

ACRI 2012 Program

Monday September, 24th			
Petros Nomikos Conference Centre	10.00 – 11.10	Workshop on ACA Chairs: A. Dennunzio, N. Fatès and E. Formenti	Workshop on TCA Chairs: K. Nishinari and A. Schadschneider
	11.10 – 11.40	<i>Coffee Break</i>	
	11.40 – 13.00	Workshop on ACA Chairs: A. Dennunzio, N. Fatès and E. Formenti	Workshop on TCA Chairs: K. Nishinari and A. Schadschneider
	13.00 – 14.00	<i>Lunch</i>	
	14.00 – 15.30	Workshop on CACGI Chairs: M. I Meyer-Hermann, A. Deutsch and H. Hatzikirou	Workshop on C&CA Chairs: S. Manzoni, I. Georgoudas and G. Ch. Sirakoulis
	15.30 – 16.00	<i>Coffee Break</i>	
	16.00 – 18.00	Workshop on CACGI Chairs: M. I Meyer-Hermann, A. Deutsch and H. Hatzikirou	Workshop on C&CA Chairs: S. Manzoni, I. Georgoudas and G. Ch. Sirakoulis
	18.30 – 19.30	ACRI 2012 Welcome Opening	
Tuesday September, 25th			
Petros Nomikos Conference Centre	09.00 – 09.10	ACRI 2012 Opening – G. Ch. Sirakoulis, S. Bandini	
	09.10 – 10.00	Invited Talk Chair: G. Mauri	
	10.00 – 11.20	CA Theory I Chair: T. Worsch	
	11.20 – 11.50	<i>Coffee Break</i>	
	11.50 – 13.30	CA Theory II Chair: M. Kutrib	
	13.30 – 14.30	<i>Lunch</i>	
	14.30 – 16.10	CA Dynamics, Control and Synchronization I Chair:	
	16.10 – 16.40	<i>Coffee Break / Poster Session</i>	
	16.40 – 18.40	CA Dynamics, Control and Synchronization II Chair: B. Voorhes	
Wednesday September, 26th			
Petros Nomikos Conference Centre	09.00 – 10.00	Invited Talk Chair B. Chopard	
	10.00 – 11.20	Modelling and Simulation I Chair: F. Seredynski	
	11.20 – 11.50	<i>Coffee Break</i>	
	11.50 – 13.30	Modelling and Simulation II Chair: R. Serra	
	13.30 – 14.30	<i>Lunch</i>	
	14.30 – 16.10	CA-Based Hardware and Architectures Chair: F. Pepper	
	16.10 – 16.40	<i>Coffee Break / Poster Session</i>	
	16.40 – 18.40	Modelling and Simulation III Chair: S. Morishita	
	20.00 – 22.30	Social dinner	
Thursday September, 27th			
Petros Nomikos Conference Centre	09.00 – 10.00	Invited Talk Chair H. Umeo	
	10.00 – 11.20	Modelling and Simulation IV Chair: F. Bagnoli	
	11.20 – 11.50	<i>Coffee Break</i>	

11.50 – 13.30	CA and Networks Chair: A. T. Lawniczak
13.30 – 14.30	Lunch
14.30 – 16.10	Codes, PRNGs and Cryptography with CA Chair: S. Di Gregorio
16.10 – 16.40	Coffee Break / Poster Session
16.40 – 18.40	CA-Based Image Processing, Computer Vision and Robotics Chair: S. Bandini
18.40 – 19.00	ACRI 2012 Closing – G. Ch. Sirakoulis, S. Bandini

