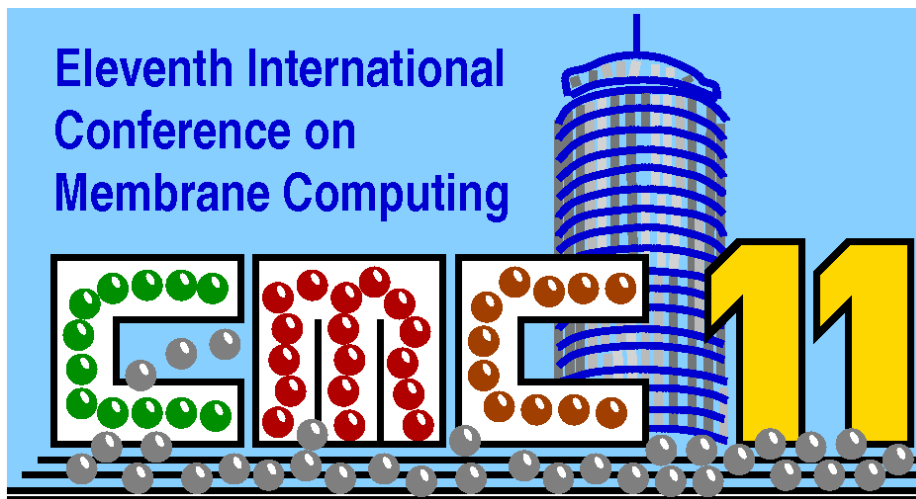




Programme of the Eleventh International Conference on Membrane Computing (CMC11)

**24 - 27 August 2010
Friedrich Schiller University Jena, Germany**

CMC11

Eleventh International Conference on Membrane Computing
Friedrich Schiller University Jena, Germany, 24 - 27 August 2010
<http://cmc11.uni-jena.de>

Conference Venue

Friedrich Schiller University Jena
Campus Ernst-Abbe-Platz
Hörsaalgebäude CZ3
Carl-Zeiss-Straße 3
D-07743 Jena

Main entrance via Ernst-Abbe-Platz
Lecture Theatre 9 (first floor)

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Sponsors



seit 1558



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- Sara Woodworth (Amgen in Thousand Oaks, USA)
- Claudio Zandron (Milan, Italy)

Schedule Structure

	Tuesday 24 August	Wednesday 25 August	Thursday 26 August	Friday 27 August
	Registration + Refreshments 08:30 - 09:00	Registration + Refreshments 08:30 - 09:00		
09:00	Opening Ceremony and News 09:00 - 09:20	Invited Talk 3, 09:00-10:00 Maurice Margenstern	Keynote 3, 09:00-10:00 Marian Gheorghe	Invited Talk 4, 09:00-10:00 Peter Dittrich
	Keynote 1, 09:30 - 10:30 Gheorghe Paun joined with Jena Life Science Forum			
10:00	Coffee Break	Coffee Break	Coffee Break	Coffee Break
		Session 3 10:30 - 12:30	Session 6 10:30 - 12:30	Session 7 10:30 - 12:00
11:00	Keynote 2, 11:00 - 12:00 Peter Stadler joined with Jena Life Science Forum	"Theoretical Foundations of P Systems" chair: V. Manca	"P Systems for Computing Purposes" chair: G. Mauri	"Special Types of P Systems" chair: P. Frisco
12:00	Portrait Jena Centre for Bioinf. Stefan Schuster			Best Contribution Award Closing
	Lunch Break 12:30 - 14:00	Lunch Break 12:30 - 14:00	Lunch Break 12:30 - 14:00	Lunch Break 12:30 - 14:00
13:00				
14:00	Invited Talk 1, 14:00 - 15:00 Martin Kutrib joined with workshop NCMA	Session 4 14:00 - 16:00 "P Systems Related to Biological or Chemical Applications" chair: S. Verlan	Touristic Event Bus trip to Weimar with sight seeing and some highlights 14:00 - 19:00	
15:00	Coffee Break			
	Invited Talk 2, 15:15 - 16:15 Gabriel Ciobanu			
16:00	Coffee Break	Poster Session and Refreshments 16:00 - 17:00		
	Session 1 16:30 - 17:50			
17:00	"Spiking Neural P Systems I" chair: E. Csuhaj-Varju	Session 5 17:00 - 18:20 "Software Demo Session" chair: T. Hinze		
	Coffee Break			
18:00	Session 2 18:10 - 19:20 "Spiking Neural P Systems II" chair: R. Freund	Coffee Break European Molecular Computing Consortium (EMCC) Meeting		
19:00		18:30 - 19:15	Dinner starting 19:00 Landgrafen Jena Panorama Restaurant Landgrafenstieg 25	

