symport/antiport P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume I*, pages 267–282. Fénix Editora, 2006.

[471] E. Csuhaj-Varjú, M. Margenstern, G. Vaszil, and S. Verlan. On small universal antiport P systems. *Theoretical Computer Science*, 372(2-3):152–164, 2007.

[472] E. Csuhaj-Varjú, C. Martín-Vide, G. Păun, and A. Salomaa. From Watson-Crick L Systems to Darwinian P systems. Technical Report 26, Rovira i Virgili University, 2003.

[473] E. Csuhaj-Varjú, C. Martín-Vide, G. Păun, and A. Salomaa. From Watson-Crick L Systems to Darwinian P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 155–170, Tarragona, February 5-11 2003.

[474] E. Csuhaj-Varjú, C. Martín-Vide, G. Păun, and A. Salomaa. From Watson-Crick L Systems to Darwinian P systems. *Natural Computing*, 2(3):299–318, August 2003.

[475] E. Csuhaj-Varju, A. D. Nola, G. Păun, M. J. Pérez-Jiménez, and G. Vaszil. Editing configurations of P systems. Submitted, 2005.

[476] E. Csuhaj-Varjú, G. Păun, and G. Vaszil. Grammar systems vs. membrane computing: The case of CD grammar systems. Submitted, 2004.

[477] E. Csuhaj-Varjú, G. Păun, and G. Vaszil. Grammar systems vs. membrane computing: The case of PC grammar systems. Submitted, 2004.

[478] E. Csuhaj-Varjú, G. Păun, and G. Vaszil. Tissue-like P systems with dynamically emerging requests. *International Journal of Foundations of Computer Science*, 19(3):729–745, 2008.

[479] E. Csuhaj-Varjú and G. Vaszil. P Automata. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[480] E. Csuhaj-Varjú and G. Vaszil. The computational complexity of P automata, accepting P systems with communication only. In *EMCC Workshop*, Vienna, November 2003.

[481] E. Csuhaj-Varjú and G. Vaszil. New results and research directions concerning P Automata, accepting P systems with communication only. Technical Report 26, Rovira i Virgili University, 2003.

[482] E. Csuhaj-Varjú and G. Vaszil. New results and research directions concerning P Automata, accepting P systems with communication only. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 171–179, Tarragona, February 5-11 2003.

[483] E. Csuhaj-Varjú and G. Vaszil. P Automata or purely communicating accepting P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 219–233, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[484] E. Csuhaj-Varjú and G. Vaszil. Reducing the size of extended gemmating P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 208–220, Milano, Italy, June 2004.

[485] E. Csuhaj-Varju and G. Vaszil. P systems with string objects and with communication by request. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 267–278, Thessaloniki, Greece, 2007.

[486] E. Csuhaj-Varjú and G. Vaszil. (mem)brane automata. *Theoretical Computer Science*, 404(1-2):52–60, 2008.

[487] E. Czeizler. Self-activating P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[488] E. Czeizler. Self-activating P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 234–246, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[489] S. Dal-Zilio and E. Formenti. On the dynamics of PB systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 197–208, Tarragona, July 17-22 2003.

[490] S. Dal-Zilio and E. Formenti. On the dynamics of PB Systems: A Petri net view. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 153–167. Springer, July 2003.

[491] Z. Dang, O. Ibarra, and C. Li. Decidability of model-checking p systems. Submitted, 2006.

[492] Z. Dang, O. Ibarra, C. Li, and G. Xie. On model-checking of p systems. UC05, accepted, 2005.

[493] Z. Dang, O. Ibarra, S. Woodworth, and H. Yen. On symport/antiport systems and semilinear sets. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 312–335, 2005.

[494] Z. Dang and O. H. Ibarra. On P systems operating in sequential and limited parallel modes. In *Workshop on Descriptional Complexity of Formal Systems*, London-Ontario, 2004.

[495] Z. Dang, O. H. Ibarra, C. Li, and G. Xie. On model-checking of P systems. In *Unconventional Computation 4th International Conference, UC 2005, Sevilla, Spain, October 3-7, 2005. Proceedings*, volume 3699 of *Lecture Notes in Computer Science*. Springer Berlin / Heidelberg, 2005.

[496] V. Danos, J. Fret, W. Fontana, R. Harmer, and J. Krivine. Investigation of a biological repair scheme. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 1–12, 2009.

[497] D. Das and T. Renz. A simulator model for p systems with active membranes. In *Proceedings 2006 IEEE Conference on Emerging Technologies - Nanoelectronics*, pages 338–340, Singapore, January 2006.

[498] D. Dascalu, editor. *Romanian Journal of Information Science and Technology*, volume 4, 2001.

[499] J. Dassow and E. Csuhaj-Varju. On the syntactic complexity of darwinian membrane systems. In *BWMC4*, Sevilla, 2006.

[500] J. Dassow and E. Csuhaj-Varjú. On the syntactic complexity of darwinian membrane systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 1–16. Fénix Editora, 2006.

[501] J. Dassow and G. Păun. On the power of membrane computing. *Journal of Universal Computer Science*, 5(2):33–49, 1999.

[502] J. Dassow and G. Păun. P systems with communication based on concentration. *Acta Cybernetica*, 15(1):9–24, 2001.

[503] J. Dassow, G. Păun, G. Thierrin, and S. Yu. Tree-systems of morphisms. *Acta Informatica*, 38(2):131–153, November 2001.

[504] J. Dassow and G. Vaszil. P finite automata and regular languages over countably infinite alphabets. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 323–336, Leiden, The Netherlands, 2006.

[505] A. O. de la Puente, R. Núñez-Hervás, M. de la Cruz-Echeandia, and M. Alfonseca. Christiansen grammar for some P systems. In *Third Brainstorming Week on Membrane Computing, Sevilla, 2005*, Sevilla, 2005.

[506] G. Delzanno and L. Begin. A biologically inspired model with fusion and clonation of membranes. In C. S. Calude, J. F. Costa, R. Freund, M. Oswald, and G. Rozenberg, editors, *Proceedings of the 7th international conference on Unconventional Computing*, volume 5204 of *Lecture Notes in Computer Science*, pages 64–82, 2008.

[507] G. Delzanno and L. V. Begin. On the dynamics of PB systems with volatile membranes. In G. Eleftherakis and G. P. P. Kefalas, editors, *Preproceedings of Membrane Computing, International Workshop - WMC8*, pages 279–300, Thessaloniki, Greece, 2007.

[508] K. Dersanambika and K. Krithivasan. Contextual array P systems. *International Journal of Computer Mathematics*, 81(8):955–969, August 2004.

[509] K. Dersanambika, K. Krithivasan, H. Agarwal, and J. Gupta. *Hexagonal contextual array P systems*. World Scientific, Singapore.

[510] K. Dersanambika, K. Krithivasan, and K. Subramanian. P systems generating hexagonal picture languages. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 209–221, Tarragona, July 17-22 2003.

[511] K. S. Dersanambika, K. Krithivasan, and K. G. Subramanian. P systems generating hexagonal picture languages. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 168–180. Springer, July 2003.

[512] A. Di-Nola, G. Păun, M. J. Pérez-Jiménez, and F. Rosselló. (imprecise topic about) Handling imprecision in P Systems. Submitted, 2004.

[513] J. C. Diaz, E. L. Dominguez, S. L. Escobar, J. E. Ramirez, and L. H. Hernandez. Development of a cleaner robot using techniques of membranes. Technical report, Report INAOE, Puebla, Mexic, 2006. Report INAOE.

[514] D. Diaz-Pernil, M. Gutiérrez-Naranjo, M. Pérez-Jiménez, and A. Núñez. A cellular solution to subset sum using division of non-elementary membranes and dissolution, with time and initial resources bounded by log k. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 301–316, Thessaloniki, Greece, 2007.

[515] D. Diaz-Pernil, M. Gutiérrez-Naranjo, M. Pérez-Jiménez, and A. Núñez. Subset sum with tissue p systems with cell division. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 113–130, Sevilla (Spain), January 29th - February 2 2007.

[516] D. Diaz-Pernil, M. Gutiérrez-Naranjo, M. Pérez-Jiménez, and A. Riscos-Núñez. An efficient solution to 3-col with tissue p systems. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[517] D. Díaz-Pernil, M. A. Gutiérrez-Naranjo, M. J. P. Jiménez, and A. Riscos-Núñez. Solving subset sum in linear time by using tissue P systems with cell division. In J. Mira and J. R. Álvarez, editors, *Proceedings of the 2nd international work-conference on The Interplay Between Natural and Artificial Computation, Part I: Bio-inspired Modeling of Cognitive Tasks*, volume 4527 of *Lecture Notes in Computer Science*, pages 170–179, 2007.

[518] D. Díaz-Pernil, M.-A. Gutiérrez-Naranjo, and M.-J. Pérez-Jiménez. Solving 3-col with tissue P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 17–30. Fénix Editora, 2006.

[519] D. Díaz-Pernil, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Solving the partition problem by using tissue-like P systems with cell division. In *Proceedings of the Third International Conference on Bio-Inspired Computing: Theories and Applications*, pages 43–47, 2008.

[520] D. Díaz-Pernil, M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Solving the partition problem by using tissue-like P systems with cell division. In D. Díaz-Pernil, C. Graciani, M. A. Gutiérrez-Naranjo, G. Păun, I. Pérez-Hurtado, and A. Riscos-Núñez, editors, *Sixth Brainstorming Week on Membrane Computing*, pages 123–134, 2008.

[521] D. Díaz-Pernil, I. Pérez-Hurtado, and M. J. P.-J. A. Riscos-Núñez. A P-Lingua programming environment for membrane computing. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 187–203, 2009.

[522] R. Domine. Theorem proving using membrane computing. Master's thesis, Dresden University, 2001.

[523] A. Dovier, C. Piazza, and G. Rossi. Multiset constraints and P systems. In C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Multiset Processing: Mathematical, Computer Science, and Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, pages 103–122. Springer-Verlag, 2001.

[524] A. Dovier, C. Piazza, and G. Rossi. A uniform approach to constraint-solving for lists multisets, compact lists, and sets. *ACM Transactions on Computational Logic*, 9(3):15:1–15:30, 2008.

[525] S. Dunn and P. Stivers. P system models of bistable, enzyme driven chemical reaction networks. In J. Mira and J. R. Álvarez, editors, *Proceedings of the 2nd international work-conference on The Interplay Between Natural and Artificial Computation, Part I: Bio-inspired Modeling of Cognitive Tasks*, volume 4527 of *Lecture Notes in Computer Science*, pages 203–213, 2007.

[526] G. B. Enguix and M. Jimenez-Lopez. Computing speech acts, artificial intelligence. In C. Bussler and D. Fensel, editors, *Methodology, Systems and Applications*, LNAI 3192, pages 236–245. Springer, 2004.

[527] G. B. Enguix and M. Jimenez-Lopez. Computing dialogues with membranes. In *Logic and Communication in Multi-Agent Systems*, LCMAS, 2005.

[528] G. B. Enguix and D. J. Lopez. Modelling parallel phenomena in conversations with P systems. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 27–30, 2005.

[529] G. B. Enguix and M. J. Lopez. Lp colonies for language evolution. a preview. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 179–192, 2005.

[530] R. Fassler, T. Hinze, T. Lenser, and P. Dittrich. Construction of oscillating chemical register machines on binary numbers using mass-action kinetics. In O. H. Ibarra and P. Sosík, editors, *Proceedings of Prague International Workshop on Membrane Computing*, pages 11–22, 2008.

[531] L. Fernandez, F. Arroyo, I. Garcia, and A. Gutierrez. Parallel software architectures analysis for implementing P systems. In M. Sugisaka and H. Tanaka, editors, *Proceedings of the 12th Int. Symposium on Artificial Life and Robotics*, pages 494–499, Beppu, Oita, Japan, Jan 25-27 2007.

[532] L. Fernandez, F. Arroyo, J. Tejedor, and J. Castellanos. Massively parallel algorithm for evolution rules application in transition p systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 337–343, Leiden, The Netherlands, 2006.

[533] L. Fernandez, V. Martinez, F. Arroyo, and L. Mingo. A hardware circuit for selecting active rules in transition p systems. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 45–48, 2005.

[534] C. Ferretti, G. Mauri, G. Păun, and C. Zandron. On three variants of P systems with string-objects. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[535] C. Ferretti, G. Mauri, G. Păun, and C. Zandron. On three variants of P systems with string-objects. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[536] C. Ferretti, G. Mauri, G. Păun, and C. Zandron. On three variants of rewriting P systems. *Theoretical Computer Science*, 301(1-3):201–215, May 2003.

[537] F. Fontana and G. Franco. Finding the maximum element using P systems. *Journal of Universal Computer Science*, 10(5):567–580, May 2004.

[538] F. Fontana and G. Franco. Maximum search using P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[539] F. Fontana and G. Franco. Maximum search using P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 152–163, Sevilla, Spain, February 2-7 2004.

[540] F. Fontana and V. Manca. Discrete solution of differential equations by P metabolic algorithm. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 31–40. Fénix Editora, 2006.

[541] F. Fontana and V. Manca. Discrete solutions to differential equations by metabolic p systems. *Theoretical Computer Science*, 372(2-3):165–182, 2007.

[542] F. Fontana and V. Manca. Predator-prey dynamics in P systems ruled by metabolic algorithm. *Biosystems*, 91(3):545–557, 2008.

[543] G. Franco. Membrane Kauffman Networks. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[544] G. Franco. Membrane Kauffman networks. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 164–167, Sevilla, Spain, February 2-7 2004.

[545] G. Franco, P. Guzzi, V. Manca, and T. Mazza. Mitotic oscillators as mp graphs. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 344–356, Leiden, The Netherlands, 2006.

[546] G. Franco, N. Jonoska, B. Osborn, and A. Plaas. Knee joint injury and repair modeled by membrane systems. *Biosystems*. To appear.

[547] G. Franco, N. Jonoska, B. Osborn, and A. Plaas. Modeling knee injuries by membrane systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, 2005.

[548] G. Franco, N. Jonoska, B. Osborn, and A. Plaas. Knee joint injury and repair modeled by membrane systems. *Biosystems*, 91(3):473–488, 2008.

[549] G. Franco and V. Manca. A membrane system for the leucocyte selective recruitment. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Pre-proceedings of the Workshop on Membrane Computing*, pages 222–230., Tarragona, July 17-22 2003.

[550] G. Franco and V. Manca. A membrane system for the leukocyte selective recruitment. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 181–190. Springer, July 2003.

[551] G. Franco and V. Manca. Modeling some biological phenomena by P systems. In *EMCC Workshop*, Vienna, November 2003.

[552] G. Franco and M. Margenstern. Computing by floating strings. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[553] F. Freund, R. Freund, and M. Oswald. *Splicing Test Tube Systems and Their Relation to Splicing Membrane Systems*, volume 2950 of *Lecture Notes in Computer Science*, pages 139–151. Springer, 2004.

[554] F. Freund, R. Freund, M. Oswald, M. Margenstern, Y. Rogozhin, and S. Verlan. P systems with cutting/recombination rules assigned to membranes. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 191–202. Springer, July 2003.

[555] R. Freund. Generalized P systems. In G. Ciobanu and G. Păun, editors, *Fundamentals of Computation Theory, FCT'99, Iasi, 1999*, volume 1684? of *Lecture Notes in Computer Science*, pages 281–292, Berlin, 1999. Springer-Verlag.

[556] R. Freund. Generalized P systems with splicing and cutting/recombination. In *Workshop on Formal Languages, FCT99, Iasi*, 1999.

[557] R. Freund. Generalized P systems with splicing and cutting/recombination. *Grammars*, 2(3):189–199, December 1999.

[558] R. Freund. Sequential P systems. In R. Freund, editor, *Theorietag 2000. Workshop on New Computing Paradigms*, pages 177–183. TU University Vienna, 2000.

[559] R. Freund. Sequential P systems. *Romanian Journal of Information Science and Technology*, 4(1-2):77–88, 2001.

[560] R. Freund. Special variants of P systems inducing an infinite hiearchy with respect to the number of membranes. *Bulletin of the EATCS*, (75):209–219, October 2001.

[561] R. Freund. Energy-controlled P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[562] R. Freund. Energy-controlled P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 247–260, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[563] R. Freund. Asynchronous P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 12–28, Milano, Italy, June 2004.

[564] R. Freund. Asynchronous P Systems on arrays and strings. Submitted, 2004. DLT'04 - Eighth International Conference on Developments in Language Theory. To appear in Proceedings of DLT'04 Lecture Notes in Computer Science, Springer. 2004.

[565] R. Freund. P systeme im sequentiellen modus. In *Workshop Formale Methoden der Linguistik, and 14 Theorietag Automaten und Formale Sprachen*, pages 57–61, Potsdam, 2004.

[566] R. Freund. Particular results for variants of P systems with one catalyst in one membrane. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 41–50. Fénix Editora, 2006.

[567] R. Freund, A. Alhazov, Yu. Rogozhin, and S. Verlan. *Communication P Systems*, pages 118–143. Oxford University Press, 2010.

[568] R. Freund and F. Freund. Molecular computing with generalized homogeneous P systems. In A. Condon and G. Rozenberg, editors, *Proc. Conf. DNA6*, pages 113–125, Leiden, 2000.

[569] R. Freund and F. Freund. Molecular computing with generalized homogeneous P-systems. In A. Condon and G. Rozenberg, editors, *DNA Computing: 6th International Workshop on DNA-Based Computers, DNA 2000, Leiden, The Netherlands, June 13-17, 2000, Revised Papers*, volume 2054 of *Lecture Notes In Computer Science*, pages 113–125, Leiden, The Netherlads, June 2001. Springer-Verlag Heidelberg.

[570] R. Freund and T. Gschwandtner. P systems for modelling biological processes in living cells. In R. Freund and M. Oswald, editors, *16. Theorietag Automaten und Formale Sprachen*, pages 46–50, 2006.

[571] R. Freund, O. H. Ibarra, G. Păun, and H.-C. Yen. Matrix languages, register machines, vector addition systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 155–168, 2005.

[572] R. Freund, M. Ionescu, and M. Oswald. Extended spiking neural P systems with decaying spikes and/or total spiking. In G. Vaszil, editor, *Proceedings of the International Workshop on Automata for Cellular and Molecular Computing*, pages 64–75, 2007.

[573] R. Freund, M. Ionescu, and M. Oswald. Extended spiking neural P systems with decaying spikes and/or total spiking. *International Journal of Foundations of Computer Science*, 19(5):1223–1234, 2008.

[574] R. Freund, L. Kari, M. Oswald, and P. Sosík. Computationally universal P systems without priorities: two catalysts are sufficient. *Theoretical Computer Science*, 2004. In press.

[575] R. Freund and M. Kogler. Drip and mate operations acting in test tube systems and tissue-like P systems. In G. Ciobanu, editor, *Third Workshop on Membrane Computing and Biologically Inspired Process Calculi 2009*, pages 123–136, 2009.

[576] R. Freund and M. Kogler. Hybrid transition modes in tissue P systems. In G. Păun, M. Pérez-Jiménez, and A. Riscos-Núez, editors, *Tenth Workshop on Membrane Computing*, pages 228–239, 2009.

[577] R. Freund, M. Kogler, and S. Verlan. P automata with controlled use of minimal communication rules. In H. Bordihn, R. Freund, M. Holzer, M. Kutrib, and F. Otto, editors, *Workshop on Non-Classical Models for Automata and Applications (NCMA)*, pages 107–119, 2009.

[578] R. Freund, A. Leporati, M. Oswald, and C. Zandron. Sequential P systems with unit rules and energy assigned to membranes. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[579] R. Freund, A. Leporati, M. Oswald, and C. Zandron. Sequential P systems with unit rules and energy assigned to membranes. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 168–182, Sevilla, Spain, February 2-7 2004.

[580] R. Freund, C. Martín-Vide, A. Obtulowicz, and G. Păun. On three classes of automata-like P systems. In Z. Ésik and Z. Fülöp, editors, *Developments in Language Theory, 7th International Conference, DLT 2003, Szeged, Hungary, July 7-11, 2003, Proceedings*, volume 2710 of *Lecture Notes In Computer Science*, pages 292–303. Springer-Verlag Heidelberg, 2003.

[581] R. Freund, C. Martín-Vide, and G. Păun. Computing with membranes: Three more collapsing hierarchies, 2000.

[582] R. Freund, C. Martín-Vide, and G. Păun. From regulated rewriting to computing with membranes: collapsing hierarchies. *Theoretical Computer Science*, 312(2-3):143–188, January 2004.

