

P-TechnicalReport

July 14, 2010

References

- [1] Joaquín Aguado, Tudor Balanescu, Tony Cowling, Marian Gheorghe, and Florentin 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.
- [2] Artiom Alhazov and Sergey Verlan. Minimization strategies for maximally parallel multiset rewriting systems. Technical Report 862, Turku Centre for Computer Science, 2008.
- [3] Ioan I. Ardelean and Daniela Besozzi. Mechanosensitive channels, a hot topic in (micro)biology: any excitement for P systems? Technical Report 26, Rovira i Virgili University, 2003.
- [4] Ioan I. Ardelean and Daniela Besozzi. New proposals for the formalization of membrane proteins. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [5] Ioan I. Ardelean and Matteo Cavaliere. Playing with a probabilistic P system simulator: Mathematical and biological problems. Technical Report 26, Rovira i Virgili University, 2003.
- [6] Ioan I. Ardelean, Matteo Cavaliere, and Dragos Sburlan. Computing using signals: From cells to P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [7] Fernando Arroyo, Angel V. Baranda, Juan Castellanos, Carmen Luengo, and Luis 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.
- [8] Adrian Atanasiu and Carlos 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.

- [9] Adrian Atanasiu and Carlos 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.
- [10] Francesco Bernardini and Marian Gheorghe. Language generating by means of P systems with active membranes. Technical Report 26, Rovira i Virgili University, 2003.
- [11] Francesco Bernardini and Marian 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.
- [12] Daniela Besozzi, Erzsebet Csuha-j-Varjú, Giancarlo Mauri, and Claudio Zandron. Size and power of extended gemmating P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [13] Daniela Besozzi, Giancarlo Mauri, and Claudio Zandron. Hierarchies of parallel rewriting P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [14] Cristian S. Calude and Gheorghe Păun. Computing with cells and atoms: After five years. Technical Report R 246, Univ. of Auckland, 2004. CDMTCS Tech. Rep. R 246.
- [15] Cristian S. Calude, Gheorghe Păun, and Monica Tatarâm. A glimpse into natural computing. Technical Report 117, CDMTCS University of Auckland, 2000.
- [16] Juan Castellanos, Gheorghe Păun, and Alfonso Rodríguez-Patón. P systems with worm-objects. Technical Report 123, University of Auckland, 2000. www.cs.auckland.ac.nz/CDMTCS.
- [17] M. Cavaliere, O. Egecioglu, O.H. Ibarra, S. Woodworth, M. Ionescu, and Gh. 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.
- [18] 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.
- [19] Matteo Cavaliere. Evolution, communication and observation. from biology to membrane systems and back. Technical Report 03/2004, Sevilla University, 2004. RNGC Report 03/2004.

- [20] Matteo Cavaliere and Daniela Genova. P systems with symport/antiport of rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [21] Matteo Cavaliere and Natasha Jonoska. Forbidding and enforcing in membrane computing. Technical Report 26, Rovira i Virgili University, 2003.
- [22] Matteo 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.
- [23] Matteo 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.
- [24] Matteo 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.
- [25] Rodica Ceterchi, Radu Gramatovici, Natasha Jonoska, and K.G. Subramanian. Generating picture languages with P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [26] Rodica Ceterchi, Mutyam Madhu, Gheorghe Păun, and K.G. Subramanian. Array-rewriting P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [27] Rodica Ceterchi and Carlos Martín-Vide. P systems with communication for static sorting. Technical Report 26, Rovira i Virgili University, 2003.
- [28] Rodica Ceterchi and Mario 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.
- [29] Gabriel Ciobanu. Pumps systems of membranes. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [30] Gabriel Ciobanu and Dorin 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.