List of Registered Participants

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Tuesday, 24 August

08:30 - 09:00	Registration and Refreshments
09:00 - 09:20	Opening Ceremony and News
09:30 - 10:30	Keynote Gheorghe Paun <i>Membrane Computing at Twelve Years</i> joined talk with Jena Life Science Forum 2010 and open for interested audience of CMC11 satellite workshops
10:30 - 11:00	Registration and Refreshments
11:00 - 12:00	Keynote Peter Stadler <i>The Brave New World of RNA</i> joined talk with Jena Life Science Forum 2010 and open for interested audience of CMC11 satellite workshops
12:00 - 12:10	Coffee Break
12:10 - 12:30	Portrait Stefan Schuster (JCB spokesman) <i>A Welcome Address of the Jena Centre for Bioinformatics (JCB): Current Activities and Focus on Interdisciplinary Research</i>
12:30 - 14:00	Lunch Break
14:00 - 15:00	Invited Talk Martin Kutrib <i>Cellular Automata and the Quest for Artificial Self-Reproducing Structures</i> joined talk with NCMA2010
15:00 - 15:15	Coffee Break

15:15 - 16:15	Invited Talk Gabriel Ciobanu <i>Mobility in Computer Science and in Membrane Systems</i>
16:15 - 16:30	Coffee Break
Session 1	Spiking Neural P Systems I Chair: Erzsebet Csuhaj-Varjú
16:30 - 17:00	R. Freund, M. Kogler <i>Computationally Complete Spiking Neural P Systems without Delay: Two Types of Neurons Are Enough</i>
17:00 - 17:30	X. Zeng, H. Adorna, M.A. Martinez-del-Amor, L. Pan, M.J. Perez-Jimenez <i>Matrix Representation of Spiking Neural P Systems</i>
17:30 - 17:50	T. Neary <i>A Universal Spiking Neural P System with 11 Neurons</i>
17:50 - 18:10	Coffee Break
Session 2	Spiking Neural P Systems II Chair: Rudolf Freund
18:10 - 18:40	J. Wang, H.J. Hoogeboom, L. Pan <i>Spiking Neural P Systems with Neuron Division</i>
18:40 - 19:00	P. Sosik, A. Rodriguez-Paton, L. Ciencialova <i>Polynomial Complexity Classes in Spiking Neural P Systems</i>
19:00 - 19:20	P. Metta, K. Krithivasan, D. Garg <i>Some Characteristics of Spiking Neural P Systems with Anti-Spikes</i>

Wednesday, 25 August

08:30 - 09:00	Registration and Refreshments
09:00 - 10:00	Invited Talk Maurice Margenstern <i>An Algorithmic Approach to Tilings of Hyperbolic Spaces: 10 Years Later</i>
10:00 - 10:30	Coffee Break
Session 3	Theoretical Foundations of P Systems Chair: Vincenzo Manca
10:30 - 11:00	A. Alhazov, C. Ciubotaru, Y. Rogozhin, S. Ivanov <i>The Family of Languages Generated by Non-Cooperative Membrane Systems</i>
11:00 - 11:30	R. Barbuti, A. Maggiolo-Schettini, P. Milazzo, S. Tini <i>On the Expressive Power of Membrane Systems Working in Accepting Mode</i>
11:30 - 11:50	A.E. Porreca, A. Leporati, G. Mauri, C. Zandron <i>P Systems with Elementary Active Membranes: Beyond NP and coNP</i>
11:50 - 12:10	M. Gheorghe, F. Ipate, R. Lefticaru, C. Dragomir <i>An Integrated Approach to P Systems Formal Verification</i>
12:10 - 12:30	O. Agrigoroaiei, G. Ciobanu <i>Flattening the Transition P Systems with Dissolution</i>
12:30 - 14:00	Lunch Break
Session 4	P Systems Related to Biological or Chemical Applications Chair: Sergey Verlan
14:00 - 14:30	V. Manca, L. Marchetti <i>Goldbeters Mitotic Oscillator Entirely Modeled by MP Systems</i>
14:30 - 15:00	E. Mosca, P. Cazzaniga, D. Pescini, G. Mauri, L. Milanesi <i>Modelling Spatial Heterogeneity and Macromolecular Crowding with Membrane Systems</i>

15:00 - 15:20	M.A. Colomer, S. Lavin, I. Marco, A. Margalida, I. Perez-Hurtado, M.J. Perez-Jimenez, D. Sanuy, E. Serrano, L. Valencia-Cabrera <i>Modeling Population Growth of Pyrenean Chamois (Rupicapra p. pyrenaica) by using P Systems</i>
15:20 - 15:40	P. Kefalas, I. Stamatopoulou <i>Towards Modelling of Reactive, Goal-Oriented and Hybrid Intelligent Agents using P Systems</i>
15:40 - 16:00	S. Peter, T. Veloz, P. Dittrich <i>Feasibility of Organizations - A Refinement of Chemical Organization Theory with Application to P Systems</i>
16:00 - 17:00	Poster Session and Refreshments
Session 5	Software Demo Session Chair: Thomas Hinze
17:00 - 17:30	D. Besozzi, P. Cazzaniga, G. Mauri, D. Pescini <i>BioSimWare: A P Systems-Based Simulation Environment for Biological Systems</i>
17:30 - 17:50	G. Grünert, P. Dittrich <i>Using the SRSim Software for Spatial and Rule-Based Modelling of Combinatorially Complex Biochemical Reaction Systems</i>
17:50 - 18:10	I. Dinca <i>Design Pattern-Based Solutions for General Membrane System Components</i>
18:10 - 18:20	A. Ciobanu, R. Lefticaru, I.M. Niculescu, F. Ipate <i>Tools for P System Testing</i>
18:20 - 18:30	Coffee Break
18:30 - 19:15	Annual Meeting of the European Molecular Computing Consortium (EMCC) with Introduction of CMC12 Venue