[583] R. Freund and M. Oswald. Variants of GP Systems. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[584] R. Freund and M. Oswald. Variants of GP Systems. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[585] R. Freund and M. Oswald. GP Systems with forbidding context. *Fundamenta Informaticae*, 49(1-3):81–102, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[586] R. Freund and M. Oswald. A short note on analysing P systems with antiport rules. *Bulletin of the EATCS*, (78):231–236, October 2002.

[587] R. Freund and M. Oswald. Complexity of P automata with catalysts. In *EMCC Workshop*, Vienna, November 2003.

[588] R. Freund and M. Oswald. P systems with activated/prohibited membrane channels. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 261–269, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[589] R. Freund and M. Oswald. P systems with conditional communication rules assigned to membranes. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 231–240, Tarragona, July 17-22 2003.

[590] R. Freund and M. Oswald. P systems with elementary graph productions. Technical Report 26, Rovira i Virgili University, 2003.

[591] R. Freund and M. Oswald. P systems with elementary graph productions. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 180–188, Tarragona, February 5-11 2003.

[592] R. Freund and M. Oswald. Modelling grammar systems by tissue P systems. In *Pre-Proceedings of Workshop on Grammar Systems, Computer and Automation Research Institute (SZTAKI) of the Hungarian Academy of Sciences (MTA)*, pages 162–179, Budapest, July 5-9 2004.

[593] R. Freund and M. Oswald. P systems with antiport rules for evolution rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[594] R. Freund and M. Oswald. P systems with antiport rules for evolution rules. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 183–192, Sevilla, Spain, February 2-7 2004.

[595] R. Freund and M. Oswald. P systems with dynamic channels transporting membrane vesicles. Submitted, 2004.

[596] R. Freund and M. Oswald. P systems with local graph productions. *New Generation Computing*, 22(4):365–375, August 2004.

[597] R. Freund and M. Oswald. P colonies working in the maximally parallel and in the sequential mode. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 49–56, 2005.

[598] R. Freund and M. Oswald. Tissue p systems with symport/antiport rules of one symbol are computationally universal. Submitted, 2005.

[599] R. Freund and M. Oswald. Tissue P systems with symport/antiport rules of one symbol are computationally universal. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 187–200, 2005.

[600] R. Freund and M. Oswald. P colonies and prescribed teams. *Intern. J. Computer Math.*, 2006.

[601] R. Freund and M. Oswald. Small universal antiport P systems and universal multiset grammars. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 51–64. Fénix Editora, 2006.

[602] R. Freund and M. Oswald. Tissue p systems with mate and drip operations. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[603] R. Freund and M. Oswald. Partial halting in P systems. *International Journal of Foundations of Computer Science*, 18(6):1215–1225, 2007.

[604] R. Freund and M. Oswald. Spiking neural p systems with inhibitory axons. In M. Sugisaka and H. Tanaka, editors, *Proceedings of the 12th Int. Symposium on Artificial Life and Robotics*, pages 509–512, Beppu, Oita, Japan, Jan 25-27 2007.

[605] R. Freund and M. Oswald. Regular omega-languages defined by finite extended spiking neural P systems. *Fundamenta Informaticae*, 83(1-2):65–73, 2008.

[606] R. Freund, M. Oswald, F. Freund, M. Margenstern, S. Verlan, and Y. Rogozhin. P systems with cutting/recombination rules assigned to membranes. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 241–251, Tarragona, July 17-22 2003.

[607] R. Freund, M. Oswald, and A. Păun. P systems generating trees. In *Preproceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 221–232, Milano, Italy, June 2004.

[608] R. Freund, M. Oswald, and T. Schirk. How a membrane agent buys goods in a membrane store. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[609] R. Freund, M. Oswald, and T. Schirk. How a membrane agent buys goods in a membrane store. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 93–102, Wuhan, China, September 2006.

[610] R. Freund, M. Oswald, and T. Schirk. How a membrane agent buys goods in a membrane store. *Progress in Natural Science*, 17(4):442–448, 2007.

[611] R. Freund, M. Oswald, and L. Staiger. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, July.

[612] R. Freund, M. Oswald, and L. Staiger. Omega-P automata with communication rules. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 252–265, Tarragona, July 17-22 2003.

[613] R. Freund and A. Păun. Membrane systems with symport/antiport: Universality results. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 270–287, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[614] R. Freund and A. Păun. P systems with active membranes and without polarizations. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[615] R. Freund and A. Păun. P systems with active membranes and without polarizations. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 193–205, Sevilla, Spain, February 2-7 2004.

[616] R. Freund and A. Paun. P systems with active membranes and without polarizations. *Soft Computing*, 9(9):657–663, September 2005.

[617] R. Freund and G. Păun. On deterministic P Systems. Submitted.

[618] R. Freund, G. Păun, and M. Pérez-Jiménez. Polarizationless p systems with active membranes working in the minimally parallel manner. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 131–156, Sevilla (Spain), January 29th - February 2 2007.

[619] R. Freund, G. Păun, and M. J. Pérez-Jiménez. Tissue-like P systems with channel-states. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[620] R. Freund, G. Păun, and M. J. Pérez-Jiménez. Tissue-like P systems with channel-states. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 206–223, Sevilla, Spain, February 2-7 2004.

[621] R. Freund, G. Păun, and M. J. Pérez-Jiménez. Tissue P systems with channel states. *Theoretical Computer Science*, 2004. In press.

[622] R. Freund, G. Paun, G. Rozenberg, and A. Salomaa. *Membrane Computing.* LNCS 3850. Springer-Verlag, 2006.

[623] R. Freund and S. Verlan. A formal framework for P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 317–330, Thessaloniki, Greece, 2007.

[624] R. Freund and S. Verlan. P systems working in the k-restricted minimally parallel derivation mode. In E. Csuhaj-Varjú, R. Freund, M. Oswald, and K. Salomaa, editors, *International Workshop on Computing with Biomolecules*, pages 43–52, 2008.

[625] P. Frisco. Membrane computing based on splicing: Improvements. Technical Report 140, University of Auckland, 2000.

[626] P. Frisco. Membrane computing based on splicing: Improvements. In *Pre-Proceedings Workshop on Multiset Processing*, Curtea de Arges, Romania, August 2000.

[627] P. Frisco. On two variants of splicing P systems. *Romanian Journal of Information Science and Technology*, 4(1-2):89–100, 2001.

[628] P. Frisco. About P systems with symport/antiport. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[629] P. Frisco. About P systems with symport/antiport. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 224–236, Sevilla, Spain, February 2-7 2004.

[630] P. Frisco. The Conformon-P System: A molecular and cell biology-inspired computability model. *Theoretical Computer Science*, 312(2-3):295–319, January 2004.

[631] P. Frisco. *Theory of Molecular Computing. Splicing and Membrane Systems*. PhD thesis, Leiden University, The Netherlands, 2004.

[632] P. Frisco. About p systems with symport/antiport. *Soft Computing*, 9(9):664–672, September 2005.

[633] P. Frisco. Infinite hierarchies of conformon-p systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 357–371, Leiden, The Netherlands, 2006.

[634] P. Frisco. Conformon-p systems with negative values. In G. P. G. Eleftherakis, P. Kefalas, editor, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 331–344, Thessaloniki, Greece, 2007.

[635] P. Frisco. From molecular computing to modelling with conformons and computing by observation. *Ramanujan Math. Soc. Lecture Notes Series*, (3):85–101, 2007.

[636] P. Frisco. *Computing with Cells. Advances in Membrane Computing*. Oxford University Press, 2008.

[637] P. Frisco and D. Corne. Advances in modeling the dynamics of hiv infection with conformon-P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 21–32, Thessaloniki, Greece, 2007.

[638] P. Frisco and D. W. Corne. Dynamics of hiv infection studied with cellular automata and conformon-p systems. Submitted, 2006.

[639] P. Frisco and D. W. Corne. Dynamics of hiv infection studied with conformon-p systems. In *The Seventh International Conference on Systems Biology, October 9-13, 2006, Yokohama, Japan*, Yokohama, Japan, october 9–13 2006.

[640] P. Frisco and R. T. Gibson. A simulator and an evolution program for conformon-P systems. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 57–60, 2005.

[641] P. Frisco and R. T. Gibson. A simulator for conformon P systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 355–372, 2005.

[642] P. Frisco and H. J. Hoogeboom. Simulating counter automata by P systems with symport/antiport. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[643] P. Frisco and H. J. Hoogeboom. Simulating counter automata by P systems with symport/antiport. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 288–301, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[644] P. Frisco and H. J. Hoogeboom. P systems with symport/antiport simulating counter automata. *Acta Informatica*, 41(2-3):145–170, December 2004.

[645] P. Frisco, H. J. Hoogeboom, and P. Sant. A direct construction of a universal P system. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[646] P. Frisco, H. J. Hoogeboom, and P. Sant. A direct construction of a universal P system. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[647] P. Frisco, H. J. Hoogeboom, and P. Sant. A direct construction of a universal P system. *Fundamenta Informaticae*, 49(1-3):103–122, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[648] P. Frisco and S. Ji. Info-energy P systems. In *Proceedings DNA 8 conference*, Sapporo, Japan, June 2002. Hokkaido University.

[649] P. Frisco and S. Ji. Towards a hierarchy of info-energy P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[650] P. Frisco and S. Ji. Towards a hierarchy of conformons-P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597

of *Lecture Notes in Computer Science*, pages 302–318, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[651] P. Frisco and G. Păun. No cycles in compartments. starting from conformon-P, systems. In D. Díaz-Pernil, C. Graciani, M. A. Gutiérrez-Naranjo, G. Păun, I. Pérez-Hurtado, and A. Riscos-Núñez, editors, *Sixth Brainstorming Week on Membrane Computing*, pages 157–179, 2008.

[652] P. Frisco and P. Systems. Petri nets and program machine. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 336–354, 2005.

[653] J. A. Frutos, F. Arroyo, and A. Arteta. Usefulness states in new P system communication architectures. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 169–186, 2009.

[654] C. Fu, Z. Qi, and J. You. Encoding P systems in non-interleaving π-Calculus. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 233–244, Milano, Italy, June 2004.

[655] K. Furukawa, T. Sato, and T. Chikayama, editors. *New Generation Computing. Special Feature. Membrane Computing*, volume 22. Ohmsha, Ltd. and Springer, August 2004.

[656] Y. Gao and H. J. Hoogeboom. P systems with single passenger carriers. *International Journal of Foundations of Computer Science*, 18(6):1227–1235, 2007.

[657] M. Garcia-Arnau, D. Manrique, A. Rodriguez-Paton, and P. Sosik. A p system and a constructive membrane-inspired dna algorithm for solving the maximum clique problem. *BioSystems*, 90(3):687–697, 2007.

[658] M. Garcia-Arnau, D. Perez, A. Rodriguez-Paton, and P. Sosik. Spiking neural p systems: Stronger normal forms. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 157–178, Sevilla (Spain), January 29th - February 2 2007.

[659] M. Garcia-Arnau, D. Perez, A. Rodriguez-Paton, and P. Sosik. On the power of elementary operations in spiking neural p systems. *Natural Computing*, to appear, 2008.

[660] D. Genova. Models in membrane computing. In *Joint Annual Meeting MAA Florida Section and FTYCMA, Univ. of Central Florida*, February 2004.

[661] H. Georgescu. An efficient way to model p systems by x machine systems. *Studia Univ. Babes-Bolyai, Informatica*, 46(1):3–17, 2001.

[662] A. Georgiou and M. Gheorghe. Generative devices used in graphics. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 266–272, Tarragona, July 17-22 2003.

[663] A. Georgiou, M. Gheorghe, and F. Bernardini. *Membrane Based Devices Used in Computer Graphics*, pages 253–280. Springer-Verlag, 2005.

[664] R. Gershoni, E. Keinan, G. Păun, R. Piran, T. Ratner, and S. Shoshani. Research topics arising from the (planned) P systems implementation experiment in Technion. In D. Díaz-Pernil, C. Graciani, M. A. Gutiérrez-Naranjo, G. Păun, I. Pérez-Hurtado, and A. Riscos-Núñez, editors, *Sixth Brainstorming Week on Membrane Computing*, pages 183–192, 2008.

[665] M. Gheorghe. P systems: A modelling language. In *Pre-Proc. Unconventional Programming Paradigms, UPP04, Le Mont Saint-Michel*, pages 23–27, September 2004.

[666] M. Gheorghe. P systems - a new computational approach in systems biology. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 7–14, Wuhan, China, September 2006.

[667] M. Gheorghe and M. Holcombe, editors. *BioSystems-Cell Computing*, volume 70. Elsevier Ireland Ltd., July 2003. Pages 83–186.

[668] M. Gheorghe, M. Holcombe, and P. Kefalas. Computational models of collective foraging. In *Proc. Fourth Intern. Workshop on Information Processing in IPCAT 2001, Cells and Tissues*, Brussels, August 2001.

[669] M. Gheorghe, M. Holcombe, and P. Kefalas. Eilenberg P systems: a bio-computational model. In *Proc. First Balkan Conf. on Informatics*, pages 147–160, Thessaloniki, Greece, 2003.

[670] M. Gheorghe and F. Ipate. On testing P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 204–216, 2009.

[671] M. Gheorghe, N. Krasnogor, and M. Camara. P systems applications to systems biology. *Biosystems*, 91(3):435–437, 2008.

[672] M. Gheorghe, N. Krasnogor, G. Paun, and G. Rozenberg. Membrane computing model for tiles self-assembly. In *First Intern. Symp. on Cellular Computing, Warwick*, December 2004.

[673] M. Gheorghe, V. Manca, and F. J. Romero-Campero. Deterministic and stochastic P systems for modeling cellular processes. *Natural Computing*, to appear.

[674] M. Gheorghe, C. Martín-Vide, V. Mitrana, and M. J. Pérez-Jiménez. An agent based approach of collective foraging. In J. Mira and J. R. Alvarez, editors, *Artificial Neural Nets. Problem Solving Methods 7th International Work-Conference on Artificial and Natural Neural Networks, IWANN 2003, Maó, Menorca, Spain, June 3-6. Proceedings, Part II.*, volume 2687 of *Lecture Notes in Computer Science*, pages 639–645. Springer, 2003.

[675] M. Gheorghe and G. Păun. Computing by self-assembly: Dna molecules, polyominoes, cells. Submitted, 2005.

[676] J. L. Giavitto and O. Michel. MGS: Implementing a unified view on four biologically inspired computing models. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[677] J.-L. Giavitto and O. Michel. MGS: Implementing a unified view on four biologically inspired computing models. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[678] J.-L. Giavitto and O. Michel. Accretive rules in Cayley P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[679] J. L. Giavitto and O. Michel. The topological structures of membrane computing. *Fundamenta Informaticae*, 49(1-3):123–145, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[680] J.-L. Giavitto and O. Michel. Accretive rules in Cayley P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 319–338, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[681] F. J. Gil, L. Fernández, F. Arroyo, and J. A. de Frutos. Parallel algorithm for P systems implementation in multiprocessors. In M. Sugisaka and H. Tanaka, editors, *13th International Symposium on Artificial Life and Robotics*, pages 491–495, 2008.

[682] D. Gilbert, R. Breitling, M. Heiner, and R. Donaldson. An introduction to biomodel engineering, illustrated for signal transduction pathways. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 13–28, 2009.

[683] M. Gontineac. Mealy membrane automata: an automata-like approach to membrane computing. In *Proc. of ICCCC 2006, Oradea, Romania, June 2006*, pages 222–227.

[684] C. Graciani and A. Riscos-Nunez. Looking for simple common schemes to design recognizer p systems with active membranes that solve numerical decision problems. UC05, accepted, 2005.

[685] C. Graciani and A. Riscos-Nunez. Looking for simple common schemes to design recognizer p systems with active membranes that solve numerical decision problems. In *CiE2005: New Computational Paradigms*, Amsterdam, 2005.

[686] C. Graciani-Diaz, M. Gutiérrez-Naranjo, and M. Pérez-Jiménez. A membrane computing model for ballistic depositions. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Riscos-Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 179–198, Sevilla (Spain), January 29th - February 2 2007.

[687] C. Graciani-Díaz and A. Riscos-Núñez. Looking for simple common schemes to design recognizer P systems with active membranes that solve numerical decision problems. In *Unconventional Computation 4th International Conference, UC 2005, Sevilla, Spain, October 3-7, 2005. Proceedings*, volume 3699 of *Lecture Notes in Computer Science*. Springer Berlin / Heidelberg, 2005.

[688] R. Gramatovici and G. Bel-Enguix. *Parsing with P Automata*, pages 389–412. Springer-Verlag, 2005.

[689] A. Gutierrez, L. Fernández, F. Arroyo, and S. Alonso. Suitability of using microcontrollers in implementing new P system communication architectures. In M. Sugisaka and H. Tanaka, editors, *13th International Symposium on Artificial Life and Robotics*, pages 496–499, 2008.

[690] A. Gutiérrez, L. Fernandez, F. Arroyo, and G. Bravo. Optimizing membrane system implementation with multisets and evolution rules compression. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 345–362, Thessaloniki, Greece, 2007.

[691] M. Gutiérrez-Naranjo. Fractals and p systems. Manuscript, 2006.

[692] M. Gutiérrez-Naranjo, M. P. Jimenez, and F. R. Campero. A linear solution for qsat with membrane creation. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 395–409, 2005.

[693] M. Gutiérrez-Naranjo, M. P. Jimenez, A. R. Nunez, and F. R. Campero. On the power of dissolution in p systems with active membranes. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 373–394, 2005.

[694] M. Gutiérrez-Naranjo and M. Perez-Jimenez. P systems with active membranes, without polarizations and without dissolution: a characterization of p. UC05, accepted, 2005.

[695] M. Gutiérrez-Naranjo, M. Pérez-Jiménez, and A. Riscos-Núñez. A fast P system for finding a balanced 2-partition. *Soft Computing*, 9(9):673–678, September 2005.

[696] M. Gutiérrez-Naranjo, M. Perez-Jimenez, A. Riscos-Nunez, and F. Romero-Campero. A membrane computing view on tumours. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006 Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[697] M. Gutiérrez-Naranjo, M. Perez-Jimenez, A. Riscos-Nunez, and F. Romero-Campero. A membrane computing view on tumours. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 103–112, Wuhan, China, September 2006.

[698] M. Gutiérrez-Naranjo, M. Perez-Jimenez, A. Riscos-Nunez, and F. Romero-Campero. On the efficiency of cell-like and tissue-like recognizer membrane systems. In *Proceedings of NICSO*, 2006.

[699] M. Gutiérrez-Naranjo, M. Pérez-Jiménez, A. Riscos-Nunez, F. Romero-Campero, and A. Romero-Jiménez. *Characterizing tractability by cell-like membrane systems*. World Scientific, Singapore.

[700] M. Gutiérrez-Naranjo, M. Perez-Jimenez, and F. Romero-Campero. A linear solution of subset sum problem by using membrane creation. In J. Mira and J. Alvarez, editors, *IWINAC 2005, Las Palmas de Gran Canaria*, LNCS 3561, pages 258–267. Springer, 2005.

[701] M. A. Gutiérrez-Naranjo, A. Leporati, and C. Zandron. Converting integer numbers from binary to unary notation with P systems. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 201–208, 2005.

[702] M. A. Gutiérrez-Naranjo and M. J. Pérez-Jiménez. P systems with membrane creation and rule input. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 209–224, 2005.

[703] M.-A. Gutiérrez-Naranjo and M.-J. Pérez-Jiménez. Fractals and P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 65–86. Fénix Editora, 2006.

[704] M. A. Gutiérrez-Naranjo and M. J. Pérez-Jiménez. Hebbian learning from spiking neural P systems view. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 217–230, 2009.

[705] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Solving numerical NP-complete problems using P systems with active membranes: the partition problem and beyond. In *EMCC Workshop*, Vienna, November 2003.

[706] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. An efficient cellular solution for the partition problem. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[707] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. An efficient cellular solution for the Partition Problem. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 237–246, Sevilla, Spain, February 2-7 2004.

[708] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. On descriptive complexity of P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 245–255, Milano, Italy, June 2004.

[709] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Towards a programming language in cellular computing. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[710] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Towards a programming language in cellular computing. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 247–257, Sevilla, Spain, February 2-7 2004.

[711] M. A. Gutierrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Nuñez. *Available Membrane Computing Software*, pages 411–438. Springer-Verlag, 2005.

[712] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Multidimensional sevilla carpets associated with P systems. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 225–236, 2005.

[713] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. A simulator for confluent P systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 169–184, 2005.

[714] M.-A. Gutiérrez-Naranjo, M.-J. Pérez-Jiménez, and A. Riscos-Núñez. An approach to the degree of parallelism in P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 87–104. Fénix Editora, 2006.