- [31] Gabriel Ciobanu, Gheorghe Păun, and Gheorghe Stefanescu. Sevilla carpets associated with P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [32] Gabriel Ciobanu and Bogdan 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.
- [33] Andrés Cordón-Franco, Miguel A. Gutiérrez-Naranjo, and Mario J. Pérez-Jiménez. Looking for P Truth. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [34] Andrés Cordón-Franco, Miguel A. Gutiérrez-Naranjo, Mario J. Pérez-Jiménez, and Agustín 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.
- [35] Andrés Cordón-Franco, Miguel A. Gutiérrez-Naranjo, Mario J. Pérez-Jiménez, and Fernando Sancho-Caparrini. A Prolog simulator for deterministic P systems with active membranes. Technical Report 26, Rovira i Virgili University, 2003.
- [36] Erzsebet Csuhaj-Varjú, Carlos Martín-Vide, Gheorghe Păun, and Arto Salomaa. From Watson-Crick L Systems to Darwinian P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [37] Erzsebet Csuhaj-Varjú and Gyorgy Vaszil. New results and research directions concerning P Automata, accepting P systems with communication only. Technical Report 26, Rovira i Virgili University, 2003.
- [38] J.M. Campos Diaz, E. Lopez Dominguez, S. Lopez Escobar, J. Estudillo Ramirez, and L.D. Huerta Hernandez. Development of a cleaner robot using techniques of membranes. Technical report, Report INAOE, Puebla, Mexic, 2006. Report INAOE.
- [39] Claudio Ferretti, Giancarlo Mauri, Gheorghe Păun, and Claudio 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.
- [40] Federico Fontana and Giuditta Franco. Maximum search using P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [41] Giuditta Franco. Membrane Kauffman Networks. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

- [42] Rudolf Freund, Alberto Leporati, Marion Oswald, and Claudio 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.
- [43] Rudolf Freund and Marion 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.
- [44] Rudolf Freund and Marion Oswald. P systems with elementary graph productions. Technical Report 26, Rovira i Virgili University, 2003.
- [45] Rudolf Freund and Marion Oswald. P systems with antiport rules for evolution rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [46] Rudolf Freund and Andrei Păun. P systems with active membranes and without polarizations. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [47] Rudolf Freund, Gheorghe Păun, and Mario 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.
- [48] Pierluigi Frisco. Membrane computing based on splicing: Improvements. Technical Report 140, University of Auckland, 2000.
- [49] Pierluigi Frisco. About P systems with symport/antiport. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [50] Pierluigi Frisco, Hendrik Jan Hoogeboom, and Paul 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.
- [51] Jean Louis Giavitto and Olivier 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.
- [52] Miguel A. Gutiérrez-Naranjo, Mario J. Pérez-Jiménez, and Agustín 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.
- [53] Miguel A. Gutiérrez-Naranjo, Mario J. Pérez-Jiménez, and Agustín Riscos-Núñez. Towards a programming language in cellular computing. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.

- [54] Miguel A. Gutiérrez-Naranjo and Vladimir Rogozhin. Deductive databases and P systems. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [55] Mihai Ionescu and Dragos Sburlan. On P systems with promoters/inhibitors. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [56] Sungchul 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.
- [57] Sungchul Ji. Towards a unified theory of computing, mind, and signs. Technical Report 26, Rovira i Virgili University, 2003.
- [58] Waldemar Korczynski. Transformacje systemow Pauna jako model przekształcen systemowych. Technical Report W2/2003, WSU Kielce, 2004. Raport z Badan Grantu W2/2003.
- [59] Shankara Narayanan Krishna. Computing with simple P systems. Technical Report 140, University of Auckland, 2000.
- [60] Shankara Narayanan Krishna, K. Lakshmanan, and Raghavan 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.
- [61] Shankara Narayanan Krishna and Andrei Păun. Some universality results on evolution-communication P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [62] Shankara Narayanan Krishna and Andrei Păun. Three universality results on P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [63] Kamala Krithivasan. P automata with tapes. Technical Report 26, Rovira i Virgili University, 2003.
- [64] Manfred Kudlek, Carlos Martín-Vide, and Gheorghe Păun. Toward FMT (Formal Macroset Theory). Technical Report 140, University of Auckland, 2000.
- [65] Lucas Ledesma, Daniel Manrique, Alfonso Rodríguez-Patón, and Andrés 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.
- [66] Alberto Leporati, Claudio Zandron, and Giancarlo 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.

- [67] Mutyam Madhu. New results in rewriting P systems. Technical Report 26, Rovira i Virgili University, 2003.
- [68] Mihaela Malita. Membrane computing in Prolog. Technical Report 140, University of Auckland, 2000.
- [69] Vincenzo Manca. Monoidal systems and membrane systems. Technical Report 140, University of Auckland, 2000. CDMTCS TR 140.
- [70] Vincenzo 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.
- [71] Solomon 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.
- [72] Maurice Margenstern. Can hyperbolic geometry help molecular computing? Technical Report 26, Rovira i Virgili University, 2003.
- [73] Carlos Martín-Vide and Gheorghe 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.
- [74] Carlos Martín-Vide, Gheorghe Păun, J. Pazos, and Alfonso Rodríguez-Patón. Tissue P systems. Technical Report 421, Turku Center for Computer Science-TUCS, September 2001. TUCS Technical Report 421.
- [75] José L. Maté, Alfonso Rodríguez-Patón, and Andrés 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.
- [76] Niall Murphy and Damien 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.
- [77] Isabel 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.
- [78] Dan V. Nicolau Jr., Gerardin Solana, Florin Fulga, and Dan 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.