ACA Workshop Program

Monday, September 24th 2012	
10.00	Alberto Dennunzio, Nazim Fatès and Enrico Formenti – ACA workshop opening
10.10	Olivier Bouré, Nazim Fates and Vincent Chevrier : <i>First steps on asynchronous lattice-gas models with an application to a swarming rule</i>
10.30	Henning S Mortveit : <i>Limit Cycle Structure for Block-Sequential Threshold Systems</i>
10.50	Alberto Dennunzio, Enrico Formenti, Luca Manzoni and Giancarlo Mauri : <i>SmS-Asynchronous Cellular Automata</i>
11.10	Coffee Break
11.40	Thomas Worsch : <i>(Intrinsically?) Universal Asynchronous Cellular Automata</i>
12.00	Fernando Silva and Luís Correia : <i>A Study of Stochastic Noise and Asynchronism in Elementary Cellular Automata</i>
12.20	Sukanta Das, Anindita Sarkar and Biplab K Sikdar : <i>Synthesis of Reversible Asynchronous Cellular Automata For Pattern Generation With Specific Hamming Distance</i>
12.40	Mario Di Traglia : <i>Cellular Automata and Random Field: statistical analysis of complex space-time systems</i>
12.50	Alberto Dennunzio, Nazim Fatès and Enrico Formenti – ACA workshop closure
13.00	Lunch

TCA Workshop Program

Monday, September 24th 2012	
10.00	Katsuhiro Nishinari and Andreas Schadschneider – TCA workshop opening
10.10	Yohei Taniguchi and Hideyuki Suzuki : <i>A Traffic Cellular Automaton with Time to Collision Incorporated</i>
10.30	Jelena Vasic and Heather Ruskin : <i>A Cellular Automata-Based Network Model for Heterogeneous Traffic: Intersections, Turns and Their Connection</i>
10.50	Pavol Korcek, Lukas Sekanina and Otto Fucik : <i>Calibration of Traffic Simulation Models Using Vehicle Travel Times</i>
11.10	Coffee Break
11.40	Vedran Ivanac, Bojana Dalbelo Bašić and Zvonimir Vanjak : <i>Construction of Cellular Automata Lattice Based on Semantics of Urban Traffic Network</i>
12.00	Rolf Hoffmann and Maurice Margenstern : <i>Modeling and simulation of a car race</i>
12.20	Takahiro Ezaki and Daichi Yanagisawa : <i>Metastability in Pedestrian Evacuation</i>
12.40	Ioanna Spyropoulou: <i>Cellular Automata model properties: representation of saturation flow and capacity</i>
12.50	Katsuhiro Nishinari and Andreas Schadschneider – TCA workshop workshop closure
13.00	Lunch

C&CA Workshop Program

Monday, September 24th 2012	
14.00	Sara Manzoni, Ioakeim Georgoudas and Georgios Ch. Sirakoulis – <i>Crowds&CA workshop opening</i>
14.10	Pavel Hrabák, Marek Bukáček and Milan Krbálek : <i>Cellular model of room evacuation based on occupancy and movement prediction</i>
14.30	Ekaterina Kirik and Tat'Yana Vitova : <i>On validation of the SigMA.CA pedestrian dynamics model with bottleneck flow</i>
14.50	Mizar Luca Federici, Andrea Gorrini, Lorenza Manenti and Giuseppe Vizzari : <i>Data Collection for Modeling and Simulation: Case Study at the University of Milan-Bicocca</i>
15.10	Shigeyuki Koyama, Nobuhiko Shinozaki and Shin Morishita : <i>Modeling of Walking through Pathways and a Stairway by Cellular Automata Based on the Guideline for Evacuation</i>
15.30	Coffee Break
16.00	Nobuhiko Shinozaki, Shigeyuki Koyama and Shin Morishita : <i>Evacuation Simulation from Rooms through a Pathway and a Stairway by Cellular Automata Based on the Public Guideline</i>
16.20	Jaroslav Was, Robert Lubas and Wojciech Mysliwiec : <i>Proxemics in discrete simulation of evacuation</i>
16.40	Christos Vihás, Ioakeim Georgoudas and Georgios Ch. Sirakoulis : <i>Follow-the-Leader Cellular Automata based Model Directing Crowd Movement</i>
17.00	Burton Voorhees : <i>Introducing Innovation in a Structured Population</i>
17.20	Oleksandr Makarenko Anton Musienko, Anna Popova, Gennadiy Poveshenko, Evgeniy Samorodov, Alexander Trofimenko : <i>Cellular Automata, Agents with Mobility and GIS for Practical Problems</i>
17.30	Steffie Van Nieuland, Jan M. Baetens, Ine S. Pauwels, Bernard De Baets, Ans M. Mouton and Peter L.M. Goethals: <i>A spatially explicit migration model for pike (Esox lucius L.)</i>
17.40	Sara Manzoni, Ioakeim Georgoudas and Georgios Ch. Sirakoulis – <i>Crowds&CA workshop closure</i>
18:30	ACRI 2012 Welcome Opening