[715] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and A. Riscos-Núñez. On the degree of parallelism in membrane systems. *Theoretical Computer Science*, 372(2-3):183–195, 2007.

[716] M. A. Gutiérrez-Naranjo, M. J. Perez-Jimenez, A. Riscos-Nunez, and F. J. Romero-Campero. Characterizing tractability with membrane creation. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 61–68, 2005.

[717] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, A. Riscos-Núñez, and F. J. Romero-Campero. P systems with active membranes, without polarizations and without dissolution: A characterization of P. In *Unconventional Computation 4th International Conference, UC 2005, Sevilla, Spain, October 3-7, 2005. Proceedings*, volume 3699 of *Lecture Notes in Computer Science*. Springer Berlin / Heidelberg, 2005.

[718] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, A. Riscos-Núñez, and F. J. Romero-Campero. Computational efficiency of dissolution rules in membrane systems. *International Journal of Computer Mathematics*, 83(7):593–611, 2006.

[719] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, A. Riscos-Núñez, and F. J. Romero-Campero. How to express tumours using membrane systems. *Progress in Natural Science*, 17(4):449–457, 2007.

[720] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and F. J. Romero-Campero. Simulating avascular tumors with membrane systems. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 185–196, 2005.

[721] M. A. Gutiérrez-Naranjo, M. J. Pérez-Jiménez, and F. J. Romero-Campero. Solving SAT with membrane creation. In *CiE2005: New Computational Paradigms*, Amsterdam, 2005.

[722] M. A. Gutiérrez-Naranjo and V. Rogozhin. Deductive databases and P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[723] M. A. Gutiérrez-Naranjo and V. Rogozhin. Deductive databases and P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 258–263, Sevilla, Spain, February 2-7 2004.

[724] E. Gutuleac. Descriptive times membrane petri nets for modelling of parallel computing. In *Proc. of ICCCC 2006, Oradea, Romania, June 2006*, pages 256–261.

[725] C. Haiming, T.-O. Ishdorj, and G. Păun. Computing along the axon. *Progress in Natural Science*, 17(4):417–423, 2007.

[726] T. Head. Aqueous simulations of membrane computations. *Romanian Journal of Information Science and Technology*, 2001. To appear.

[727] D. Hemalatha, K. Dersanambika, K. Subramanian, and C. S. H. Nagore. Array-rewriting p systems with conditional communication. *Ramanujan Math. Soc. Lecture Notes Series*, (3):155–160, 2007.

[728] S. Hemalatha. *A Study on Rewriting P Systems, Splicing Grammar Systems and Picture Array Languages*. PhD thesis, University of Chennai, India, India, 2007.

[729] T. Hinze, R. Fassler, T. Lenser, N. Matsumaru, and P. Dittrich. Event-driven metamorphoses of P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 231–245, 2009.

[730] T. Hinze, S. Hayat, T. Lenser, N. Matsumaru, and P. Dittrich. Hill kinetics meets P systems: A case study on gene regulatory networks as computing agents in silico and in vivo. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 363–382, Thessaloniki, Greece, 2007.

[731] T. Hinze, T. Lenser, and P. Dittrich. A protein substructure based p system for description and analysis of cell signalling networks. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 372–286, Leiden, The Netherlands, 2006.

[732] P. Hogeweg. Multilevel modeling of morphogenesis. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 29–35, 2009.

[733] M. Holcombe, L. Holcombe, M. Gheorghe, and N. Talbot. A hybrid machine model of rice blast fungus magnaporthe grisea. In *Proc. Fourth*

Intern. Workshop on Information Processing in IPCAT 2001, Cells and Tissues, Brussels, August 2001.

[734] H. J. Hoogeboom. Carriers and counters. P systems with carriers vs. (blind) counter automata. In M. Ito and M. Toyama, editors, *Developments in Language Theory, 6th International Conference, DLT 2002, Kyoto, Japan, September 18-21, 2002, Revised Papers*, volume 2450 of *Lecture Notes In Computer Science*, pages 140–151. Springer-Verlag Heidelberg, 2003.

[735] C. Huang and X. Dong. Maximally parallel attribute on P systems: Properties and applications. *Progress in Natural Science*, 18(5):629–632, 2008.

[736] L. Huang, X.-X. He, N. Wang, and Y. Xie. P systems based multi-objective optimization algorithm. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 113–123, Wuhan, China, September 2006.

[737] L. Huang and I. H. Suh. Controller design for a marine diesel engine using membrane computing. *International Journal of Innovative Computing, Information and Control*, 5(4):899–912, 2009.

[738] L. Huang, L. Sun, N. Wang, and X. Jin. Multiobjective optimization of simulated moving bed by tissue P system. *Chinese Journal of Chemical Engineering*, 15(5):683–690, 2007.

[739] L. Huang and N. Wang. A variant of p systems for optimization. *Neurocomputing*, to appear.

[740] L. Huang and N. Wang. An optimization algorithms inspired by membrane computing. In L. Jiao, editor, *Proceedings ICNC*, volume 4222 of *Lecture Notes In Computer Science*, pages 49–55. Springer, 2006.

[741] L. Huang and N. Wang. P systems based multi-objective optimization algorithm. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[742] O. Ibarra. Some recent results concerning deterministic p systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 24–25, 2005.

[743] O. Ibarra and A. Paun. Counting time in computing with cells. In *DNA11, London, Ontario, Canada*, 2005.

[744] O. Ibarra, A. Paun, G. Păun, A. Rodriguez-Paton, P. Sosik, and S.Woodworth. Normal forms for spiking neural p systems. Submitted, 2006.

[745] O. Ibarra and G. Păun. Characterizations of context-sensitive languages and other language classes in terms of symport/antiport p systems. Submitted, 2005.

[746] O. Ibarra and G. Păun. Membrane computing: A general view. In *Annals of European Academy of Sciences*, to appear, 2008.

[747] O. Ibarra and S. Woodworth. On bounded symport/antiport p systems. In *DNA11, London, Ontario, Canada*, 2005.

[748] O. Ibarra and S. Woodworth. On symport/antiport p systems with one or two symbols. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 75–82, 2005.

[749] O. Ibarra and S. Woodworth. Characterizations of some restricted spiking neural p systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 387–396, Leiden, The Netherlands, 2006.

[750] O. Ibarra and S. Woodworth. Characterizations of some restricted spiking neural p systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 387–396, Leiden, The Netherlands, 2006.

[751] O. Ibarra and H.-C. Yen. On deterministic catalytic p systems. Submitted, 2005.

[752] O. H. Ibarra. The number of membranes matters. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 273–285, Tarragona, July 17-22 2003.

[753] O. H. Ibarra. The number of membranes matters. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 218–231. Springer, July 2003.

[754] O. H. Ibarra. On determinism versus nondeterminism in P Systems. Submitted, 2004.

[755] O. H. Ibarra. On membrane hierarchy in P systems. *Theoretical Computer Science*, 2004. In press.

[756] O. H. Ibarra. On the computational complexity of membrane systems. *Theoretical Computer Science*, 320(1):89–109, June 2004.

[757] O. H. Ibarra. P systems: Some recent results and research problems. In *Pre-Proc. Unconventional Programming Paradigms, UPP04, Le Mont Saint-Michel*, pages 47–54, September 2004.

[758] O. H. Ibarra, Z. Dang, and O. Egecioglu. Catalytic P systems, semilinear sets, and vector addition systems. *Theoretical Computer Science*, 312(2-3):379–399, January 2004. A short version of this paper (without proofs) was presented at the 28th International Symposium on Mathematical Foundations of Computer Science (MFCS 2003). This research was supported in part by NSF Grants IIS-0101134 and CCR02-08595.

[759] O. H. Ibarra, Z. Dang, O. Egecioglu, and G. Saxena. Characterizations of catalytic membrane computing systems (extended abstract). In P. V. Branislav Rovan, editor, *Mathematical Foundations of Computer Science 2003: 28th International Symposium, MFCS 2003, Bratislava, Slovakia, August 25-29, 2003, Proceedings*, volume 2747 of *Lecture Notes In Computer Science*, pages 480–489. Springer-Verlag Heidelberg, December 2003.

[760] O.-H. Ibarra, A. Paun, G. Paun, A. Rodríguez-Patón, P. Sosik, and S. Woodworth. Normal forms for spiking neural P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 105–136. Fénix Editora, 2006.

[761] O. H. Ibarra, A. Păun, G. Păun, A. Rodríguez-Patón, P. Sosík, and S. Woodworth. Normal forms for spiking neural P systems. *Theoretical Computer Science*, 372(2-3):196–217, 2007.

[762] O. H. Ibarra, A. Păun, and A. Rodríguez-Patón. Sequentiality induced by spike numbers in SNP systems. In *Proceedings of the 14th International Meeting on DNA Computing*, pages 36–46, 2008.

[763] O. H. Ibarra and S. Woodworth. Characterizing regular languages by spiking neural P systems. *International Journal of Foundations of Computer Science*, 18(6):1247–1256, 2007.

[764] O. H. Ibarra and S. Woodworth. Spiking neural P systems: Some characterizations. In E. Csuhaj-Varjú and Z. Ésik, editors, *Fundamentals of Computation Theory, 16th International Symposium*, volume 4639 of *Lecture Notes in Computer Science*, pages 23–37, 2007.

[765] O. H. Ibarra, H.-C. Yen, and Z. Dang. The power of maximal parallelism in P Systems. Submitted, 2004. To appear in Proceedings of DLT'04 Lecture Notes in Computer Science, Springer. 2004.

[766] J. Inouye. Fibonacci sequence generation using membrane computing. In *The 2004 Intern. Multiconference in Computer Science and Computer Engineering, Las Vegas*, pages 384–389, 2004.

[767] J. Inouye. Quantum simulation using membrane computing. In *The 2004 Intern. Multiconference in Computer Science and Computer Engineering, Las Vegas*, pages 403–409, 2004.

[768] J. Inouye and P. Dey. Membranous filter sort. *WSEA Transactions on Biology and Medicine*, 1(4), October 2004. ISSN: 1109-9518.

[769] M. Ionescu. *Membrane Computing. Traces, Neural Inspired Models Controls*. PhD thesis, Universitat Rovira i Virgili, Tarragona, Spain, 2008.

[770] M. Ionescu and T. Ishdorj. Boolean circuits and a dna algorithm in membrane computing. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 410–438, 2005.

[771] M. Ionescu, C. Martín-Vide, A. Păun, and G. Păun. Unexpected universality results for three classes of P systems with symport/antiport. In M. Hagiya and A. Ohuchi, editors, *DNA Computing: 8th International Workshop on DNA-Based Computers, DNA8 Sapporo, Japan, June 10-13, 2002. Revised Papers*, volume 2568 of *Lecture Notes In Computer Science*, pages 281–290. Springer-Verlag Heidelberg, 2003.

[772] M. Ionescu, C. Martín-Vide, A. Păun, and G. Păun. Unexpected universality results for three classes of P systems with symport/antiport. *Natural Computing*, 2(4):337–348, December 2003.

[773] M. Ionescu, C. Martín-Vide, and G. Păun. P systems with symport/antiport rules: The traces of objects. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[774] M. Ionescu, A. Paun, G. Paun, and M. Perez-Jimenez. Computing with spiking neural p systems: Traces and small universal systems. In C. Mao, Y. Yokomori, and B.-T. Zhang, editors, *Proceedings DNA12*, pages 32–42, Seul, June 2006.

[775] M. Ionescu, G. Păun, and T. Yokomori. Spiking neural-like p systems. Submitted, 2005.

[776] M. Ionescu and D. Sburlan. On P systems with promoters/inhibitors. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[777] M. Ionescu and D. Sburlan. On P systems with promoters/inhibitors. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 264–280, Sevilla, Spain, February 2-7 2004.

[778] M. Ionescu and D. Sburlan. On P systems with promoters/inhibitors. *Journal of Universal Computer Science*, 10(5):581–599, May 2004.

[779] M. Ionescu and D. Sburlan. P systems with adjoining controlled communication rules. In E. Csuhaj-Varjú and Z. Ésik, editors, *Fundamentals of Computation Theory, 16th International Symposium*, volume 4639 of *Lecture Notes in Computer Science*, pages 353–364, 2007.

[780] M. Ionescu and D. Sburlan. P systems with adjoining controlled communication rules. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 199–212, Sevilla (Spain), January 29th - February 2 2007.

[781] M. Ionescu and D. Sburlan. Several applications of spiking neural p systems. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 213–226, Sevilla (Spain), January 29th - February 2 2007.

[782] M. Ionescu and D. Sburlan. Some applications of spiking neural P systems. In G. Eleftherakis, P. Kefalas, and G. Păun, editors, *Proceedings of the Eighth Workshop on Membrane Computing*, pages 383–394, 2007.

[783] M. Ionescu and D. Sburlan. Some applications of spiking neural P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 383–394, Thessaloniki, Greece, 2007.

[784] M. Ionescu and D. Sburlan. Some applications of spiking neural P systems. *Computing and Informatics*, 27(3+):515–528, 2008.

[785] F. Ipate and M. Gheorghe. Testing non-deterministic stream X-machine models and P systems. In G. Ciobanu, editor, *Second International Meeting on Membrane Computing and Biologically Inspired Process Calculi*, pages 117–130, 2008.

[786] T.-O. Ishdorj. Minimal parallelism for polarizationless p systems. Submitted, 2006.

[787] T. O. Ishdorj. *Membrane Computing, Neural Inspiration, Gene Assembly in Ciliates*. PhD thesis, Universidad de Sevilla, Spain, Sevilla, Spain, 2007.

[788] T. O. Ishdorj and M. Ionescu. Replicative-distribution rules in P Systems with active membranes. Submitted, 2004. First International Colloquium on THEORETICAL ASPECTS OF COMPUTING Guiyang, China 20 - 24 September 2004.

[789] T.-O. Ishdorj and A. Leporati. Uniform solutions to SAT and 3-SAT by spiking neural P, systems with pre-computed resources. *Natural Computing*, 7(4):519–534, 2008.

[790] T.-O. Ishdorj, A. Leporati, L. Pan, X. Zeng, and X. Zhang. Deterministic solutions to qsat and q3sat by spiking neural p systems with pre-computed resources. *Theoretical Computer Science*.

[791] M. Ito, C. Martín-Vide, and G. Păun. *A characterization of Parikh sets of ET0L languages in terms of P systems*, pages 239–254. World Scientific, Singapore, 2001.

[792] J. Jack, A. Păun, and A. Rodríguez-Patón. Effects of HIV-1 proteins on the Fas-mediated apoptotic signaling cascade: A computational study of latent CD4+, T cell activation. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 246–259, 2009.

[793] J. Jack, A. Rodríguez-Patón, O. H. Ibarra, and A. Păun. Discrete nondeterministic modeling of the Fas pathway. *International Journal of Foundations of Computer Science*, 19(5):1147–1162, 2008.

[794] D. Jackson, M. Gheorghe, M. Holcombe, and F. Bernardini. An agent-based behavioural model of monomorium pharaonis colonies. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 232–239. Springer, July 2003.

[795] S. Ji. The Bhopalator: An information/energy dual model of the living cell. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[796] S. Ji. The Bhopalator: An information/energy dual model of the living cell. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[797] S. Ji. The Bhopalator: An information/energy dual model of the living cell. *Fundamenta Informaticae*, 49(1-3):147–165, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[798] S. Ji. Towards a unified theory of computing, mind, and signs. Technical Report 26, Rovira i Virgili University, 2003.

[799] S. Ji. Towards a unified theory of computing, mind, and signs. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 189–197, Tarragona, February 5-11 2003.

[800] S. Ji and G. Ciobanu. Towards the modeling of cell communication and computation using the shape algebra of biopolymers. psystems.disco.unimib.it, 2002. psystems.disco.unimib.it.

[801] N. Jonoska and M. Margenstern. Tree operations in P systems and λ-calculus. *Fundamenta Informaticae*, 59(1):67–90, 2004.

[802] L. Kari, C. Martín-Vide, and A. Păun. *On the Universality of P systems with Minimal Symport/Antiport Rules*, volume 2950 of *Lecture Notes in Computer Science*, pages 254–265. Springer, 2004.

[803] L. Kari and G. Rozenberg. The many facets of natural computing. *Communications of the ACM*, 51(10):72–83, 2008.

[804] P. Kefalas, G. Eleftherakis, M. Holcombe, and M. Gheorghe. Simulation and verification of P systems through communicating X-machines. *BioSystems*, 70(2):135–148, July 2003.

[805] P. Kefalas, I. Stamatopoulou, G. Eleftherakis, and M. Gheorghe. Transforming state-based models to P systems models in practice. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 260–273, 2009.

[806] P. Kefalas, I. Stamatopoulou, and M. Gheorghe. Principles of transforming communicating X-machines to population P systems. In G. Vaszil, editor, *Proceedings of the International Workshop on Automata for Cellular and Molecular Computing*, pages 76–89, 2007.

[807] J. Kelemen. Plain talk about language-theoretic models of multi-agent systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 395–404, Thessaloniki, Greece, 2007.

[808] J. Kelemen. Some questions inspired by (membrane computing motivated) language-theoretic models hardware. *Computing and Informatics*, 27(3+):571–580, 2008.

[809] J. Kelemen, A. Kelemenova, and G. Păun. P colonies. In *Workshop on Artificial Chemistry, ALIFE9*, Boston, Massachusetts, USA, September 12-15 2004.

[810] C. Kevorchian. An algebraic topology approach of membrane computing. In *Proc. AIDC'2003, Craiova, Romania.*, 2003.

[811] M. Kirkilionis, M. Domijan, M. Eigel, E. George, M. Li, and L. Sbano. A definition of cellular interface problems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 36–62, 2009.

[812] M. Kirkilionis, M. Domijan, M. Eigel, E. George, M. Li, and L. Sbano. A definition of cellular interface problems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 36–62, 2009.

[813] J. Kleijn and M. Koutny. Synchrony and asynchrony in membrane systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 21–39, Leiden, The Netherlands, 2006.

[814] J. Kleijn and M. Koutny. Processes of membrane systems with promoters and inhibitors. *Theoretical Computer Science*, 404(1-2):112–126, 2008.

[815] J. Kleijn and M. Koutny. A Petri net model for membrane systems with dynamic structure. *Natural Computing*, to appear.

[816] J. Kleijn, M. Koutny, and G. Rozenberg. Towards a petri net semantics for membrane systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 439–460, 2005.

[817] J. Kleijn, M. Koutny, and G. Rozenberg. Process semantics for membrane systems. Submitted, 2006.

[818] M. Kogler. Controlled use of partitionings of rule sets in (tissue) P systems. Master's thesis, Faculty of Computer Science. TU Vienna, Vienna, Austria, September 2009.

[819] W. Korczynski. P Systems as a tool to deal with concurrency in accounting. Submitted, 2004.

[820] W. Korczynski. Transformacje systemow Pauna jako model przeksztalcen systemowych. Technical Report W2/2003, WSU Kielce, 2004. Raport z Badan Grantu W2/2003.

[821] W. Korczynski. Paun's systems and accounting. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 461–464, 2005.

[822] W. Korczynski. Paun's systems as models of economic systems. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[823] W. Korczynski. Paun's systems as models of economic systems. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 124–130, Wuhan, China, September 2006.

[824] W. Korczynski. Paun's systems as models of economic systems. *Progress in Natural Science*, 17(4):466–470, 2007.

[825] W. Korczynski, G. Wawrzola, and S. Wawrzola. On a reconstruction problem for membrane systems. In *Proceedings of the Second Conference on Tools and Methods of Data Transformation*. WSU Kielce, 2004.

[826] W. Kowczynski. On a model of economic systems. In *Proceedings of the Second Conference on Tools and Methods of Data Transformation*. WSU Kielce, 2004.

[827] A. Krassovitskiy, Y. Rogozhin, and S. Verlan. One-sided insertion and deletion: traditional and P systems case. In E. Csuhaj-Varjú, R. Freund, M. Oswald, and K. Salomaa, editors, *International Workshop on Computing with Biomolecules*, pages 51–63, 2008.

[828] S. Krishna. Combining brane calculus and membrane computing. Submitted, 2006.

[829] S. Krishna. Combining brane calculus and membrane computing. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 131–143, Wuhan, China, September 2006.

[830] S. Krishna. Combining brane calculus and membrane computing. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[831] S. Krishna. Universality results for a brane calculus. *Theoretical Computer Science*, 2006. ?

[832] S. Krishna. On the efficiency of a variant of p systems with mobile membranes. *Ramanujan Math. Soc. Lecture Notes Series*, (3):171–178, 2007.