- [79] Taishin Yasunobu 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.
- [80] Adam Obtulowicz. Mathematical models of uncertainty with a regard to membrane systems. Technical Report 26, Rovira i Virgili University, 2003.
- [81] Linqiang Pan and Tseren-Onolt Ishdorj. P systems with active membranes and separation rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [82] Linqiang Pan and Carlos 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.
- [83] Andrei 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.
- [84] Gh. Paun, M.J. Perez-Jimenez, and A. Salomaa. Bounding the indegree of spiking neural p systems. Technical report, TUCS Technical Report 773, 2006.
- [85] Gheorghe Păun. Computing with membranes. Technical Report 208, Turku Center for Computer Science-TUCS, 1998. (www.tucs.fi).
- [86] Gheorghe 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).
- [87] Gheorghe 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.
- [88] Gheorghe Păun. Further open problems in membrane computing. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [89] Gheorghe Păun, Mario J. Pérez-Jiménez, and Agustín Riscos-Núñez. P systems with tables of rules. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [90] Gheorghe Păun, Mario J. Pérez-Jiménez, and Agustín Riscos-Núñez. Tissue P systems with cell division. Technical Report 01/2004, Dept. of Computer Sciences and Artificial Intelligence, Univ. of Sevilla, 2004.
- [91] Gheorghe Păun, Grzegorz Rozenberg, and Arto Salomaa. Membrane computing with external output. Technical Report 218, Turku Center for Computer Science-TUCS, 1998. Report No 218 (www.tucs.fi).

- [92] Gheorghe Păun and Gabriel 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).
- [93] Gheorghe Păun and Sheng 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).
- [94] Antonio Pérez-Jiménez, Mario J. Pérez-Jiménez, and Fernando Sancho-Caparrini. Computing a partial mapping by a P system: Design and verification. Technical Report 26, Rovira i Virgili University, 2003.
- [95] Antonio Pérez-Jiménez, Mario J. Pérez-Jiménez, and Fernando 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.
- [96] Mario J. Pérez-Jiménez and Francisco José 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.
- [97] Mario J. Pérez-Jiménez and Francisco José 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.
- [98] Mario J. Pérez-Jiménez, Alvaro Romero-Jiménez, and Fernando Sancho-Caparrini. Complexity classes in cellular computing with membranes. Technical Report 26, Rovira i Virgili University, 2003.
- [99] Mario J. Pérez-Jiménez, Alvaro Romero-Jiménez, and Fernando Sancho-Caparrini. Solving VALIDITY problem by active membranes with input. Technical Report 26, Rovira i Virgili University, 2003.
- [100] Mario J. Pérez-Jiménez and Fernando Sancho-Caparrini. Verification of non-deterministic transition P systems solving SAT problem. Technical Report 26, Rovira i Virgili University, 2003.
- [101] Raghavan Rama. Computing with P systems. Technical Report 140, University of Auckland, 2000.
- [102] Vladimir Rogozhin and Elena 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.
- [103] Fernando 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.

- [104] Dragos Sburlan. Membrane systems with promoters/inhibitors. from computational universality to algorithms. Technical Report 04/2004, Sevilla University, 2004. RNGC Report 04/2004.
- [105] José 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.
- [106] Petr Sosík. Solving a PSPACE-complete problem by P systems with active membranes. Technical Report 26, Rovira i Virgili University, 2003.
- [107] K.G. Subramanian, D.G. Thomas, M.H. Begum, and P.H. 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.
- [108] Yasuhiro Suzuki and Hiroshi Tanaka. Artificial life and P systems. Technical Report 140, University of Auckland, 2000.
- [109] Yasuhiro Suzuki and Hiroshi Tanaka. Abstract rewriting systems on multisets and their application for modelling complex behaviours. Technical Report 26, Rovira i Virgili University, 2003.