Thursday, 26 August

09:00 - 10:00	Keynote Marian Gheorghe <i>Testing Based on P Systems - An Overview</i>
10:00 - 10:30	Coffee Break
Session 6	P Systems for Computing Purposes Chair: Giancarlo Mauri
10:30 - 11:00	P. Frisco <i>P Systems and Unique-Sum Sets</i>
11:00 - 11:30	A. Alhazov, Y. Rogozhin, S. Verlan <i>A Small Universal Splicing P System</i>
11:30 - 12:00	M.A. Gutierrez-Naranjo, M.J. Perez-Jimenez <i>Depth-First Search with P Systems</i>
12:00 - 12:20	M.J. Dinneen, Y.B. Kim, R. Nicolescu <i>A Faster P Solution for the Byzantine Agreement Problem</i>
12:20 - 12:30	J.M. Sempere <i>String-Object Transduction with Dogmatic P Systems</i>
12:30 - 14:00	Lunch Break
14:00 - 19:00	Touristic Event Bus trip to Weimar with sight seeing and some highlights
Starting 19:00	CMC11 Conference Dinner Landgrafen Jena Panorama Restaurant located at Landgrafenstieg 25

Friday, 27 August

09:00 - 10:00	Invited Talk Peter Dittrich <i>Organization Oriented Chemical Computing</i>
10:00 - 10:30	Coffee Break
Session 7	Special Types of P Systems Chair: Pierluigi Frisco
10:30 - 11:00	E. Csuhaj-Varjú, G. Vaszil, S. Verlan <i>On Generalized Communicating P Systems with One Symbol</i>
11:00 - 11:30	A. Alhazov, S. Ivanov, Y. Rogozhin <i>Polymorphic P Systems</i>
11:30 - 12:00	A. Obtulowicz <i>Randomized Gandy-Paun-Rozenberg Machines</i>
12:00 - 12:30	Voting for Best Contribution Award (€ 200 Travel Grant) Video Trailer: The Friedrich Schiller University of Jena Presentation of Best Contribution Award Winner CMC11 Closing
12:30 - 14:00	Lunch Break

Poster Presentations

- **V. Antohe, C. Stanciu**
Model of Surface Water Quality
- **L. Cienciala, L. Ciencialova**
On PCol Automata Working in the t-Mode
- **P. Lucas**
Massive Data-Parallel Swarm Simulation and Visualisation using CUDA
- **T. Rumpf**
Conways Game of Life Accelerated with OpenCL

Related Events

Second Workshop on Non-Classical Models of Automata and Applications (NCMA)

23-24 August 2010, room SR 209 (second floor)

Many non-classical automata models are natural objects of theoretical computer science. They are studied from different points of view in various areas, both as theoretical concepts and as formal models for applications. The aim of this workshop is to bring together researchers working on different aspects of different variants of non-classical automata models in order to exchange and develop novel ideas. A deeper and interdisciplinary coverage of this particular area may gain new insights and substantial progress.

Fourth Workshop on Membrane Computing and Biologically Inspired Process Calculi (MeCBIC)

23 August 2010, lecture theatre 9 (first floor)

The main aim is to bring together researchers working in membrane computing, in biologically inspired process calculi (ambients, brane calculi, etc.) and in other related fields to present recent results and to discuss new ideas concerning such formalisms, their properties and relationships (similarities, differences,...). Topics of interest include (but are not limited to) biologically inspired models and calculi, biologically inspired systems and their applications, analysis of properties of biologically inspired models and languages, theoretical links and comparison between different models/systems.

Applications of Membrane computing, Concurrency and Agent-based modelling in POPulation biology (AMCA-POP)

25 August 2010, room SR 209 (second floor)

Computational methods are becoming established tools to face both theoretical and practical problems in ecosystems science, epidemiology, sustainability science, evolution, and other fields in which population dynamics and interactions with the environment are studied. However, there are phenomena in these fields that could be profitably studied with models and means similar to those used in Natural Computing and Systems Biology. The aim of the workshop is to allow researchers that might be interested in working in formal modelling for Population Biology and Ecology to share ideas and get in touch with each other.

City Map of Jena



Internet

During the conference, all attendees can use the wireless internet connection (WLAN) inside the lecture theatre 9 (building CZ3):

Network name: FSUJ-WPA-PSK

pre-shared key (pass phrase): cmc11-fsu-jena-2010

Local Taxi

+49 3641 5566 (24 hours per day). Roughly EUR 20.00 for typical city fares.

Emergency Calls

110 (police)

112 (medical aid / emergency aid)

Notes

<http://cmc11.uni-jena.de>