[833] S. Krishna and R. Rama. *Towards reducing parallelism in P systems.* World Scientific, Singapore, 2006.

[834] S. Krishna and R. Rama. An infinite hierarchy for some variants of p systems. *Ramanujan Math. Soc. Lecture Notes Series*, (3):179–185, 2007.

[835] S.-N. Krishna. P systems with symport/antiport: The traces of RBCs. In G. Mauri, G. Păun, M. J. Pérez-Jiménez, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing. International Workshop WMC5, Milano, Italy, 2004, LNCS, Springer, 2005 (TO APPEAR).*

[836] S. N. Krishna. Computing with simple P systems. Technical Report 140, University of Auckland, 2000.

[837] S.-N. Krishna. Computing with simple P systems. In *Pre-Proceedings Workshop on Multiset Processing*, Curtea de Arges, Romania, August 2000.

[838] S. N. Krishna. Infinite hierarchies on some variants of P Systems. Submitted, 2002.

[839] S.-N. Krishna. *Languages of P Systems. Computability and Complexity.* PhD thesis, Indian Institute of Technology, Madras, India, 2002.

[840] S.-N. Krishna. Universality with RBC-like objects. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 256–267, Milano, Italy, June 2004.

[841] S. N. Krishna. On the efficiency of a variant of P systems with mobile membranes. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 237–246, 2005.

[842] S. N. Krishna. The power of mobility: four membranes suffice. In *CiE2005: New Computational Paradigms*, Amsterdam, 2005.

[843] S. N. Krishna. On the computational power of flip-flop proteins on membranes. In S. B. Cooper, B. Löwe, and A. Sorbi, editors, *Proceedings of the 3rd conference on Computability in Europe: Computation and Logic in the Real World*, volume 4497 of *Lecture Notes in Computer Science*, pages 695–704, 2007.

[844] S. N. Krishna. Universality results for P systems based on brane calculi operations. *Theoretical Computer Science*, 371(1-2):83–105, 2007.

[845] S. N. Krishna. The expressiveness of concentration controlled P systems. In C. S. Calude, J. F. Costa, R. Freund, M. Oswald, and G. Rozenberg, editors, *Proceedings of the 7th international conference on Unconventional Computing*, volume 5204 of *Lecture Notes in Computer Science*, pages 96–110, 2008.

[846] S. N. Krishna and G. Ciobanu. On the computational power of enhanced mobile membranes. In A. Beckmann, C. Dimitracopoulos, and B. Löwe, editors, *Proceedings of the 4th conference on Computability in Europe: Logic and Theory of Algorithms*, volume 5028 of *Lecture Notes in Computer Science*, pages 326–335, 2008.

[847] S. N. Krishna, K. Krithivasan, and R. Rama. P systems with picture objects. *Acta Cybernetica*, 15(1):53–74, 2001.

[848] S. N. Krishna, K. Lakshmanan, and R. Rama. Hybrid P systems. *Romanian Journal of Information Science and Technology*, 4(1-2):111–123, 2001.

[849] S. N. Krishna, K. Lakshmanan, and R. Rama. On the power of P systems with contextual rules. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[850] S.-N. Krishna, K. Lakshmanan, and R. Rama. On the power of P systems with contextual rules. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[851] S. N. Krishna, K. Lakshmanan, and R. Rama. On the power of P systems with contextual rules. *Fundamenta Informaticae*, 49(1-3):167–178, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[852] S.-N. Krishna, K. Lakshmanan, and R. Rama. Tissue P systems with contextual and rewriting rules. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[853] S.-N. Krishna, K. Lakshmanan, and R. Rama. Tissue P systems with contextual and rewriting rules. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 339–351, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[854] S. N. Krishna and A. Păun. Some universality results on evolution-communication P systems. Technical Report 26, Rovira i Virgili University, 2003.

[855] S.-N. Krishna and A. Păun. Some universality results on evolution-communication P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 207–215, Tarragona, February 5-11 2003.

[856] S. N. Krishna and A. Păun. Three universality results on P systems. Technical Report 26, Rovira i Virgili University, 2003.

[857] S.-N. Krishna and A. Păun. Three universality results on P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 198–206, Tarragona, February 5-11 2003.

[858] S. N. Krishna and A. Păun. Results on catalytic and evolution-communication P systems. *New Generation Computing*, 22(4):377–394, August 2004.

[859] S. N. Krishna and G. Păun. P Systems with mobile membranes. Submitted, 2004.

[860] S. N. Krishna and R. Rama. A variant of P systems with active membranes: Solving NP-Complete problems. *Romanian Journal of Information Science and Technology*, 2(4):357–367, 1999.

[861] S. N. Krishna and R. Rama. On simple P Systems with external output. Submitted, 2000.

[862] S. N. Krishna and R. Rama. On the power of P systems based on sequential/parallel rewriting. *International Journal of Computer Mathematics*, 77(1-2):1–14, 2000.

[863] S.-N. Krishna and R. Rama. Insertion-deletion P systems. In N. Jonoska and N. Seeman, editors, *Proc. 7th Intern. Meeting on DNA Based Computers*, pages 350–359, Tampa, Florida, USA, 2001.

[864] S. N. Krishna and R. Rama. A note on parallel rewriting in P systems. *Bulletin of the EATCS*, (73):147–151, February 2001.

[865] S. N. Krishna and R. Rama. P systems with replicated rewriting. *Journal of Automata, Languages and Combinatorics*, 6(3):345–350, 2001.

[866] S. N. Krishna and R. Rama. Time-varying and null parallel P Systems. No aparece, 2001. No aparece.

[867] S. N. Krishna and R. Rama. On the power of tissue P systems working in minimal mode. In C. Calude, M. J. Dinneen, and F. Peper, editors, *Unconventional Models of Computation: Third International Conference, UMC 2002, Kobe, Japan, October 15-19, 2002. Proceedings*, volume 2509 of *Lecture Notes In Computer Science*, pages 208–219, London, UK, October 15–19 2002. Springer-Verlag Heidelberg.

[868] S. N. Krishna and R. Rama. Breaking DES using P systems. *Theoretical Computer Science*, 299(1-3):495–508, April 2003.

[869] S. N. Krishna, R. Rama, and H. Ramesh. Further results on contextual/rewriting P systems. *Fundamenta Informaticae*, 2005. To appear.

[870] K. Krithivasan. P automata with tapes. Technical Report 26, Rovira i Virgili University, 2003.

[871] K. Krithivasan. P Automata with tapes. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 216–225, Tarragona, February 5-11 2003.

[872] K. Krithivasan. A glimpse of membrane computing. *Ramanujan Math. Soc. Lecture Notes Series*, (3):49–61, 2007.

[873] K. Krithivasan and M. Madhu. Contextual P systems. *Fundamenta Informaticae*, 49(1-3):179–189, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[874] K. Krithivasan and S. V. Varma. On minimising finite state P automata. *Bulletin of the EATCS*, 80:168–173, July 2003.

[875] M. Kudlek, C. Martín-Vide, and G. Păun. Toward FMT (Formal Macroset Theory). Technical Report 140, University of Auckland, 2000.

[876] M. Kudlek, C. Martín-Vide, and G. Păun. Toward FMT (formal macroset theory). In *Pre-Proceedings Workshop on Multiset Processing*, Curtea de Arges, Romania, August 2000.

[877] M. Kudlek, C. Martín-Vide, and G. Păun. Toward a formal macroset theory. In C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Multiset Processing: Mathematical, Computer Science, and Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, pages 123–134. Springer-Verlag, 2001.

[878] M. Kudlek and V. Mitrana. Closure properties of multiset language families. *Fundamenta Informaticae*, 49(1-3):191–203, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[879] M. Kudlek and V. Mitrana. Some considerations on a multiset model for membrane computing. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[880] M. Kudlek and V. Mitrana. Considerations on a multiset model for membrane computing. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 352–359, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[881] K. Lakshmanan. Computational universality and solving NP complete problems using insertion deletion tissue P Systems. Submitted, 2003.

[882] K. Lakshmanan and R. Rama. On the power of tissue P systems with insertion and deletion rules. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 304–318, Tarragona, July 17-22 2003.

[883] K. Lakshmanan and R. Rama. *The computational efficiency of insertion deletion tissue P systems.* World Scientific, Singapore, 2006.

[884] L. Lakshmanan. *On the Crossroads of P Systems and Contextual Grammars: Variants, Computability Complexity and Efficiency.* PhD thesis, Dept. of Mathematics, Indian Institute of Technology, Madras, India, 2004.

[885] L. Ledesma, D. Manrique, and A. Rodriguez-Paton. A tissue p system and a dna microfluidic device for solving the shortest common superstring problem. *Soft Computing*, 9(9):679–685, September 2005.

[886] L. Ledesma, D. Manrique, A. Rodríguez-Patón, and A. Silva. A tissue P system and a DNA microfluidic device for solving the shortest common superstring problem. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[887] L. Ledesma, D. Manrique, A. Rodríguez-Patón, and A. Silva. A tissue P system and a DNA microfluidic device for solving the shortest common superstring problem. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 281–291, Sevilla, Spain, February 2-7 2004.

[888] Leporati and D. Pagani. A membrane algorithm for the min storage problem. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 397–416, Leiden, The Netherlands, 2006.

[889] A. Leporati. Quantum (UREM) P systems: Background, definition and computational power. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 33–56, Thessaloniki, Greece, 2007.

[890] A. Leporati, D. Besozzi, P. Cazzaniga, C. Ferretti, and D. Pescini. Computing with energy and chemical reactions. *Natural Computing*, to appear.

[891] A. Leporati and S. Felloni. Three quantum algorithms to solve 3-SAT. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 137–160. Fénix Editora, 2006.

[892] A. Leporati and S. Felloni. Three "quantum" algorithms to solve 3-SAT. *Theoretical Computer Science*, 372(2-3):218–241, 2007.

[893] A. Leporati and M. A. Gutiérrez-Naranjo. Solving subset sum by spiking neural P systems with pre-computed resources. *Fundamenta Informaticae*, 87(1):61–77, 2008.

[894] A. Leporati, G. Mauri, and C. Zandron. Quantum sequential p systems with unit rules and energy assigned to membranes. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 465–484, 2005.

[895] A. Leporati, D. Pescini, and C. Zandron. Quantum energy-based P systems. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[896] A. Leporati and C. Zandron. A family of P systems which solve 3-SAT. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 247–256, 2005.

[897] A. Leporati, C. Zandron, C. Ferretti, and G. Mauri. On the computational power of spiking neural p systems. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Riscos-Nunez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 227–246, Sevilla (Spain), January 29th - February 2 2007.

[898] A. Leporati, C. Zandron, C. Ferretti, and G. Mauri. Solving numerical NP-complete problems with spiking neural P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 405–424, Thessaloniki, Greece, 2007.

[899] A. Leporati, C. Zandron, and M. A. Gutiérrez-Naranjo. P systems with input in binary form. *International Journal of Foundations of Computer Science*, 17(1):127–146, February 2006.

[900] A. Leporati, C. Zandron, and G. Mauri. *Fundamenta Informaticae*, (4).

[901] A. Leporati, C. Zandron, and G. Mauri. Conservative computations in energy-based P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 268–283, Milano, Italy, June 2004.

[902] A. Leporati, C. Zandron, and G. Mauri. Simulating the Fredkin Gate with energy–based P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[903] A. Leporati, C. Zandron, and G. Mauri. Simulating the Fredkin gate with energy–based P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 292–308, Sevilla, Spain, February 2-7 2004.

[904] A. Leporati, C. Zandron, and G. Mauri. Simulating the Fredkin Gate with energy-based P systems. *Journal of Universal Computer Science*, 10(5):600–619, May 2004.

[905] A. Leporati, C. Zandron, and G. Mauri. Solving the factorization problem with p systems. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 144–153, Wuhan, China, September 2006.

[906] A. Leporati, C. Zandron, and G. Mauri. Solving the factorization problem with p systems. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[907] A. Leporati, C. Zandron, and G. Mauri. Solving the factorization problem with P systems. *Progress in Natural Science*, 17(4):471–478, 2007.

[908] A. Leporati, C. Zandron, and G. Mauri. How redundant is your universal computation device? In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 274–291, 2009.

[909] C. Li, Z. Dang, O. Ibarra, and H. Yen. Signaling p systems and verification problems. In *ICALP'05*, , July 11-15 2005.

[910] C. Li, Z. Dang, O. Ibarra, and H.-C. Yen. Signaling p systems and verification problems. In *Proceedings of ICALP 2005*, LNCS 3586, pages 1462–1473. Springer, 2005.

[911] H. Liang. *Research on Membrane Computing. Optimization Methods.* PhD thesis, Institute of Advanced Process Control, Zhejiang University, China, 2007.

[912] H. Liang, H. Xiongxiong, W. Ning, and X. Yi. P systems based multiobjective optimization algorithm. *Progress in Natural Science*, 17(4):458–465, 2007.

[913] G. Liu and M. Ionescu. Further remarks on trace languages in p systems with symport/antiport. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 417–428, Leiden, The Netherlands, 2006.

[914] G. Liu and M. Ionescu. Further remarks on trace languages in P systems with symport/antiport. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 161–172. Fénix Editora, 2006.

[915] J. Q. Liu and K. Shimohara. Evolutionary dynamics for heterogeneous P systems. *Journal of Xi'an Mining Institute*, 2001.

[916] H. Long and Y. Fu. Building combinational p automata with rewriting and active membrane rules. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 154–159, Wuhan, China, September 2006.

[917] H. Long and Y. Fu. Building combinational p automata with rewriting and active membrane rules. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[918] D. Lopez and J. Sempere. Editing distances between membrane structures. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 485–504, 2005.

[919] D. Lucanu. Rewriting logic-based semantics of membrane systems and the maximal concurrency. In O. H. Ibarra and P. Sosík, editors, *Proceedings of Prague International Workshop on Membrane Computing*, pages 23–34, 2008.

[920] M. Madhu. Rewriting P systems. collapsing hierarchies. Submitted. Theoretical Computer Science, to appear.

[921] M. Madhu. Complexity issues in rewriting P systems. In *Pre-proceedings of Fourth International Workshop on Descriptional Complexity of Formal Systems, DCFS-2002*, London, Ontario, Canada, August 21-24 2002.

[922] M. Madhu. A note on P Systems with replicated rewriting. Submitted, 2002.

[923] M. Madhu. New results in rewriting P systems. Technical Report 26, Rovira i Virgili University, 2003.

[924] M. Madhu. New results in rewriting P systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 232–240, Tarragona, February 5-11 2003.

[925] M. Madhu. Probabilistic rewriting P systems. *International Journal of Foundations of Computer Science*, 14(1):157–166, February 2003.

[926] M. Madhu. *Studies of P Systems as a model of cellular computing.* PhD thesis, Dept. of Computer Science and Engineering, Indian Institute of Technology, Madras, India, 2003.

[927] M. Madhu and K. Krithivasan. Inter-membrane communication in P systems. *Romanian Journal of Information Science and Technology*, 3(4):335–352, 2000.

[928] M. Madhu and K. Krithivasan. P systems with dynamic membrane polarization. *Romanian Journal of Information Science and Technology*, 4(1-2):135–154, 2001.

[929] M. Madhu and K. Krithivasan. P systems with membrane creation: Universality and efficiency. In M. Margenstern and Y. Rogozhin, editors,

Machines, Computations, and Universality. Third International Conference, MCU 2001 Chisinau, Moldava, May 23-27, 2001. Proceedings., volume 2055 of *Lecture Notes in Computer Science*, pages 276–287, Berlin, 2001. Springer-Verlag.

[930] M. Madhu and K. Krithivasan. Universality results for some variants of P systems. In C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Multiset Processing: Mathematical, Computer Science, and Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, pages 237–253, Berlin, 2001. Springer-Verlag.

[931] M. Madhu and K. Krithivasan. Generalized normal forms for rewriting P systems. *Acta Informatica*, 38(10):721–734, September 2002.

[932] M. Madhu and K. Krithivasan. Hybrid P Systems: Improved universality results. Poster in Unconventional Models of Computation, UMC-02, Himeji, Japan, October 15-19, 2002, October 15-19 2002. Poster in Unconventional Models of Computation, UMC-02, Himeji, Japan, October 15-19, 2002.

[933] M. Madhu and K. Krithivasan. Improved results about universality of P systems. *Bulletin of the EATCS*, (76):162–168, February 2002.

[934] M. Madhu and K. Krithivasan. A note on hybrid P systems. *Grammars*, 5(3):239–244, December 2002.

[935] M. Madhu and K. Krithivasan. A survey on some variants P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[936] M. Madhu and K. Krithivasan. On a class of P automata. *International Journal of Computer Mathematics*, 80(9):1111–1120, September 2003.

[937] M. Madhu and K. Krithivasan. A survey on some variants P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 360–370, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[938] M. Madhu and K. Krithivasan. Tissue P Systems with leftmost rewriting. Submitted, 2004.

[939] M. Madhu, V. S. Murty, and K. Krithivasan. Hardware realization of P Systems with carriers. Poster presentation in the Eighth International Conference on DNA based Computers, Hokkaido University, Sapporo Campus, Japan, June 10-13, 2002, June 2002. Poster presentation in the Eighth International Conference on DNA based Computers, Hokkaido University, Sapporo Campus, Japan, June 10-13, 2002.

[940] M. Malita. Membrane computing in Prolog. Technical Report 140, University of Auckland, 2000.

[941] M. Malita. Membrane computing in Prolog. In *Pre-Proceedings Workshop on Multiset Processing*, Curtea de Arges, Romania, August 2000.

[942] V. Manca. Monoidal systems and membrane systems. In *Pre-proceedings of Workshop on Multiset Processing*, Curtea de Arges, Romania.

[943] V. Manca. Monoidal systems and membrane systems. Technical Report 140, University of Auckland, 2000. CDMTCS TR 140.

[944] V. Manca. Membrane algorithms for propositional satisfiability. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[945] V. Manca. Membrane algorithms for propositional satisfiability. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[946] V. Manca. Monoidals for molecules and membranes. *Romanian Journal of Information Science and Technology*, 4(1-2):155–170, 2001.

[947] V. Manca. DNA and membrane algorithms for SAT. *Fundamenta Informaticae*, 49(1-3):205–221, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[948] V. Manca. On the dynamics of P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 29–43, Milano, Italy, June 2004.

[949] V. Manca. Metabolic p systems for biomolecular dynamics. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 15–26, Wuhan, China, September 2006.

[950] V. Manca. Mp systems approaches to biochemical dynamics: Biological rhythms and oscillations. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 40–53, Leiden, The Netherlands, 2006.

[951] V. Manca. Topics and problems in metabolic P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 173–184. Fénix Editora, 2006.

[952] V. Manca. Metabolic P systems for biochemical dynamics. *Progress in Natural Science*, 17(4):384–391, 2007.

[953] V. Manca. The metabolic algorithm for P systems: Principles and applications. *Theoretical Computer Science*, 404(1-2):142–155, 2008.

[954] V. Manca. Enumerating membrane structures. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 292–298, 2009.

[955] V. Manca and L. Bianco. Biological networks in metabolic P systems. *Biosystems*, 91(3):489–498, 2008.

[956] V. Manca, L. Bianco, and F. Fontana. Evolution and oscillation in P systems: Applications to biological phenomena. In G. Mauri, G. Păun, M. J. Pérez-Jiménez, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC5, Milano, Italy, 2004, Selected Papers (G. Mauri, Gh. Paun, M.J. Perez-Jimenez, G. Rozenberg, A. Salomaa, eds.), LNCS, Springer-Verlag, Berlin, 2005, to appear.*

[957] V. Manca, C. Martín-Vide, and G. Păun. On the power of P systems with replicated rewriting. *Journal of Automata, Languages and Combinatorics*, 6(3):359–374, 2001.

[958] V. Manca, R. Pagliarini, and S. Zorzan. Toward an MP model of non-photochemical quenching. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 299–310, 2009.

[959] S. Marcus. Membranes versus DNA. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[960] S. Marcus. Membranes versus DNA. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[961] S. Marcus. Membranes versus DNA. *Fundamenta Informaticae*, 49(1-3):223–227, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[962] S. Marcus. Bridging P systems and genomics: A preliminary approach. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 371–376, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[963] R. Mardare, M. Cavaliere, and S. Sedwards. A logical characterization of robustness, mutants and species in colonies of agents. *Intenational Journal of Foundations of Computer Science*, 19(5):1199–1221, 2008.

[964] M. Margenstern. Can hyperbolic geometry be of help for P systems? In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 240–249. Springer, July 2003.

[965] M. Margenstern. Can hyperbolic geometry be of help for P systems? In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 319–325., Tarragona, July 17-22 2003.