CACGI Workshop Program

Monday, September 24th 2012	
14.00	Michael Meyer-Hermann, Andreas Deutsch and Haralampos Hatzikirou – <i>CACGI workshop opening</i>
14.10	David Basanta : <i>Modelling the role of phenotypic heterogeneity in tumours with a CA</i>
14.30	Harald Kempf : <i>Modeling of tumor irradiation therapies</i>
14.50	Sebastiano De Franciscis : <i>Fractal scaling analysis of tumor growth</i>
15.10	Peter Buske : <i>On the biomechanics of adenoma formation in the gut</i>
15.30	Coffee Break
16.00	John Lowengrub : <i>Invasive behavior of lineage structured populations</i>
16.20	Rafał Wcisło and Witold Dzwiniel : <i>A metaphor of Complex Automata in modeling biological phenomena</i>
16.40	Alvaro Koehn : <i>TBA</i>
17.00	Michael Meyer-Hermann, Andreas Deutsch and Haralampos Hatzikirou – <i>CACGI workshop closure</i>
18:30	ACRI 2012 Welcome Opening

ACRI 2012 Main Track

Tuesday September, 25th	
09.00	ACRI 2012 Opening – G. Ch. Sirakoulis, S. Bandini
09.10	Invited talk: To be announced (G. Mauri)
CA Theory I (T. Worsch)	
10.00	Jan Baetens and Bernard De Baets : <i>Topological perturbations and their effect on the dynamics of totalistic cellular automata</i>
10.20	Martin Kutrib and Andreas Malcher : <i>Iterative Arrays: Little Resources Big Size Impact</i>
10.40	Fumio Ohi and Takanori Ichikawa : <i>Confliction-Like Dynamics of Rule 20 ECA of Wolfram Class II</i>
11.00	Toshikazu Ishia and Shuichi Inokuchi : <i>Limit Cycle for Compositated Cellular Automata</i>
11.20	Coffee break
CA Theory II (M. Kutrib)	
11.50	Debdeep Mukhopadhyay : <i>Generating Expander Graphs using Cellular Automata</i>
12.10	Sukanta Das, Avik Chakraborty and Biplab K Sikdar : <i>Counting Cycles in Reversible Cellular Automata</i>
12.30	Nazma Naskar, Avik Charaborty, Pradipta Maji and Sukanta Das : <i>Analysis of Reachability Tree for Identification of Cyclic and Acyclic CA States</i>
12.50	Dominique Désérable : <i>Propagative Mode in a Lattice-Grain CA: Time Evolution and Timestep Synchronization</i>
13.10	Baltasar Trancón Y Widemann : <i>Structural Operational Semantics for Cellular Automata</i>
13.30	Lunch
CA dynamics, control and synchronization I (M. Margenstern)	
14.30	Susumu Adachi, Jia Lee, Ferdinand Peper, Teijiro Isokawa and Katsunobu Imai : <i>Determining the Critical Temperature of the Continuous-State Game of Life</i>
14.50	Tomasz Gwizdała : <i>The dynamics of disproportionality index for Cellular Automata based sociophysical models</i>
15.10	Adam Adamopoulos and Stylianos Scarlatos : <i>Behavior of Social Dynamical Models II: Clustering for Some Multitype Particle Systems with Confidence Threshold</i>
15.30	Machi Zawidzki and Katsuhiro Nishinari : <i>Controlling the opacity of a building envelope by a triangular two-color two-dimensional cellular automaton</i>
15.50	Luidnel Maignan and Jean-Baptiste Yunès : <i>A Spatio-Temporal Algorithmic Point of View on Firing Squad Synchronisation Problem</i>
16.10	Coffee break
CA dynamics, control and synchronization II (B. Voorhes)	
16.40	Hiroshi Umeo and Keisuke Kubo : <i>Recent Developments in Constructing Square Synchronizers</i>
17.00	Gina M. B. Oliveira and Paulo M. Vidica : <i>A Coevolutionary Approach to Cellular Automata-Based Task Scheduling</i>
17.20	Anna Piwońska, Franciszek Seredynski and Mirosław Szaban : <i>Searching Cellular Automata Rules for Solving Two-Dimensional Binary Classification Problem</i>
17.40	Anastasiya Sharifulina : <i>Investigation of Stable Patterns Formed by Totalistic Cellular Automata Evolution</i>
18.00	Maria Vittoria Avolio, Salvatore Di Gregorio, William Spataro and Giuseppe A. Trunfio : <i>A Theorem about the Algorithm of Minimization of Differences for Multicomponent Cellular Automata</i>
18.20	Epaminondas Sidiropoulos : <i>Multi-objective cellular automata optimization</i>