[966] M. Margenstern. Can hyperbolic geometry help molecular computing? Technical Report 26, Rovira i Virgili University, 2003.

[967] M. Margenstern. Can hyperbolic geometry help molecular computing? In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 226–231, Tarragona, February 5-11 2003.

[968] M. Margenstern, C. Martín-Vide, and G. Păun. Computing with membranes, variants with an enhanced membrane handling. In N. Jonoska and N. Seeman, editors, *Proc. 7th Intern. Meeting on DNA Based Computers*, pages 53–62, Tampa, Florida, USA, 2001.

[969] M. Margenstern, C. Martín-Vide, and G. Păun. Computing with membranes: Variants with an enhanced membrane handling. In N. S. N. Jonoska, editor, *Proceedings 7th International Meeting on DNA Based Computers*, pages 53–62, Tampa, Florida, USA, June 10-13 2001.

[970] M. Margenstern, V. Rogozhin, Y. Rogozhin, and S. Verlan. About P systems with minimal symport/antiport rules and four membranes. In *Preproceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 283–294, Milano, Italy, June 2004.

[971] E. Martegani, R. Tisi, F. Belotti, S. Colombo, C. Paiardi, J. Winderickx, P. Cazzaniga, D. Besozzi, and G. Mauri. Identification of an intracellular signalling complex for ras/camp pathway in yeast: experimental evidences and modelling. In *ISSY 25 Conf., Hanassari, Espo, Finland, 2006*, 2006.

[972] C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors. *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*. Springer-Verlag, 2004.

[973] C. Martín-Vide and V. Mitrana. P systems with valuations. In I. Antoniou, C. Calude, and M. Dinneen, editors, *Unconventional Models of Computation*, pages 154–166, London, February 2000. Springer-Verlag. Contributed paper.

[974] C. Martín-Vide, V. Mitrana, and G. Păun. On the power of P systems with valuations. *Computación y Sistemas*, 5(2):120–127, 2002.

[975] C. Martín-Vide, A. Păun, and G. Păun. Membrane computing: New results, new problems. *Bulletin of the EATCS*, (78):204–212, October 2002.

[976] C. Martín-Vide, A. Păun, and G. Păun. On the power of P systems with symport rules. *Journal of Universal Computer Science*, 8(2):317–331, 2002.

[977] C. Martín-Vide, A. Păun, and G. Păun. *Membrane Computing: New Results, New Problems*, pages 613–623. World Scientific Publishing Co. Pte. Ltd, 2004.

[978] C. Martín-Vide, A. Păun, G. Păun, and G. Rozenberg. Membrane systems with coupled transport: Universality and normal forms. *Fundamenta Informaticae*, 49(1-3):1–15, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[979] C. Martín-Vide and G. Păun. Computing with membranes. One more collapsing hierarchy. *Bulletin of the EATCS*, (72):183–187, October 2000.

[980] C. Martín-Vide and G. Păun. String-objects in P systems. In *Proc. of Algebraic Systems, Formal Languages and Computations Workshop*, pages 161–169, Kyoto, 2000. RIMS Kokyuroku, Kyoto Univ.

[981] C. Martín-Vide and G. Păun. Computing with membranes (P systems): Universality results. In M. Margenstern and Y. Rogozhin, editors, *Machines, Computations, and Universality. Third International Conference, MCU 2001 Chisinau, Moldava, May 23-27, 2001. Proceedings.*, volume 2055 of *Lecture Notes in Computer Science*, pages 82–101, Chisinau, Moldova, 2001. Springer-Verlag.

[982] C. Martín-Vide and G. Păun. Elements of formal language theory for membrane computing. Technical Report 21/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 21/01 of Research Group on Mathematical Linguistics.

[983] C. Martín-Vide and G. Păun. Language generating by means of membrane systems. *Bulletin of the EATCS*, (75):199–218, October 2001.

[984] C. Martín-Vide and G. Păun, editors. *Pre-Proceedings of Workshop on Membrane Computing, Curtea de Arges, Romania, August 2001*, August 2001.

[985] C. Martín-Vide and G. Păun, editors. *Technical Report 16/01, University Rovira i Virgili, Tarragona, Spain, 2001*, 2001. 266 pages.

[986] C. Martín-Vide and G. Păun. *Language generating by means of Membrene Systems*, pages 599–611. World Scientific Publishing Co. Pte. Ltd, 2004.

[987] C. Martín-Vide and G. Păun. *P systems with Symport/Antiport Rules. A Survey*, pages 175–192. Natural Computing Series. Springer, 2004.

[988] C. Martín-Vide, G. Păun, J. Pazos, and A. Rodríguez-Patón. Tissue P systems. Technical Report 421, Turku Center for Computer Science-TUCS, September 2001. TUCS Technical Report 421.

[989] C. Martín-Vide, G. Păun, J. Pazos, and A. Rodríguez-Patón. Tissue P systems. *Theoretical Computer Science*, 296(2):295–326, March 2003.

[990] C. Martín-Vide, G. Păun, and A. Rodriguez-Patón. On P systems with membrane creation. *Computer Science Journal of Moldova*, 9(2):134–145, 2001.

[991] C. Martín-Vide, G. Păun, and A. Rodriguez-Patón. P systems with immediate communication. *Romanian Journal of Information Science and Technology*, 4(1-2):171–182, 2001.

[992] C. Martín-Vide, G. Păun, and G. Rozenberg. Membrane systems with carriers. *Theoretical Computer Science*, 270(1-2):779–796, January 2002.

[993] V. Martinez, L. Fernandez, F. Arroyo, and A. Gutierrez. HW implementation of a optimized algorithm for the application of active rules in a transition P-system. *International Journal on Information Theory and Applications*, 14(4):324–331, 2007.

[994] J. L. Maté, A. Rodríguez-Patón, and A. Silva. On the power of P systems with DNA-Worms. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[995] J. L. Maté, A. Rodríguez-Patón, and A. Silva. On the power of P systems with DNA-Worms. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[996] J. L. Maté, A. Rodríguez-Patón, and A. Silva. On the power of P systems with DNA-worm-objects. *Fundamenta Informaticae*, 49(1-3):229–239, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[997] G. Mauri, M. J. P. Jiménez, and C. Zandron. On a Păun's conjecture in membrane systems. In J. Mira and J. R. Álvarez, editors, *Proceedings of the 2nd international work-conference on The Interplay Between Natural and Artificial Computation, Part I: Bio-inspired Modeling of Cognitive Tasks*, volume 4527 of *Lecture Notes in Computer Science*, pages 180–192, 2007.

[998] G. Mauri, G. Păun, M. J. Perez-Jimenez, G. Rozenberg, and A. Salomaa, editors. *Membrane Computing, International Workshop, WMC5, Milano, Italy, 2004, Selected Papers*, volume 3365 of *Lecture Notes in Computer Science*. Springer-Verlag, 2005. (417 + viii pages).

[999] G. Mauri, G. Păun, and C. Zandron, editors. *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5)*, Milano. Italy, June 2004. 446 pages.

[1000] G. Mauri and C. Zandron. *Membrane Systems for Computing*, pages 213–232. Kluwer Academic/Plenum Publishers Hardbound, New York, July 2002.

[1001] T. Mazza. Towards a complete covering of SBML functionalities. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 425–444, Thessaloniki, Greece, 2007.

[1002] T. Mazza and M. Cavaliere. Cell cycle and tumor growth in membrane systems with peripheral proteins. In G. Ciobanu, editor, *Second International Meeting on Membrane Computing and Biologically Inspired Process Calculi*, pages 145–158, 2008.

[1003] V. Metta and K. Krithivasan. Spiking neural p systems and petri nets. *submitted*, 2008.

[1004] O. Michel and F. Jacquemard. Analysis of the Needham-Schroeder public-key protocol with MGS. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 295–315, Milano, Italy, June 2004.

[1005] O. Michel and F. Jacquemard. *An Analysis of a Public–Key Protocol with Membranes*, pages 281–300. Springer-Verlag, 2005.

[1006] D. Molteni, C. Ferretti, and G. Mauri. Frequency membrane systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 445–454, Thessaloniki, Greece, 2007.

[1007] D. Molteni, C. Ferretti, and G. Mauri. Frequency membrane systems. *Computing and Informatics*, 27(3+):467–479, 2008.

[1008] O. Moya-Mesa. Plasma membrane, compartmentation, transport, and imprecisions. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[1009] N. Murphy and D. Woods. Active membrane systems without charges and using only symmetric elementary division characterize P. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 455–470, Thessaloniki, Greece, 2007.

[1010] N. Murphy and D. Woods. A characterisation of NL using membrane systems without charges and dissolution. Technical Report 2008-01, Department of Computer Science, National University of Ireland, Maynooth, 2008.

[1011] N. Murphy and D. Woods. A characterisation of NL using membrane systems without charges and dissolution. In C. S. Calude, J. F. Costa, R. Freund, M. Oswald, and G. Rozenberg, editors, *Proceedings of the 7th international conference on Unconventional Computing*, volume 5204 of *Lecture Notes in Computer Science*, pages 164–176, 2008.

[1012] M. Muskulus. An observation on the sevilla complexity. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 257–266, 2005.

[1013] M. Muskulus. Identification of P system models assisted by biochemical databases. In O. H. Ibarra and P. Sosík, editors, *Proceedings of Prague International Workshop on Membrane Computing*, pages 47–49, 2008.

[1014] M. Muskulus. Applications of page ranking in P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 311–324, 2009.

[1015] M. Muskulus, D. Besozzi, R. Brijder, P. Cazzaniga, S. Houweling, D. Pescini, and G. Rozenberg. Cycles and communicating classes in membrane systems and molecular dynamics. *Theoretical Computer Science*. To appear.

[1016] M. Muskulus, D. Besozzi, R. Brijder, P. Cazzaniga, S. Houweling, D. Pescini, and G. Rozenberg. Cycles and communicating classes in membrane systems and molecular dynamics. *Theoretical Computer Science*, 372(2-3), 2007.

[1017] M. Muskulus and R. Brijder. Complexity of biocomputation: symbolic dynamics in membrane systems. *Intern. J. Found. Computer Sci.* To Appear.

[1018] M. Muskulus and R. Brijder. First steps towards a geometry of computation. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 197–218, 2005.

[1019] M. Muskulus and R. Brijder. Complexity of bio-computation: symbolic dynamics in membrane systems. *International Journal of Foundations of Computer Science*, 17(1):147–165, February 2006.

[1020] M. Muskulus, S. Houweling, G. Rozenberg, P. C. Daniela Besozzi and, D. Pescini, and R. Brijder. Reaction cycles in membrane systems and molecular dynamics. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 185–208. Fénix Editora, 2006.

[1021] M. Mutyam. Rewriting P systems: improved hierarchies. *Theoretical Computer Science*, 2004. In press.

[1022] M. Mutyam and K. Krithivasan. P systems with membrane creation: Universality and efficiency. In Y. R. M. Margenstern, editor, *Machines, Computations, and Universality: Third International Conference, MCU 2001 Chisinau, Moldavia, May 23-27, 2001, Proceedings*, volume 2055 of *Lecture Notes In Computer Science*, pages 276–287. Springer-Verlag Heidelberg, May 23-27 2001.

[1023] M. Mutyam and K. Krithivasan. Tissue p systems with leftmost derivation. *Ramanujan Math. Soc. Lecture Notes Series*, (3):187–196, 2007.

[1024] M. Mutyam, V. J. Prakash, and K. Krithivasan. Rewriting tissue P systems. *Journal of Universal Computer Science*, 10(9):1250–1271, September 2004.

[1025] H. Nagda, A. Paun, and A. Rodriguez-Paton. P systems with symport/antiport and time. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 429–442, Leiden, The Netherlands, 2006.

[1026] B. Nagy and L. Szegedi. Membrane computing and geographical operating systems. *Journal of Universal Computer Science*, 12(9):1312–1331, 2006.

[1027] T. Neary. On the computational complexity of spiking neural P systems. In C. S. Calude, J. F. Costa, R. Freund, M. Oswald, and G. Rozenberg, editors, *Proceedings of the 7th international conference on Unconventional Computing*, volume 5204 of *Lecture Notes in Computer Science*, pages 189–205, 2008.

[1028] T. Neary. A small universal spiking neural P system. In E. Csuhaj-Varjú, R. Freund, M. Oswald, and K. Salomaa, editors, *International Workshop on Computing with Biomolecules*, pages 65–74, 2008.

[1029] I. Nepomuceno, J. Nepomuceno, and F. J. Romero-Campero. A tool for using the SBML format to represent P systems which model biological reaction networks. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 219–228, 2005.

[1030] I. A. Nepomuceno-Chamorro. A Java simulator for basic transition P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1031] I. A. Nepomuceno-Chamorro. A Java simulator for basic transition P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 309–315, Sevilla, Spain, February 2-7 2004.

[1032] I. A. Nepomuceno-Chamorro. A Java simulator for membrane computing. *Journal of Universal Computer Science*, 10(5):620–629, May 2004.

[1033] V. Nguyen, D. Kearney, and G. Gioiosa. Balancing performance, flexibility and scalability in a parallel computing platform for membrane computing applications. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 471–508, Thessaloniki, Greece, 2007.

[1034] V. Nguyen, D. Kearney, and G. Gioiosa. An implementation of membrane computing using reconfigurable hardware. *Computing and Informatics*, 27(3+):551–569, 2008.

[1035] V. Nguyen, D. Kearney, and G. Gioiosa. An algorithm for non-deterministic object distribution in P systems and its implementation in hardware. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 325–354, 2009.

[1036] D. V. Nicolau Jr., G. Solana, F. Fulga, and D. V. Nicolau. A C library for simulating P systems. *Fundamenta Informaticae*, 49(1-3):241–248, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[1037] D. V. Nicolau Jr., G. Solana, F. Fulga, and D. V. Nicolau Sr. A "C" library for implementing P systems on the electronic computer (abstract). Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[1038] D. V. Nicolau-Jr., G. Solana, F. Fulga, and D. V. Nicolau-Sr. A C library for implementing P systems on the electronic computer (Abstract). In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[1039] T. Nishida. Membrane algorithm: An approximate algorithm for np-complete optimization problems eploiting p systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 26–43, 2005.

[1040] T. Y. Nishida. Simulations of photosynthesis by a K-Subset transforming system with membranes. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[1041] T. Y. Nishida. Simulations of photosynthesis by a K-Subset transforming system with membranes. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[1042] T. Y. Nishida. Simulations of photosynthesis by a K-Subset transforming system with membranes. *Fundamenta Informaticae*, 49(1-3):249–259, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[1043] T. Y. Nishida. An application of P systems: A new algorithm for NP-complete optimization problems. In e. a. N. Callaos, editor, *Proceedings of the 8th World Multi-Conference on Systems, Cybernetics and Informatics, vol. V, 2004*, pages 109–112, 2004.

[1044] T. Y. Nishida. An approximate algorithm for NP-complete optimization problems exploiting P systems. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[1045] T. Y. Nishida. An approximate algorithm for NP-complete optimization problems exploiting P systems. *Journal of Cybernetics and Informatics*, V:109–112, 2004.

[1046] T. Y. Nishida. *Membrane Algorithms: Approximate Algorithms for NP-Complete Optimization Problems*, pages 301–312. Springer-Verlag, 2005.

[1047] T. Y. Nishida. *A Membrane Computing Model of Photosynthesis*, pages 179–200. Springer-Verlag, 2005.

[1048] T. Y. Nishida. Membrane algorithm with brownian subalgorithm and genetic subalgorithm. *International Journal of Foundations of Computer Science*, 18(6):1353–1360, 2007.

[1049] A. Obtulowicz. Deterministic P systems for solving SAT problem. *Romanian Journal of Information Science and Technology*, 4(1-2):195–202, 2001.

[1050] A. Obtulowicz. Membrane computing and one-way functions. *International Journal of Foundations of Computer Science*, 12(4), August 2001.

[1051] A. Obtulowicz. Note on some recursive family of P Systems with active membranes. Submitted, 2001.

[1052] A. Obtulowicz. On P systems with active membranes solving integer factorizing problem in a polynomial time. In C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Multiset Processing: Mathematical, Computer Science, and Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, pages 267–286. Springer-Verlag, 2001.

[1053] A. Obtulowicz. Probabilistic P systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[1054] A. Obtulowicz. Mathematical models of uncertainty with a regard to membrane systems. Technical Report 26, Rovira i Virgili University, 2003.

[1055] A. Obtulowicz. Mathematical models of uncertainty with a regard to membrane systems. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 241–246, Tarragona, February 5-11 2003.

[1056] A. Obtulowicz. Mathematical models of uncertainty with a regard to membrane systems. *Natural Computing*, 2(3):251–263, August 2003.

[1057] A. Obtulowicz. New mathematical foundations of membrane computing; attacking NP complete problems revisited. Submitted, 2003.

[1058] A. Obtulowicz. Probabilistic P systems. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 377–387, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[1059] A. Obtulowicz. Fuzzy P systems and fuzzy rule-based decisionmaking systems. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[1060] A. Obtulowicz. General multi-fuzzy sets and fuzzy membrane systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 316–326, Milano, Italy, June 2004.

[1061] A. Obtulowicz. Gandy's principle for mechanisms and membrane computing. In *Third Brainstorming Week on Membrane Computing, Sevilla, 2005*, Sevilla, 2005.

[1062] A. Obtulowicz. Gandy's principles for mechanisms and membrane computing. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 267–276, 2005.

[1063] A. Obtulowicz. Relational membrane systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 505–509, 2005.

[1064] A. Obtulowicz. Gandy's principles for mechanisms and membrane computing. *International Journal of Foundations of Computer Science*, 17(1):167–181, February 2006.

[1065] A. Obtulowicz. Mathematical (denotational) semantics of some reducts of ambient calculus and brane calculi. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 443–454, Leiden, The Netherlands, 2006.

[1066] A. Obtulowicz. Mathematical (denotational) semantics of some reducts of ambient calculus and brane calculi. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 443–454, Leiden, The Netherlands, 2006.

[1067] A. Obtulowicz. On an idea of a (possibly) uniform data base for life sciences from molecular biology to cognitive psychology. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 209–212. Fénix Editora, 2006.

[1068] A. Obtulowicz. Multigraphical membrane systems: a visual formalism for modeling complex systems in biology and evolving neural networks. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 509–512, Thessaloniki, Greece, 2007.

[1069] A. Obtulowicz. Some mathematical methods and tools for an analysis of harmony-seeking computations. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Riscos-Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 246–262, Sevilla (Spain), January 29th - February 2 2007.

[1070] A. Obtulowicz and G. Păun. (In search of) Probabilistic P systems. *BioSystems*, 70(2):107–121, July 2003.

[1071] M. Oswald. *P Automata*. PhD thesis, Faculty of Computer Science. TU Vienna, Vienna, Austria, November 2003.

[1072] M. Oswald. Independent agents in a globalized world modelled by tissue p systems. In *Conf. Artificial Life and Robotics*, 2006.

[1073] M. Oswald and R. Freund. P Automata with membrane channels. In M. Sugisaka and H. Tanaka, editors, *Proceedings of the eighth Int. Symp. on Artificial Life and Robotics*, pages 275–278, Beppu, Japan, 2003.

[1074] V. Pakash. On the power of tissue P systems working in the maximal-one mode. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Pre-proceedings of the Workshop on Membrane Computing*, pages 356–364, Tarragona, July 17-22 2003.

[1075] L. Pan and A. Alhazov. Solving HPP and SAT by P systems with active membranes and separation rules. *Acta Informatica*, 43(2):131–145, 2006.

[1076] L. Pan, A. Alhazov, and Ts.-O. Isdorj. Further remarks on p systems with active membranes, separation, merging and release rules. *Soft Computing*, 9(9):686–690, September 2005.

[1077] L. Pan, A. Alhazov, and Ts.-O. Ishdorj. Further remarks on P systems with active membranes separation, merging and release rules. In Gh. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing Sevilla, Spain, February 2-7 2004*, pages 316–324, Sevilla, Spain, February 2-7 2004.

[1078] L. Pan and T.-O. Ishdorj. P systems with active membranes and separation rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1079] L. Pan and T.-O. Ishdorj. P systems with active membranes and separation rules. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 325–341, Sevilla, Spain, February 2-7 2004.

[1080] L. Pan and T. O. Ishdorj. P systems with active membranes and separation rules. *Journal of Universal Computer Science*, 10(5):630–649, May 2004.

[1081] L. Pan and C. Martín-Vide. Solving multidimensional 0-1 Knapsack Problem by P systems with input and active membranes. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1082] L. Pan and C. Martín-Vide. Solving multidimensional 0-1 Knapsack problem by P systems with input and active membranes. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 342–353, Sevilla, Spain, February 2-7 2004.

[1083] L. Pan and C. Martín-Vide. Further remark on p systems with active membranes and two polarizations. *Journal of Parallel and Distributed Computing*, 66:867–872, 2006.

[1084] L. Pan and M. J. Pérez-Jiménez. Computational complexity of tissue-like p systems. *Journal of Complexity*.

[1085] L. Pan and G. Păun. Spiking neural p systems with anti-spikes. *Int. J. of Computers, Communications & Control*, 4(3):273–282, 2009.

[1086] L. Pan and G. Păun. Spiking neural p systems: An improved normal form. *Theoretical Computer Science*, 411:906–918, 2010.

[1087] L. Pan and X. Zeng. A note on small universal spiking neural p systems. *Pre-proceedings of Tenth Workshop on Membrane Computing*, page 2009.

[1088] L. Pan, X. Zhang, X. Zeng, and J. Wang. Research advances and prospect of spiking neural p systems. *Chinese Journal of Computers*, 12:2090–2096, 2008.

[1089] A. Paun. On P systems with active membranes. In I. Antoniou, C. Calude, and M. Dinneen, editors, *Unconventional Models of Computation*, pages 187–201, London, February 2000. Springer-Verlag. Contributed paper.

[1090] A. Paun. On P systems with global rules. In N. Jonoska and N. Seeman, editors, *Proc. 7th Intern. Meeting on DNA Based Computers*, pages 43–52, Tampa, Florida, USA, 2001.

[1091] A. Păun. On P systems with partial parallel rewriting. *Romanian Journal of Information Science and Technology*, 4(1-2):203–210, 2001.

[1092] A. Păun. P systems with string-objects: Universality results. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[1093] A. Paun. P systems with string-objects: Universality results. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[1094] A. Paun. Membrane systems with symport/antiport. Universality results. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[1095] A. Păun. *Unconventional Models of Computation: DNA and Membrane Computing*. PhD thesis, University of Western Ontario, London, Ontario, Canada, May 2003.

[1096] A. Păun and G. Păun. The power of communication: P systems with symport/antiport. *New Generation Computing*, 20(3):295–305, May 2002.

[1097] A. Paun and G. Păun. Small universal spiking neural p systems. Submitted, 2006.

[1098] A. Paun and G. Paun. Small universal spiking neural P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 213–234. Fénix Editora, 2006.

[1099] A. Păun, G. Păun, and A. Rodriguez-Patón. Further remarks on P systems with symport rules. *Ann. Univ. Al.I. Cuza Iasi, Math.-Informatics Series*, 10:3–18, 2001.

[1100] A. Păun, G. Păun, and G. Rozenberg. Computing by communication in networks of membranes. *International Journal of Foundations of Computer Science*, 13(6):779–798, December 2002.

[1101] A. Păun and M. Păun. *On Membrane Computing Based on Splicing*, chapter 36, pages 409–422. Kluwer Academic Publishers, Dordrecht Hardbound, Dordrecht, November 2000.

[1102] A. Paun and B. Popa. P systems with proteins on membranes. Submitted, 2005.

[1103] A. Paun and B. Popa. P systems with proteins on membranes and membrane division. In *Proceedings 10th DLT Conf. (invited talk), Santa Barbara, USA, 2006*, volume 4036 of *Lecture Notes in Computer Science*, pages 292–303. Springer, 2006.

[1104] A. Paun and B. Popa. Rewriting p systems with communication by symport rules. Submitted, 2006.

[1105] A. Paun and A. Rodriguez-Paton. On flip-flop membrane systems with proteins. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 513–526, Thessaloniki, Greece, 2007.

[1106] G. Paun. A quick overview of membrane computing with some details about spiking neural P systems. *Frontiers of Computer Science in China*. To appear.

[1107] G. Paun. Spiking neural p systems used as acceptors and transducers. In *CIAA 2007, 12th Conf., Prague, July 2007, LNCS 4783 (J. Holub, J. Zdarek, eds.), Springer, Berlin, 2007, 1–4.*

[1108] G. Paun. Spiking neural p systems with astrocyte-like control. In *JUCS, 13, 11 (2007), 1707–1721.*

[1109] G. Păun. Computing with membranes. Technical Report 208, Turku Center for Computer Science-TUCS, 1998. (www.tucs.fi).

[1110] G. Păun. Computing with membranes. A correction. Two problems and some bibliographical remarks. *Bulletin of the EATCS*, (69):141–144, October 1999.

[1111] G. Păun. Computing with membranes. An introduction. *Bulletin of the EATCS*, (67):139–152, February 1999.

[1112] G. Păun. Computing with membranes. *Journal of Computer and System Sciences*, 61(1):108–143, 2000. and Turku Center for Computer Science-TUCS Report No 208.

[1113] G. Păun. Computing with membranes: Attacking NP-complete problems. In I. Antoniou, C. Calude, and M. Dinneen, editors, *Unconventional Models of Computation*, pages 94–115, London, February 2000. Springer-Verlag. Invited paper.

[1114] G. Păun. Computing with membranes (P systems): A variant. *International Journal of Foundations of Computer Science*, 11(1):167–182, March 2000. and CDMTCS TR 098, Univ. of Auckland, 1999 (www.cs.auckland.ac.nz/CDMTCS).

[1115] G. Păun. Computing with membranes (P systems): Twenty six research topics. Technical Report 119, University of Auckland, 2000. CDMTCS TR 119 (www.cs.auckland.ac.nz/ CDMTCS).

[1116] G. Păun. From cells to computers: Computing with membranes (P systems). In R. Freund and A. Kelemenova, editors, *Proc. Intern. Workshop Grammar Systems 2000*, pages 9–40, Bad Ischl, Austria, July 2000.

[1117] G. Păun. On the generative power of P systems. In R. Freund, editor, *Theorietag 2000. Workshop on New Computing Paradigms*, pages 59–78. TU University Vienna, 2000.

[1118] G. Păun. From cells to computers: Computing with membranes (P systems). *BioSystems*, 59(3):139–158, March 2001.

[1119] G. Păun. Further research topics about P systems. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[1120] G. Păun. Further research topics about P systems. In *Pre-Proceedings of Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2001.

[1121] G. Păun. P systems with active membranes: Attacking NP-Complete problems. *Journal of Automata, Languages and Combinatorics*, 6(1):75–90, 2001. and CDMTCS TR 102, Univ. of Auckland, 1999 (www.cs.auckland.ac.nz/CDMTCS).

[1122] G. Păun. *Membrane Computing. An Introduction.* Springer-Verlag, Berlin, 2002.

[1123] G. Păun. Descriptional complexity issues in membrane computing. In *Proc. of DCFS Workshop*, pages 66–77, Budapest, Hungary, 2003.

[1124] G. Păun. Membrane computing. In A. Lingas and B. J. Nilsson, editors, *Fundamentals of Computation Theory 14th International Symposium, FCT 2003, Malmö, Sweden, August 12-15, 2003, Proceedings.*, volume 2751 of *Lecture Notes in Computer Science*, pages 284–295. Springer, 2003.

[1125] G. Păun. Further open problems in membrane computing. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1126] G. Păun. Further open problems in Membrane Computing, Sevilla, Spain, february 2–7 2004. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 354–365, Sevilla, Spain, February 2-7 2004.

[1127] G. Păun. Grammar systems vs. membrane computing: A preliminary approach. In *Pre-Proceedings of Workshop on Grammar Systems, Computer and Automation Research Institute (SZTAKI) of the Hungarian Academy of Sciences (MTA).*, pages 225–245, Budapest, July 5-9 2004.

[1128] G. Păun. Introduction to membrane computing. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[1129] G. Păun. Learning new computing models from biology: Membrane computing. In *International Conference on Computers and Communications-ICCC 2004, Baile Felix Spa, Oradea, ROMANIA*, Oradea, ROMANIA, May 27-29 2004.

[1130] G. Păun. Membrane computing (after the Second Brainstorming Week, Sevilla, february 2004). *Bulletin of the EATCS*, June 2004.

[1131] G. Păun. Membrane computing. An introduction. In *Pre-Proc. Unconventional Programming Paradigms, UPP04, Le Mont Saint-Michel*, pages 39–48, September 2004.

[1132] G. Păun. *Membrane computing: Main ideas, basic results, applications.* Idea Group Publ., London, 2004.

[1133] G. Păun. Membrane computing: Power and efficiency (a quick overview). In *THE TENTH INTERNATIONAL MEETING ON DNA COMPUTING (DNA 10), Universita' di Milano-Bicocca, Milan, Italy*, Milan, Italy, June 7-10 2004.

[1134] G. Păun. *Membrane Computing: Some Non-standard Ideas*, volume 2950 of *Lecture Notes in Computer Science*, pages 322–337. Springer, 2004.

[1135] G. Păun. *Membrane computing. Some recent results and current research topics.* Kronos Editorial, Sevilla, 2004.

[1136] G. Păun. Membrane systems: From cells to computers. In *WoLLIC'2004 11th Workshop on Logic, Language, Information and Computation, July 19th to 22nd, 2004, Paris, France*, Paris, France, July 19th to 22nd 2004.

[1137] G. Păun. Further twenty six open problems in membrane computing. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 249–262, 2005.

[1138] G. Păun. Further twenty-six open problems in membrane computing. In *Third Brainstorming Week on Membrane Computing, Sevilla, 2005*, Sevilla, 2005.

[1139] G. Paun. Membrane computing. basic ideas, results, applications. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 1–8, 2005.

[1140] G. Păun. Membrane computing: Power, efficiency, applications. Submitted, 2005.

[1141] G. Paun. Membrane computing: power, efficiency, applications, new computational paradigms. In B. L. S. Barry Cooper and L. Torenvliet, editors, *First Conf. on Computability in Europe, CiE2005, Amsterdam*, LNCS 3536, pages 396–407. Springer, 2005.

[1142] G. Păun. One more universality result for P systems with objects on membranes. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 263–274, 2005.

[1143] G. Păun. 2006 research topics in membrane computing. Nanuscript, 2006.

[1144] G. Păun. 2006 research topics in membrane computing. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 235–252. Fénix Editora, 2006.

[1145] G. Paun. Languages in membrane computing. some details for spiking neural p systems. In *Proceedings 10th DLT Conf. (invited talk), Santa Barbara, USA, 2006*, volume 4036 of *Lecture Notes in Computer Science*, pages 20–35. Springer, 2006.

[1146] G. Paun. Membrane computing and brane calculi (some personal notes). In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[1147] G. Paun. Spiking neural P systems. A tutorial. *Bulletin of the EATCS*, February 2007.

[1148] G. Paun. Tracing some open problems in membrane computing. *ROMJIST*, 10(4):303–314, 2007.

[1149] G. Paun. Twenty six research topics about spiking neural p systems. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 363–280, Sevilla (Spain), January 29th - February 2 2007.

[1150] G. Paun and R. Paun. Membrane computing models for economics. An invitation-survey. *Studii şi Cercetări de Calcul Economic si Cibernetica Economica*. To appear.

[1151] G. Păun and R. Paun. Membrane computing and economics: Numerical p systems. Submitted, 2005.

[1152] G. Păun and R. Paun. Membrane computing as a framework for modeling economic processes. Submitted, 2005.

[1153] G. Păun, J. Pazos, M. J. Pérez-Jiménez, and A. Rodriguez-Patón. Symport/antiport P systems with three objects are universal. *Fundamenta Informaticae*, 2005. To appear.

[1154] G. Paun and M. Perez-Jimenez. Spiking neural p systems. an overview. In *Advancing Artificial Intelligence through Biological Process Applications (A.B. Porto, A. Pazos, W. Buno, eds.), Idea Group Publ., London, 2008.*

[1155] G. Păun and M. Perez-Jimenez. Membrane computing: Brief introduction, recent results and applications. Submitted, 2005.

[1156] G. Paun and M. Perez-Jimenez. Spiking neural p systems. recent results, research topics. *submitted*, 2008.

[1157] G. Păun, M. Perez-Jimenez, and G. Rozenberg. Infinite spike trains in spiking neural p systems. Submitted, 2005.

[1158] G. Păun, M. Perez-Jimenez, and G. Rozenberg. Spike trains in spiking neural p systems. Submitted, 2005.

[1159] G. Paun, M. Perez-Jimenez, and A. Salomaa. Bounding the indegree of spiking neural p systems. Technical report, TUCS Technical Report 773, 2006.

[1160] G. Păun and M. J. Pérez-Jiménez. Recent computing models inspired from biology: DNA and membrane computing. *Theoria*, 18(46):71–84, 2003.

[1161] G. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez. P systems with tables of rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1162] G. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez. P systems with tables of rules. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 366–379, Sevilla, Spain, February 2-7 2004.

[1163] G. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Tissue P systems with cell division. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1164] G. Păun, M. J. Pérez-Jiménez, and A. Riscos-Núñez. Tissue P systems with cell division. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 380–386, Sevilla, Spain, February 2-7 2004.

[1165] G. Păun, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. On the reachability problem for P Systems with porters. Submitted, 2001. Proc. AFL10, Debrecen, 2002.

[1166] G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors. *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, Feb 2-7, 2004*, 2004.

[1167] G. Păun and G. Rozenberg. A guide to membrane computing. *Theoretical Computer Science*, 287(1):73–100, September 2002.

[1168] G. Păun, G. Rozenberg, and A. Salomaa. Membrane computing with external output. Technical Report 218, Turku Center for Computer Science-TUCS, 1998. Report No 218 (www.tucs.fi).

[1169] G. Păun, G. Rozenberg, and A. Salomaa. Membrane computing with external output. *Fundamenta Informaticae*, 41(3):313–340, February 2000.

[1170] G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors. *Membrane Computing. International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002, Revised Papers*, volume 2597 of *Lecture Notes in Computer Science*, Berlin, 2003. Springer-Verlag. 423 + viii pages.

[1171] G. Păun, Y. Sakakibara, and T. Yokomori. P Systems on graphs of restricted forms. Publicationes Mathematicae Debrecen, to appear, 2004. Publicationes Mathematicae Debrecen, to appear.

[1172] G. Păun, Y. Suzuki, and H. Tanaka. P systems with energy accounting. *International Journal of Computer Mathematics*, 78(3):343–364, 2001.

[1173] G. Păun, Y. Suzuki, H. Tanaka, and T. Yokomori. On the power of membrane division in P systems. *Theoretical Computer Science*, 324(1):61–85, September 2004.

[1174] G. Păun and G. Thierrin. Multiset processing by means of systems of finite state transducers. Technical Report 101, University of Auckland. CDMTCS Report (www.cs.auckland.ac.nz/CDMTCS).

[1175] G. Păun and G. Thierrin. Multiset processing by means of systems of finite state transducers. In *Pre-Proceedings of Workshop on Implementing Automata WIA99*, Potsdam, August 1999.

[1176] G. Păun and T. Yokomori. Membrane computing based on splicing. In E. Winfree and D. Gifford, editors, *Preliminary Proceedings of Fifth International Meeting on DNA Based Computers*, pages 213–227. MIT, June 1999.

[1177] G. Păun and T. Yokomori. Simulating H Systems by P systems. *Journal of Universal Computer Science*, 6(1):178–193, 2000. (www.iicm.edu/jucs). `http://www.jucs.org/jucs_6_1/simulating_h_systems_by`.

[1178] G. Păun and S. Yu. On synchronization in P systems. Technical Report 539, University of Western Ontario, Ontario, Canada, 1999. Report TR 539 (www.csd.uwo.ca/faculty/syu/TR539.html).

[1179] G. Păun and S. Yu. On synchronization in P systems. *Fundamenta Informaticae*, 38(4):397–410, June 1999.

[1180] G. Păun and C. Zandron, editors. *Pre-Proceedings of Workshop on Membrane Computing, Curtea de Arges, Romania, August 2002*, August 2002. and MolCoNet Publucation N 1, 2002 (394 pages).

[1181] R. Paun. Producers, retailers, and their investments. a membrane computing approach. manuscript, 2005.

[1182] J. Pazos, A. Rodríguez-Patón, and A. Silva. Solving SAT in linear time with a neural-like membrane system. In J. Mira and J. R. Alvarez, editors, *Artificial Neural Nets. Problem Solving Methods 7th International Work-Conference on Artificial and Natural Neural Networks, IWANN 2003, Maó, Menorca, Spain, June 3-6. Proceedings, Part II.*, volume 2687 of *Lecture Notes in Computer Science*, pages 662–669. Springer, 2003.

[1183] A. Pérez-Jiménez, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. Computing a partial mapping by a P system: Design and verification. Technical Report 26, Rovira i Virgili University, 2003.

[1184] A. Pérez-Jiménez, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. Computing a partial mapping by a P system: Design and verification. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 247–260, Tarragona, February 5-11 2003.

[1185] A. Perez-Jimenez, M. J. Perez-Jimenez, and F. Sancho-Caparrini. Computing a partial mapping by P Systems: Design and verification, 2003. M. Cavaliere, C. Martín-Vide, Gh. Paun (Eds), Brainstorming Week on Membrane Computing; Tarragona, Feb 5-11 2003, 247-260.

[1186] A. Pérez-Jiménez, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. Formal verification of a transition P system generating the set $2^n + n^2 + n | n > 1$. Technical Report 26, Rovira i Virgili University, 2003.

[1187] A. Pérez-Jiménez, M. J. Pérez-Jiménez, and F. Sancho-Caparrini. Formal verification of a transition P system generating the set $2^n + n^2 + n | n > 1$. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 261–269, Tarragona, February 5-11 2003.

[1188] M. Perez-Jimenez. P systems-based modelling of cellular signalling pathways. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Preproceedings of Membrane Computing, International Workshop, WMC7*, pages 54–73, Leiden, The Netherlands, 2006.

[1189] M. Perez-Jimenez. P systems-based modelling of cellular signalling pathways. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Preproceedings of Membrane Computing, International Workshop, WMC7*, pages 54–73, Leiden, The Netherlands, 2006.

[1190] M. Perez-Jimenez. P systems-based modelling of cellular signalling pathways. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Preproceedings of Membrane Computing, International Workshop, WMC7*, pages 54–73, Leiden, The Netherlands, 2006.

[1191] M. Perez-Jimenez and F. Romero-Campero. Modelling vibrio fischeri's behaviour using p systems. accepted in the Systems Biology Workshop, ECAL 2005, September 2005.

[1192] M. Perez-Jimenez and F. Romero-Campero. A study of the robustness of the egfr signalling cascade using continuos membrane systems. In *First Intern. Work-Conference on the Interplay between Natural and Artificial Computation, IWINAC 2005*, Las Palmas de Gran Canaria, 2005.

[1193] M. Perez-Jimenez, A. Romero-Jiménez, and F. Sancho-Caparrini. Hard problems addressed through P Systems. Submitted, 2004.

[1194] M. Pérez-Jiménez and T. Yokomori. Membrane computing schema based on string insertions. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 281– 298, Sevilla (Spain), January 29th - February 2 2007.

[1195] M. J. Pérez-Jiménez. An approach to computational complexity in membrane computing. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[1196] M. J. Pérez-Jiménez. Complexity clsses in membrane computing. In *Preproceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 63–63, Milano, Italy, June 2004.

[1197] M. J. Pérez-Jiménez. Computational complexity aspects of membrane computing: Ideas, results, open problems. In *Proceedings of the ESF Exploratory Workshop on Cellular Computing (Complexity Aspects), Sevilla (Spain), January 31st - February 2nd*, pages 277–292, 2005.

[1198] M. J. Pérez-Jiménez and A. Riscos-Núñez. A linear-time solution for the Knapsack problem using active membranes. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 326–342, Tarragona, July 17-22 2003.

[1199] M. J. Pérez-Jiménez and A. Riscos-Núñez. A linear-time solution to the Knapsack problem using P systems with active membranes. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 250–268. Springer, July 2003.

[1200] M. J. Pérez-Jiménez and F. J. Romero-Campero. A CLIPS simulator for recognizer P systems with active membranes. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1201] M. J. Pérez-Jiménez and F.-J. Romero-Campero. A CLIPS simulator for recognizer P systems with active membranes. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 387–413, Sevilla, Spain, February 2-7 2004.

[1202] M. J. Pérez-Jiménez and F. J. Romero-Campero. An efficient family of P systems for packing items into bins. *Journal of Universal Computer Science*, 10(5):650–670, May 2004.

[1203] M. J. Pérez-Jiménez and F. J. Romero-Campero. *Membrane computing as production systems*, pages 167–204. Kronos Editorial, Sevilla, 2004. To appear.