Wednesday September, 26th	
09.00	Invited speaker : To be announced (B. Chopard)
Modelling and Simulation I (F. Seredynski)	
10.00	Maria Vittoria Avolio, Salvatore Di Gregorio, Valeria Lupiano and Giuseppe A. Trunfio : <i>Simulation of Wildfire Spread Using Cellular Automata with Randomized Local Sources</i>
10.20	Mohamed Ben Belgacem, Bastien Chopard and Andrea Parmigiani : <i>Coupling method for building a network of irrigation canals on a distributed computing environment</i>
10.40	Davide De March, Alessandro Filisetti, Elisabetta Sartorato and Emanuele Argese : <i>Agent-Based Model to simulate groundwater remediation with nanoscale Zero Valent Iron</i>
11.00	Toshihiko Komatsuzaki, Yoshio Iwata and Shin Morishita : <i>Modelling of incident sound wave propagation around sound barriers using Cellular Automata</i>
11.20	Coffee break
Modelling and Simulation II (R. Serra)	
11.50	Soumyabrata Ghosh, Nirmalya Maiti and Parimal Pal Chaudhuri : <i>Theory and Application of Restricted Five Neighborhood Cellular Automata (R5NCA) For Protein Structure Prediction</i>

12.10	Kerry Landman, Benjamin Binder and Donald Newgreen : <i>Modeling development and disease in our "second" brain</i>
12.30	Monamorn Precharattana and Wannapong Triampo : <i>Effects of Initial Concentration and Severity of Infected Cells on Stochastic Cellular Automaton Model Dynamics for HIV infection</i>
12.50	Chrysi Laspidou, Antonis Liakopoulos and Marios Spiliopoulos : <i>A 2-D cellular automata biofilm detachment algorithm</i>
13.10	Pieter Van der Weeën, Nathalie De Clercq, Koen Dewettinck and Bernard De Baets : <i>A CA-based model describing fat bloom in chocolate</i>
13.30	Lunch
CA-Based Hardware and Architectures (F. Pepper)	
14.30	Miki Hirabayashi, Syunsuke Kinoshita, Shukichi Tanaka, Hajime Honda, Hiroaki Kojima and Kazuhiro Oiwa : <i>Cellular Automata Analysis on Self-Assembly Properties in DNA Tile Computing</i>
14.50	Daichi Takata, Teijiro Isokawa, Jia Lee, Ferdinand Peper and Nobuyuki Matsui : <i>On Construction by Worm-like Agents on a Self-Timed Cellular Automaton</i>
15.10	Oliver Schneider and Thomas Worsch : <i>A 3-state asynchronous CA for the simulation of delay-insensitive circuits</i>
15.30	Fotios Panagiotopoulos, Vassilios Mardiris and Vassilios Chatzis : <i>Quantum-Dot Cellular Automata Design for Median Filtering and Mathematical Morphology Operations on Binary Images</i>
15.50	Gabriele Di Stefano and Alfredo Navarra : <i>Scintillae: how to approach computing systems by means of cellular automata</i>
16.10	Coffee break
Modelling and Simulation III (S. Morishita)	
16.40	Anna T. Lawniczak, Jason Ernst and Bruno N. Di Stefano : <i>Creature Learning To Cross A CA Simulated Road</i>
17.00	Marcelo Zamith, Regina Leal-Toledo and Esteban Clua : <i>A Novel Cellular Automaton Model for Traffic Freeway Simulation</i>
17.20	Guillaume Sartoretti, Jean-Luc Falcone, Bastien Chopard and Martin J. Gander : <i>Decentralized Method for Traffic Monitoring</i>
17.40	Stefania Bandini, Lorenza Manenti and Sara Manzoni : <i>Generation of Pedestrian Groups Distributions with Probabilistic Cellular Automata</i>
18.00	Ivan Blečić, Arnaldo Cecchini, Giuseppe A. Trunfio and Emmanuil Verigos : <i>Urban Cellular Automata with Irregular Space of Proximities: a Case Study</i>
18:20	Maria Vittoria Avolio, Claudia Roberta Calidonna, Marco Delle Rose, Salvatore Di Gregorio, Valeria Lupiano, Tiziano Maria Pagliara and Anna Maria Sempreviva : <i>A preliminary cellular model for sand coastal erosion and experimental contrast with Porto Cesareo case</i>
20:00	Social dinner