[1204] M. J. Pérez-Jiménez and F. J. Romero-Campero. Solving the BINPACKING problem by recognizer P systems with active membranes. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1205] M. J. Pérez-Jiménez and F.-J. Romero-Campero. Solving the BIN-PACKING problem by recognizer P systems with active membranes. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 414–430, Sevilla, Spain, February 2-7 2004.

[1206] M. J. Pérez-Jiménez and F.-J. Romero-Campero. Trading polarizations for bi-stable catalysts in P systems with active membranes. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 327–342, Milano, Italy, June 2004.

[1207] M. J. Pérez-Jimenez and F. J. Romero-Campero. Modelling egfr signalling network using continuous membrane systems. Submitted, 2005.

[1208] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Decision P systems and the P $\neq$ NP conjecture. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[1209] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. *Teoría de la complejidad en modelos de computación celular con membranas*. Kronos Editorial, Sevilla, 2002.

[1210] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Complexity classes in cellular computing with membranes. Technical Report 26, Rovira i Virgili University, 2003.

[1211] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Complexity classes in cellular computing with membranes. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 270–278, Tarragona, February 5-11 2003.

[1212] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Complexity classes in models of cellular computing with membranes. *Natural Computing*, 2(3):265–285, August 2003.

[1213] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Decision P systems and the P $\neq$ NP conjecture. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 388–399, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[1214] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Solving VALIDITY problem by active membranes with input. Technical Report 26, Rovira i Virgili University, 2003.

[1215] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Solving VALIDITY problem by active membranes with input. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 279–290, Tarragona, February 5-11 2003.

[1216] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. Modelos de computacion celular con membranas. *Boletin de la Sociedad Española de Matemática Aplicada*, (29):57–88, September 2004.

[1217] M. J. Pérez-Jiménez, A. Romero-Jiménez, and F. Sancho-Caparrini. *The P versus NP problem through cellular computing with membranes*, volume 2950 of *Lecture Notes in Computer Science*, pages 338–352. Springer, 2004.

[1218] M. J. Pérez-Jiménez and F. Sancho-Caparrini. *Computación celular con membranas: Un modelo no convencional*. Kronos Editorial, Sevilla, 2002.

[1219] M. J. Pérez-Jiménez and F. Sancho-Caparrini. A formalization of transition P systems. *Fundamenta Informaticae*, 49(1-3):261–271, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[1220] M. J. Pérez-Jiménez and F. Sancho-Caparrini. Verifying a P system generating squares. *Romanian Journal of Information Science and Technology*, 5(2-3), 2002.

[1221] M. J. Pérez-Jiménez and F. Sancho-Caparrini. Verification of nondeterministic transition P systems solving SAT problem. Technical Report 26, Rovira i Virgili University, 2003.

[1222] M. J. Pérez-Jiménez and F. Sancho-Caparrini. Verification of nondeterministic transition P systems solving SAT problem. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 291–304, Tarragona, February 5-11 2003.

[1223] D. Pescini, D. Besozzi, and G. Mauri. Investigating local evolutions in dynamical probabilistic p systems. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 83–90, 2005.

[1224] D. Pescini, D. Besozzi, G. Mauri, and C. Zandron. Dynamical probabilistic P systems. *International Journal of Foundations of Computer Science*, 17(1):183–204, February 2006.

[1225] D. Pescini, D. Besozzi, C. Zandron, and G. Mauri. Dynamical probabilistic P systems: Definitions and applications. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 275–288, 2005.

[1226] D. Pescini, P. Cazzaniga, C. Ferretti, and G. Mauri. First steps towards a wet implementation for τ-DPP. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 355–373, 2009.

[1227] I. Petre. A normal form for P systems. *Bulletin of the EATCS*, (67):165–172, February 1999.

[1228] I. Petre and L. Petre. Mobile ambients and P systems. In *Workshop on Formal Languages, FCT99, Iasi*, 1999.

[1229] I. Petre and L. Petre. Mobile ambients and P systems. *Journal of Universal Computer Science*, 5(9):588–598, 1999.

[1230] B. Petreska and C. Teuscher. A hardware membrane system. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 343–355, Tarragona, July 17-22 2003.

[1231] B. Petreska and C. Teuscher. A reconfigurable hardware membrane system. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 269–285. Springer, July 2003.

[1232] G. M. Pinna and A. Saba. An event based semantics of p systems. In G. Ciobanu, editor, *Second International Meeting on Membrane Computing and Biologically Inspired Process Calculi*, pages 174–187, 2008.

[1233] B. Popa. *Membrane Systems with Limited Parallelism*. PhD thesis, College of Engineering and Science, Louisiana Tech University, Ruston, USA, Ruston, USA, 2006.

[1234] A. Porreca, G. Mauri, and C. Zandron. Complexity classes for membrane systems. Submitted, 2005.

[1235] V. Prakash and K. Krithivasan. Simulating boolean circuits with tissue P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 343–359, Milano, Italy, June 2004.

[1236] P. Prakash-Mohan. Computing with membranes. Master's thesis, TU Dresden, Fakultat Informatik, April 2001.

[1237] A. Profir and E. Boian. P systems of biocomputing systems. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[1238] A. Profir and E. Boian. Modeling molecular genetic triggers by means of P systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 365–386, Tarragona, July 17-22 2003.

[1239] A. Profir, E. Boian, N. Barbacari, E. Gutuleac, and C. Zelinschi. Modelling molecular genetic trigger by means of P transducer. In *Preproceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 360–362, Milano, Italy, June 2004.

[1240] A. Profir, E. Gutuleac, and E. Boian. Simulation of continuous-time p systems using descriptive rewriting timed petri nets. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 91–94, 2005.

[1241] Y. Pu, Y. Yu, and X. Dong. Simulation of biomolecular processes by using stochastic p systems. In *Workshop on High Performance Computing in the Life Sciences*, Ouro Preto, Brasil, October 2006.

[1242] G. Păun. Tracing some open problems in membrane computing. *Romanian Journal of Information Science and Technology*, 10(4):303–314, 2007.

[1243] G. Păun. *Computability of the DNA and cells. Splicing and membrane computing.* SBEB Publishing, Choundrant, Louisiana, 2008.

[1244] G. Păun. An introduction to MC, after 10 years, by means of a (partial) glossary. In G. Ciobanu, editor, *Second International Meeting on Membrane Computing and Biologically Inspired Process Calculi*, pages 1–9, 2008.

[1245] G. Păun and F. J. Romero-Campero. Membrane computing as a modeling framework. cellular systems case studies. In M. Bernardo, P. Degano, and G. Zavattaro, editors, *Formal Methods for Computational Systems Biology*, volume 5016 of *Lecture Notes in Computer Science*, pages 168–214, 2008.

[1246] Z. Qi, C. Fu, D. Shi, and J. You. Specification and execution of P systems with symport/antiport rules using rewriting logic. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 363–371, Milano, Italy, June 2004.

[1247] Z. Qi, C. Fu, D. Shi, J. You, and M. Li. Membrane calculus. A formal method for grid transactions. In *Proceedings of the 3rd International Conference on Grid and Cooperative Computing, GCC 2004*, Wuhan, China, 2004.

[1248] Z. Qi, R. Rao, G. Xue, and J. You. A new formal model based on p systems for mobile transactions. In *Proc. IEEE Intern. Conf. on Services Computing, SCC2004*, pages 16–22, 2004.

[1249] Z. Qi and J. You. P systems and Petri nets. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 387–403., Tarragona, July 17-22 2003.

[1250] Z. Qi, J. You, Y. Jin, and H. Mao. The P System based transaction model for mobile computing. Submitted.

[1251] Z. Qi, J. You, and H. Mao. P systems and Petri nets. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 286–303. Springer, July 2003.

[1252] R. Rama. Computing with P systems. Technical Report 140, University of Auckland, 2000.

[1253] R. Rama. Computing with P systems. In *Pre-Proceedings Workshop on Multiset Processing*, Curtea de Arges, Romania, August 2000.

[1254] R. Rama and H. Ramesh. On generating trees by p systems with active membranes. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 95–98, 2005.

[1255] H. Ramesh and R. Rama. Rewriting P systems with conditional communication: improved hierarchies. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 527–538, Thessaloniki, Greece, 2007.

[1256] H. Ramesh and R. Rama. Rewriting P systems with conditional communication: Improved hierarchies. *Computing and Informatics*, 27(3+):453–465, 2008.

[1257] D. Ramirez-Martinez and M. Gutiérrez-Naranjo. A software tool for dealing with spiking neural p systems. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 299–314, Sevilla (Spain), January 29th - February 2 2007.

[1258] A. J. Ramos-Espina. *Uso de recursos precomputados en sistemas celulares*, chapter 3, pages 159–241. Fenix Editorial, Sevilla, 2004.

[1259] A. Riscos-Núñez. *Cellular Programming: Efficient Resolution of NP-Complete Numerical Problems*. PhD thesis, Universidad de Sevilla, Sevilla, Spain, 2004.

[1260] E. Rivero-Gil, M. A. Gutiérrez-Naranjo, Á. Romero-Jiménez, and A. Riscos-Núñez. A software tool for generating graphics by means of P systems. In E. Csuhaj-Varjú, R. Freund, M. Oswald, and K. Salomaa, editors, *International Workshop on Computing with Biomolecules*, pages 87–100, 2008.

[1261] A. Rodriguez-Patón. Computing with membranes: P Systems with DNA-Worms. GECCO, 2001 (poster), 2001. GECCO, 2001 (poster).

[1262] A. Rodriguez-Patón. On the universality of P systems with membrane creation. *Bulletin of the EATCS*, (74):229–234, June 2001.

[1263] A. Rodriguez-Paton and P. Sosik. P systems with active membranes characterize PSPACE, 2006.

[1264] V. Rogozhin and E. Boian. Simulation of mobile ambients by P systems. Part 1. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 304–319. Springer, July 2003.

[1265] V. Rogozhin and E. Boian. Simulation of mobile ambients by P systems. Part 1. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Pre-proceedings of the Workshop on Membrane Computing*, pages 404–427, Tarragona, July 17-22 2003.

[1266] V. Rogozhin and E. Boian. Simulation of mobile ambients by P systems. part 2. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1267] V. Rogozhin and E. Boian. Simulation of mobile ambients by P systems. Part 2. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 431–442, Sevilla, Spain, February 2-7 2004.

[1268] V. Rogozhin and E. Boian. Simulation of mobile ambients by tissue P systems with a dynamic network of membranes. In *International Conference on Computers and Communications-ICCC 2004, Baile Felix Spa, Oradea, ROMANIA*, Oradea, ROMANIA, May 27-29 2004.

[1269] Y. Rogozhin and S. Verlan. On the rule complexity of universal tissue p systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 510–516, 2005.

[1270] Yu. Rogozhin, A. Alhazov, and R. Freund. Computational power of symport/antiport: History, advances and open problems. In R. Freund, G. Lojka, M. Oswald, and Gh. Păun, editors, *Pre-Proc. of the Sixth*

Workshop on Membrane Computing WMC6, Vienna, Austria, pages 44–78, 2005.

[1271] F. Romero-Campero, M. Gheorghe, L. Bianco, D. Pescini, M. Perez-Jimenez, and R. Ceterchi. Towards probabilistic model checking on p systems using prism. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 455–473, Leiden, The Netherlands, 2006.

[1272] F. Romero-Campero, M. Gheorghe, L. Bianco, D. Pescini, M. Perez-Jimenez, and R. Ceterchi. Towards probabilistic model checking on p systems using prism. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 455–473, Leiden, The Netherlands, 2006.

[1273] F. Romero-Campero and M. Perez-Jimenez. A model of the quorum sensing system in vibrio fischeri. *Artificial Life*, 14(1):95–109, 2008.

[1274] F. J. Romero-Campero. *P systems, a computational modelling framework for systems biology.* PhD thesis, Universidad de Sevilla, Spain, 2008.

[1275] F. J. Romero-Campero. *P systems, a computational modelling framework for systems biology.* PhD thesis, University of Sevilla, Sevilla, Spain, 2008.

[1276] F. J. Romero-Campero, H. Cao, M. Camara, and N. Krasnogor. Structure and parameter estimation for cell systems biology models. In M. Keijzer, editor, *Proceedings of the 10th annual conference on Genetic and evolutionary computation*, pages 331–338, 2008.

[1277] F. J. Romero-Campero, M. Gheorghe, G. Ciobanu, J. M. Auld, and M. J. Pérez-Jiménez. Cellular modelling using P systems and process algebra. *Progress in Natural Science*, 17(4):375–383, 2007.

[1278] F. J. Romero-Campero and M. J. Pérez-Jiménez. A model of the quorum sensing system in Vibrio fischeri using P systems. *Artificial Life*, 14(1):95–109, 2008.

[1279] F. J. Romero-Campero and M. J. Pérez-Jiménez. Modelling gene expression control using P systems: The Lac Operon, a case study. *Biosystems*, 91(3):438–457, 2008.

[1280] F. J. Romero-Campero, J. Twycross, H. Cao, J. Blakes, and N. Krasnogor. A multiscale modeling framework based on P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 64–78, 2009.

[1281] F. J. Romero-Campero, J. Twycross, and N. K. Hongqing Cao, Jonathan Blakes. A multiscale modeling framework based on P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 63–77, 2009.

[1282] A. Romero-Jiménez. *Complexity and universality in cellular computing models.* PhD thesis, Departamento de Ciencias de la Computación e Inteligencia Artificial. Universidad de Sevilla, Sevilla, Spain, 2003.

[1283] A. Romero-Jimenez, M. Gutiérrez-Naranjo, and M. Perez-Jimenez. Graphical modelling of higher plants using p systems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 474–484, Leiden, The Netherlands, 2006.

[1284] A. Romero-Jiménez, M. A. Gutiérrez-Naranjo, and M.-J. Pérez-Jiménez. The growth of branching structures with P systems. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 253–266. Fénix Editora, 2006.

[1285] A. Romero-Jiménez and M. J. Pérez-Jiménez. Generation of diophantine sets by computing p systems with external output. In C. Calude, M. J. Dinneen, and F. Peper, editors, *Unconventional Models of Computation: Third International Conference, UMC 2002, Kobe, Japan, October 15-19, 2002. Proceedings*, volume 2509 of *Lecture Notes In Computer Science*, pages 176–190, London, UK, October 15–19 2002. Springer-Verlag Heidelberg.

[1286] A. Romero-Jiménez and M. J. Pérez-Jiménez. Simulating Turing machines by P systems with external output. *Fundamenta Informaticae*, 49(1-3):273–278, January 2002. Special Issue: Membrane Computing (WMC-CdeA2001) Guest Editor(s): Carlos Martín-Vide, Gheorghe Păun.

[1287] Á. Romero-Jiménez and M. J. Pérez-Jiménez. Computing partial recursive functions by transition P systems. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 320–340. Springer, July 2003.

[1288] A. Romero-Jiménez and M. J. Pérez-Jiménez. Computing partial recursive functions through transition P systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 428–444, Tarragona, July 17-22 2003.

[1289] G. Rozenberg. Selectivity in molecular computing. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 64–64, Milano, Italy, June 2004.

[1290] N. Sabadini and R. Walters. Hierarchical automata and p systems. *Electronic Notes in Theoretical Computer Science*, (78):1–15, 2003.

[1291] F. Sancho-Caparrini. *Verification of Programs in Unconventional Computing Models*. PhD thesis, University of Sevilla, Sevilla, Spain, 2002.

[1292] F. Sancho-Caparrini. A note on complexity measures for probabilistic P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1293] F. Sancho-Caparrini. A note on complexity measures for probabilistic P systems. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 443–448, Sevilla, Spain, February 2-7 2004.

[1294] D. Sburlan. Clock-free P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 372–383, Milano, Italy, June 2004.

[1295] D. Sburlan. From cells to software architecture. A P system outlook of computational design. In *Third Workshop on Mathematical Modelling of Environmental and Life Sciences Problems*, Constancta, 2004.

[1296] D. Sburlan. Membrane systems with promoters/inhibitors. from computational universality to algorithms. Technical Report 04/2004, Sevilla University, 2004. RNGC Report 04/2004.

[1297] D. Sburlan. New results on P systems with multiset promoted/inhibited rules. Bull. PAMM, 2164, 2004. pages 45–54.

[1298] D. Sburlan. Further results on P systems with promoters/inhibitors. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 289–304, 2005.

[1299] D. Sburlan. Modeling the dynamical parallelism of bio-systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 517–529, 2005.

[1300] D. Sburlan. Non-cooperative p systems with priorities characterize pset0l. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 530–539, 2005.

[1301] D. Sburlan. Further results on P systems with promoters/inhibitors. *International Journal of Foundations of Computer Science*, 17(1):205–221, February 2006.

[1302] D. Sburlan. *Promoting and Inhibiting Contexts in Membrane Computing*. PhD thesis, University of Sevilla, Sevilla, Spain, 2006.

[1303] J. Sempere and D. Lopez. Identifying p rules from membrane structures with an error-correcting approach. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 485–500, Leiden, The Netherlands, 2006.

[1304] J. Sempere and D. Lopez. Characterizing membrane structures through multiset tree automata. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 539–550, Thessaloniki, Greece, 2007.

[1305] J. Sempere and D. Lopez. On two families of multiset tree automata. In M. Gutiérrez-Naranjo, G. Păun, A. Romero-Jiménez, and A. Núñez, editors, *Proceedings of the Fifth Brainstorming Week on Membrane Computing*, pages 315–325, Sevilla (Spain), January 29th - February 2 2007.

[1306] J. M. Sempere. P systems with external input and learning strategies. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 341–356. Springer, July 2003.

[1307] J. M. Sempere. P systems with external input and learning strategies. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 445–448, Tarragona, July 17-22 2003.

[1308] J. M. Sempere. *Complexity applications of covering rules in P systems*, pages 277–291. Kronos Editorial, Sevilla, 2004. To appear.

[1309] J. M. Sempere. Covering reductions and degrees in P systems. In *Preproceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 384–391, Milano, Italy, June 2004.

[1310] J. M. Sempere. Covering rules in P systems: Some preliminary ideas. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

[1311] J. M. Sempere. Covering rules in P systems: Some preliminary ideas. In G. Păun, A. Riscos-Núñez, A. Romero-Jiménez, and F. Sancho-Caparrini, editors, *Second Brainstorming Week on Membrane Computing, Sevilla, Spain, February 2-7 2004*, pages 449–456, Sevilla, Spain, February 2-7 2004.

[1312] J. M. Sempere. Translating multiset tree automata into P systems. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, 2009.

[1313] J. M. Sempere and D. López. Recognizing membrane structures with tree automata. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 305–316, 2005.

[1314] T. Serbanuta, G. Stefanescu, and G. Rosu. Defining and executing P systems with structured data in K. In D. W. Corne, P. Frisco, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing: 9th International Workshop*, volume 5391 of *Lecture Notes in Computer Science*, pages 374–393, 2009.

[1315] S.Hemalatha, K.S.Dersanambika, K.G.Subramanian, and C. S. H. Nagore. P systems generating 3d rectangular picture languages. In *in G. Ciobanu, Gh. Paun, Pre-Proc. of First International Workshop on Theory and Application of P Systems, Timisoara, Romania, September 26-27*, pages 69–74, 2005.

[1316] A. Skowron, editor. *Fundamenta Informaticae*, volume 49, 2002.

[1317] S.N. and G. Ciobanu. On the computational power of enhanced mobile membranes. *submitted*, 2008.

[1318] P. Sosik. P systems versus register machines: two universality proofs. In *Pre-Proceedings of Second Workshop on Membrane Computing*, Curtea de Arges, Romania, August 2002.

[1319] P. Sosík. The computational power of cell division in P systems: Beating down parallel computers? *Natural Computing*, 2(3):287–298, August 2003.

[1320] P. Sosík. The power of catalysts and priorities in membranes. *Grammars*, 6:13–24, 2003.

[1321] P. Sosík. Solving a PSPACE-complete problem by P systems with active membranes. Technical Report 26, Rovira i Virgili University, 2003.

[1322] P. Sosik. Solving a PSPACE-Complete Problem by P systems with active membranes. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 305–312, Tarragona, February 5-11 2003.

[1323] P. Sosik. On evolutionary lineages of membrane systems. In *Pre-Proc. of the sixth Workshop on Membrane Computing, WMC6, Vienna, Austria*, pages 79–93, 2005.

[1324] P. Sosik and R. Freund. String rewriting sequential P systems and regulated rewriting. In *Proc. Conf. Developments in Language Theory*, Vienna, 2001.

[1325] P. Sosik and R. Freund. P systems without priorities are computationally universal. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 400–409, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[1326] P. Sosík and J. Matýsek. Membrane computing: when communication is enough. In C. Calude, M. J. Dinneen, and F. Peper, editors, *Unconventional Models of Computation: Third International Conference, UMC 2002, Kobe, Japan, October 15-19, 2002. Proceedings*, volume 2509 of *Lecture Notes In Computer Science*, pages 264–275, London, UK, October 15–19 2002. Springer-Verlag Heidelberg.

[1327] P. Sosik and J. Matysek. *Membranove vypocty: komunikace versus reakce*, pages 233–244. Slezska Univ., Opava, 2002. in vol "Kognice a umely zivot II".

[1328] P. Sosík and A. Rodríguez-Patón. Membrane computing and complexity theory: A characterization of PSPACE. *Journal of Computer and System Sciences*, 73(1):137–152, 2007.

[1329] A. Spicher, O. Michel, M. Cieslak, J.-L. Giavitto, and P. Prusinkiewicz. Stochastic P systems and the simulation of biochemical processes with dynamic compartments. *Biosystems*, 91(3):458–472, 2008.

[1330] I. Stamatopoulou, M. Gheorghe, and P. Kefalas. Modelling of dynamic configuration of biology-inspired multi-agent systems with communicating X-machines and population P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 392–404, Milano, Italy, June 2004.

[1331] I. Stamatopoulou, P. Kefalas, G. Eleftherakis, and M. Gheorghe. A modeling language and tool for population P systems. In P. Bozanis and E. N. Houstis, editors, *10th Panhellenic Conference on Informatics*, pages 142–152, 2005.

[1332] I. Stamatopoulou, P. Kefalas, and M. Gheorghe. Operas$_{CC}$: An instance of a formal framework for MAS modelling based on population P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 551–566, Thessaloniki, Greece, 2007.

[1333] I. Stamatopoulou, P. Kefalas, and M. Gheorghe. OPERAS: A framework for the formal modelling of multi-agent systems and its application to swarm-based systems. In A. Artikis, G. M. O'Hare, K. Stathis, and G. Vouros, editors, *Engineering Societies in the Agents World VIII: 8th International Workshop*, volume 4995 of *Lecture Notes In Artificial Intelligence*, pages 158–174, 2008.

[1334] G. Stefan. Chaotic membrane computation with cellular automata, 2002.

[1335] G. Stefan. Membrane computing in connex environment. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 81–98, Thessaloniki, Greece, 2007.

[1336] K. Subramanian, M. Geethalakshmi, and P. H. Chandra. Array rewriting p systems generating rectangular arrays. In *National Conference in Intelligent Optimization Modeling Gandhigram Rural Institute-Deemed University, India*, India, March 2006.

[1337] K. Subramanian, S. Hemalatha, and C. S. H. Nagore. On image generation by sequential/parallel rewriting p systems. In *Proc. Intern. Conf. on Signal Processing, Communications and Networking, Anna University, Chennai, IEEE - IETE*, pages 70–73, 2007.

[1338] K. Subramanian, S. Hemalatha, C. S. H. Nagore, and M. Margenstern. On the power of p systems with parallel rewriting and conditional communication. *Romanian Journal of Information Science and Technology*, 2006. Accepted.

[1339] K. Subramanian, L. Pan, S. K. Lee, and A. K. Nagar. P systems and context-free 2d picture languages. *Proceedings of the 4th BIC-TA*, pages 336–340, 2009.

[1340] K. Subramanian, R. Saravanan, M. Geethalakshmi, P. H. Chandra, and M. Margenstern. P systems with array objects and array rewriting rules. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 160–167, Wuhan, China, September 2006.

[1341] K. Subramanian, R. Saravanan, M. Geethalakshmi, P. H. Chandra, and M. Margenstern. P systems with array objects and array rewriting rules. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[1342] K. Subramanian, R. Saravanan, and K. Rangarajan. Array p systems and basic puzzle grammars. In *National Conference in Intelligent Optimization Modeling Gandhigram Rural Institute-Deemed University, India*, India, March 2006.

[1343] K. Subramanian, D. Thomas, M. Begum, and P. Chandra. A note on self crossover and splicing P systems. Technical Report 17/01, Rovira i Virgili University, Tarragona, Spain, 2001. Technical Report 17/01 of Research Group on Mathematical Linguistics.

[1344] K. Subramanian, D. Thomas, M. Begum, and P. Chandra. A note on self crossover and splicing P Systems, 2001. Pre-Proceedings of WMC 2001 (No está en los proceedings: Fundamenta Informaticae 49).

[1345] K. G. Subramanian, R. M. Ali, A. K. Nagar, and M. Margenstern. Array P systems and t-communication. *Fundamenta Informaticae*, 91(1):145–159, 2009.

[1346] K. G. Subramanian, R. Saravanan, M. Geethalakshmr, P. H. Chandra, and M. Margenstern. P systems with array objects and array rewriting rules. *Progress in Natural Science*, 17(4):479–485, 2007.

[1347] Y. Suzuki. An attempt to analyze the dynamics of abstract rewriting systems on multisets. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 501–506, Leiden, The Netherlands, 2006.

[1348] Y. Suzuki. Dynamics of an abstract chemical system with few molecules. In M. Sugisaka and H. Tanaka, editors, *Proceedings of the 12th Int. Symposium on Artificial Life and Robotics*, pages 506–508, Beppu, Oita, Japan, Jan 25-27 2007.

[1349] Y. Suzuki, D. Besozzi, C. Zandron, H. Tanaka, and G. Mauri. Toward a novel computational framework for molecular computing: chemical reaction as computation. Submitted, 2004. DNA10, Milano, 2004.

[1350] Y. Suzuki, Y. Fujiwara, H. Tanaka, and J. Takabayashi. Artificial life applications of a class of P systems: Abstract rewriting systems on multisets. In C. Calude, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Multiset Processing: Mathematical, Computer Science, and Molecular Computing Points of View*, volume 2235 of *Lecture Notes in Computer Science*, pages 299–346, Berlin, 2001. Springer-Verlag.

[1351] Y. Suzuki, S. Ogishima, and H. Tanaka. Modeling the p53 signaling network by using P systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 449–454, Tarragona, July 17-22 2003.

[1352] Y. Suzuki, J. Takabayashi, and H. Tanaka. Adaptive behavior in a tritrophic interactions consisting of plants, herbivors and carnivores. In *The Sixth International Conference on the Simulation of Adaptive Behavior (SAB2000) September 11-15 2000, Paris, France*, September 2000.

[1353] Y. Suzuki, J. Takabayashi, and H. Tanaka. *Investigation of an Ecological System by Using an Abstract Rewriting System on Multisets*, pages 300–309. Editura Academiei Romane, Bucharest, August 2000.

[1354] Y. Suzuki and H. Tanaka. Artificial life and P systems. Technical Report 140, University of Auckland, 2000.

[1355] Y. Suzuki and H. Tanaka. Artificial life and P systems. In *Pre-Proceedings Workshop on Multiset Processing*, Curtea de Arges, Romania, August 2000.

[1356] Y. Suzuki and H. Tanaka. Chemical evolution among artificial protocells. *Artificial Life*, 7:54–63, 2000.

[1357] Y. Suzuki and H. Tanaka. Computational living systems based on an abstract chemical system. In *Proc. CEC2000*, pages 1369–1376. IEEE, 2000.

[1358] Y. Suzuki and H. Tanaka. A new molecular computing model, artificial cell systems. In *Genetic and Evolutionary Computation Conf. GECCO*, pages 833–840. Morgan Kaufman, 2000.

[1359] Y. Suzuki and H. Tanaka. On a LISP implementation of a class of P systems. *Romanian Journal of Information Science and Technology*, 3(2):173–186, 2000.

[1360] Y. Suzuki and H. Tanaka. Abstract rewriting systems on multisets and their application for modelling complex behaviours. Technical Report 26, Rovira i Virgili University, 2003.

[1361] Y. Suzuki and H. Tanaka. Abstract rewriting systems on multisets and their application for modelling complex behaviours. In M. Cavaliere, C. Martín-Vide, and G. Păun, editors, *Brainstorming Week on Membrane Computing, Tarragona, February 5-11 2003*, pages 313–331, Tarragona, February 5-11 2003.

[1362] Y. Suzuki and H. Tanaka. *Modeling p53 Signaling Pathways by Using Multiset Processing*, pages 201–214. Springer-Verlag, 2005.

[1363] A. Syropoulos. Fuzzyfying P Systems. Submitted, 2003.

[1364] A. Syropoulos. Fuzzifying P systems. In *First brainstorming Workshop on Uncertainty in Membrane Computing, Palma de Mallorca, Spain, November 2004*, 2004.

[1365] A. Syropoulos. On P systems and distributed computing. In *Preproceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 405–413, Milano, Italy, June 2004.

[1366] A. Syropoulos, S. Doumanis, and K. T. Sotiriades. Computing recursive functions with P systems. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 414–421, Milano, Italy, June 2004.

[1367] A. Syropoulos, E. G. Mamatas, P. C. Allilomes, and K. T. Sotiriades. A distributed simulation of transition P systems. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane*

Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers, volume 2933 of *Lecture Notes in Computer Science*, pages 357–368. Springer, July 2003.

[1368] A. Syropoulos, E. G. Mamatas, P. C. Allilomes, and K. T. Sotiriades. A distributed simulation of transition P systems. In C. Martín-Vide, G. Mauri, G. R. Gheorghe Păun, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes In Computer Science*, pages 357–368. Springer-Verlag Heidelberg, 2004.

[1369] A. Tejedor, L. Fernandez, F. Arroyo, and G. Bravo. An architecture for attacking the bottleneck communication in P systems. In M. Sugisaka and H. Tanaka, editors, *Proceedings of the 12th Int. Symposium on Artificial Life and Robotics*, pages 500–505, Beppu, Oita, Japan, Jan 25-27 2007.

[1370] J. Tejedor, L. Fernandez, F. Arroyo, and S. Gomez. Algorithm of rules applications based on competitiveness of evolution rules. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 567–580, Thessaloniki, Greece, 2007.

[1371] G. Terrazas, N. Krasnogor, M. Gheorghe, F. Bernardini, S. Diggle, and M. Camara. An environment aware p system model of quorum sensing, new computational paradigms. In B. L. S. Barry Cooper and L. Torenvliet, editors, *First Conf. on Computability in Europe, CiE2005, Amsterdam*, LNCS 3536, pages 479–485. Springer, 2005.

[1372] C. Teuscher. From membranes to systems: self-configuration and self-replication in membrane systems. *BioSystems*. To appear (IPCAT 2005).

[1373] C. Teuscher. Chemical blending with particles, cells and artificial chemistries. In *Pre-Proc. Unconventional Programming Paradigms, UPP04, Le Mont Saint-Michel*, pages 29–37, September 2004.

[1374] J. Twycross, F. J. Romero-Campero, M. Bennett, M. Cámara, and N. Krasnogor. Modular assembly of cell systems biology models using P systems. In O. H. Ibarra and P. Sosík, editors, *Proceedings of Prague International Workshop on Membrane Computing*, pages 51–62, 2008.

[1375] K. Ueda and N. Nato. LMNtal: A language model with links and membranes. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 65–80, Milano, Italy, June 2004.

[1376] M. Umeki and Y. Suzuki. Direct simulation of the oregonator model by using a class of P systems. In G. Eleftherakis and G. P. P. Kefalas, editors, *Pre-proceedings of Membrane Computing, International Workshop - WMC8*, pages 581–588, Thessaloniki, Greece, 2007.

[1377] M. Umeki and Y. Suzuki. A simple membrane computing method for simulating bio-chemical reactions. *Computing and Informatics*, 27(3+):515–528, 2008.

[1378] R. Vasilco, A. Popescu, R. Chiurtu, and D. Dascalu. The architecture for living structures - a possible basis for molecular computing. In G. Păun, G. Rozenberg, A. Salomaa, and C. Zandron, editors, *Membrane Computing: International Workshop, WMC-CdeA 2002, Curtea de Arges, Romania, August 19-23, 2002. Revised Papers.*, volume 2597 of *Lecture Notes in Computer Science*, pages 410–421, Curtea de Arges, Romania, July 2003. Springer-Verlag, Berlin.

[1379] G. Vaszil. On the size of P systems with minimal symport/antiport. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 422–431, Milano, Italy, June 2004.

[1380] G. Vaszil. On a class of P automata as a machine model for languages over infinite alphabets. In *Proceedings of the Third Brainstorming Week on Membrane Computing, Sevilla (Spain), January 31st - February 4th*, pages 317–326, 2005.

[1381] G. Vaszil. A class of P automata for characterizing context-free languages. In M. A. Gutiérrez-Naranjo, G. Paun, A. Riscos-Núñez, and F. J. Romero-Campero, editors, *Fourth Brainstorming Week on Membrane Computing, Sevilla, January 30 - February 3, 2006. Volume II*, pages 267–276. Fénix Editora, 2006.

[1382] S. Verlan. About splicing P systems with immediate communication and non-extended splicing P Systems. In C. Martín-Vide, G. Mauri, G. Păun, G. Rozenberg, and A. Salomaa, editors, *Membrane Computing, International Workshop, WMC 2003, Tarragona, Spain, July, 17-22, 2003, Revised Papers*, volume 2933 of *Lecture Notes in Computer Science*, pages 369–382. Springer, July 2003.

[1383] S. Verlan. About splicing P systems with immediate communication and non-extended splicing P Systems. In A. Alhazov, C. Martín-Vide, and G. Păun, editors, *Preproceedings of the Workshop on Membrane Computing*, pages 461–473., Tarragona, July 17-22 2003.

[1384] S. Verlan. Communicating distributed h systems with alternating filters and tissue p systems with minimal symport/antiport, 2003. EMCC Workshop - 2nd Annual MolCoNet Meeting November 27-29, 2003 Wien, Austria.

[1385] S. Verlan. Communicating distributed H Systems with alternating filters and tissue P systems with minimal symport/antiport. In *EMCC Workshop*, Vienna, November 2003.

[1386] S. Verlan. *Head systems and application to bio-informatics*. PhD thesis, LITA, Université de Metz, Metz, France, 2004.

[1387] S. Verlan. Tissue P Systems with minimal symport/antiport, 2004. DLT'04 - Eighth International Conference on Developments in Language Theory, Auckland, New Zealand - December 13-17 2004.

[1388] S. Verlan, F. Bernardini, M. Gheorghe, and M. Margenstern. On communication in tissue p systems: Conditional uniport. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 507–521, Leiden, The Netherlands, 2006.

[1389] S. Verlan, F. Bernardini, M. Gheorghe, and M. Margenstern. Generalized communicating P systems. *Theoretical Computer Science*, 404(1-2):170–184, 2008.

[1390] C. Versari. Encoding catalytic p systems in π@. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[1391] A. Vitale and G. Mauri. Communication via mobile vesicles in brane calculi. In N. Busi and C. Zandron, editors, *Proceedings MeCBIC 2006*, Venice, 2006.

[1392] A. Vitale, G. Mauri, and C. Zandron. Simulation of a bounded symport/antiport P system with Brane calculi. *Biosystems*, 91(3):558–571, 2008.

[1393] J. Wang, H. Hoogeboom, L. Pan, and G. Păun. Spiking neural p systems with weights and thresholds. *Pre-proceedings of Tenth Workshop on Membrane Computing*, 2009.

[1394] J. Wiedermann. Coupling computational and non-computational processes: Minimal artificial life. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 432–445, Milano, Italy, June 2004.

[1395] M. M. with L. Colson, N. Jonoska, and G. Păun. About P systems and λ-Calculus. In *Pre-proceedings of the Fifth Workshop on Membrane Computing (WMC5), Milano, Italy, June 2004*, pages 44–62, Milano, Italy, June 2004.

[1396] X. Xian. Tissue P systems with parallel rules on channels. *Progress in Natural Science*, 17(4):486–491, 2007.

[1397] X. Xu. Tissue p systems with parallel rules on channels. In *Pre-proceedings of International Conference on Bio-Inspired Computing - Theory and Applications, BIC-TA 2006, Membrane Computing Section*, pages 168–177, Wuhan, China, September 2006.

[1398] X. Xu. Tissue p systems with parallel rules on channels. In *Proc. Bio-Inspired Computing – Theory and Applications Conf., BIC-TA 2006, Wuhan, China, September 2006, Membrane Computing Section.*, 2006.

[1399] L. Yang, Z. Dang, and O. H. Ibarra. On stateless automata and P systems. *Intenational Journal of Foundations of Computer Science*, 19(5):1259–1276, 2008.

[1400] L. Yang, Y. Wang, and Z. Dang. Automata on multisets of communicating objects. In C. S. Calude, J. F. Costa, R. Freund, M. Oswald, and G. Rozenberg, editors, *Proceedings of the 7th international conference on Unconventional Computing*, volume 5204 of *Lecture Notes in Computer Science*, pages 242–257, 2008.

[1401] D. Zaharie and G. Ciobanu. Distributed evolutionary algorithms inspired by membranes in solving continuous optimization problems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 522– 537, Leiden, The Netherlands, 2006.

[1402] D. Zaharie and G. Ciobanu. Distributed evolutionary algorithms inspired by membranes in solving continuous optimization problems. In H. Hoogeboom, G. Paun, and G. Rozenberg, editors, *Pre-proceedings of Membrane Computing, International Workshop, WMC7*, pages 522– 537, Leiden, The Netherlands, 2006.

[1403] C. Zandron. *A Model for Molecular Computing: Membrane Systems*. PhD thesis, Dipartimento di Scienze dell'Informazione, Universita' degli Studi di Milano, Milano, Italy, 2002.

[1404] C. Zandron, C. Ferretti, and G. Mauri. Priorities and variable thickness of membranes in rewriting P systems, 2000.

[1405] C. Zandron, C. Ferretti, and G. Mauri. Solving NP-complete problems using P systems with active membranes. In I. Antoniou, C. Calude, and M. Dinneen, editors, *Unconventional Models of Computation*, pages 289–301, London, February 2000. Springer-Verlag. Contributed paper.

[1406] C. Zandron, C. Ferretti, and G. Mauri. Two normal forms for rewriting P systems. In M. Margenstern and Y. Rogozhin, editors, *Machines, Computations, and Universality. Third International Conference, MCU 2001 Chisinau, Moldava, May 23-27, 2001. Proceedings.*, volume 2055 of *Lecture Notes in Computer Science*, pages 153–164, Chisinau, Moldova, 2001. Springer-Verlag.

[1407] C. Zandron, C. Ferretti, and G. Mauri. Using membrane features in P systems. *Romanian Journal of Information Science and Technology*, 4(1-2):241–257, 2001.

[1408] C. Zandron, A. Leporati, C. Ferretti, G. Mauri, and M. J. Pérez-Jiménez. On the computational efficiency of polarizationless recognizer P systems with strong division and dissolution. *Fundamenta Informaticae*, 87(1):79–91, 2008.

[1409] C. Zandron, G. Mauri, and C. Ferretti. Universality and normal forms on membrane systems. In R. Freund and A. Kelemenova, editors, *Proc. Intern. Workshop Grammar Systems 2000*, pages 61–74, Bad Ischl, Austria, July 2000.

[1410] X. Zeng, C. Lu, and L. Pan. A weakly universal spiking neural p system. *Proceedings of the 4th BIC-TA*, 2009.

[1411] G.-X. Zhang, M. Gheorghe, and C.-Z. Wu. A quantum-inspired evolutionary algorithm based on P systems for knapsack problem. *Fundamenta Informaticae*, 87(1):93–116, 2008.

[1412] L. Zhang, Yao; Huang. A variant of p systems for optimization. *NEUROCOMPUTING*, 72(4-6):1355–1360, 2009.

[1413] X. Zhang, Y. Jiang, and L. Pan. Small universal spiking neural P systems with exhaustive use of rules. In *Proceedings of the Third International Conference on Bio-Inspired Computing: Theories and Applications*, pages 117–127, 2008.

[1414] X. Zhang, J. Wang, and L. Pan. A note on the generative power of axon p systems. *International Journal of Computers, Communications & Control*, 4:92–98, 2009.

[1415] X. Zhang, X. Zeng, and L. Pan. On string languages generated by spiking neural p systems with exhaustive use of rules. *Natural Computing*, 7(4):535–549, 2008.

[1416] X. Zhang, X. Zeng, and L. Pan. Smaller universal spiking neural p systems. *Fundamenta Informaticae*, 87(1):117–136, 2008.

[1417] X. Zhang, X. Zeng, and L. Pan. Smaller universal spiking neural P systems. *Fundamenta Informaticae*, 87(1):117–136, 2008.

[1418] X. Zhang, X. Zeng, and L. Pan. On string languages generated by asynchronous spiking neural p systems. *Theoretical Computer Science*, 410:2478–2488, 2009.