Thursday September, 27th	
09.00	Invited speaker : To be announced (H. Umeo)
Modelling and Simulation IV (F. Bagnoli)	
10.00	Roberto Parise, Donato D'Ambrosio, Giuseppe Spingola, Giuseppe Filippone, Rocco Rongo, Giuseppe A. Trunfio and William Spataro : <i>Swi2, a HTML5/WebGL application for Cellular Automata Debris Flows Simulation</i>
10.20	Dmytro Svyetlichnyy, Jaroslaw Nowak and Łukasz Łach : <i>Modeling of recrystallization with recovery by frontal cellular automata</i>
10.40	Ronan Mendonça Amorim, Ricardo Silva Campos, Marcelo Lobosco, Christian Jacob and Rodrigo Weber Dos Santos : <i>An electro-mechanical cardiac simulator based on cellular automata and mass-spring models</i>
11.00	Kenichiro Shimura and Katsuhiro Nishinari : <i>Improving a Project Management by use of Cellular Automata</i>
11.20	Coffee break
CA and Networks (A. T. Lawniczak)	
11.50	Franco Bagnoli, Emanuele Massaro and Andrea Guazzini : <i>Community-detection cellular automata with local and long-range connectivity</i>
12.10	Marco Villani, Roberto Serra, Stefano Benedettini, Andrea Roli and David Lane : <i>Noise-induced emergent hierarchies in a CA model</i>
12.30	Nasiruddin Khan, Ilora Maity, Sukanta Das and Biplab K Sikdar : <i>A Cellular Automata Based Scheme For Energy Efficient Fault Diagnosis In WSN</i>
12.50	Michal Bidlo and Zdenek Vasicek : <i>Cellular Automaton as Sorting Network Generator Using Instruction-Based Development</i>
13.10	Yoshihiko Kayama : <i>Network View of Binary Cellular Automata</i>
13.30	Lunch
Codes, Pseudorandom Number Generators and Cryptography with CA (S. Di Gregorio)	
14.30	Kaushik Chakraborty and Dipanwita Roy Chowdhury : <i>CSHR : Selection of Cryptographically Suitable Hybrid Cellular Automata Rule</i>
14.50	Sourav Das and Dipanwita Roychowdhury : <i>CASTREAM: A New Stream Cipher Suitable for Both Hardware and Software</i>
15.10	Bernard Girau and Nikolaos Vlassopoulos : <i>Evolution of 2-Dimensional Cellular Automata as Pseudo-Random Number</i>

	<i>Generators</i>
15.30	Sandip Karmakar and Dipanwita Roy Chowdhury : <i>Countermeasures of Side Channel Attacks on Symmetric Key Ciphers using Cellular Automata</i>
15.50	Ioannis Vourkas, Dimitrios Michail and Georgios Ch. Sirakoulis : <i>Spreading Patterns of Mobile Phone Viruses using Cellular Automata</i>
16.10	Coffee break
CA-Based Image Processing, Computer Vision and Robotics (S. Bandini)	
16.40	Savvas Chatzichristofis, Oge Marques, Mathias Lux and Yiannis Boutalis : <i>Visual Multimedia Content Encryption using the Recursive Attributes of the eXclusive-OR (XOR) Filter on Cellular Automata</i>
17.00	Konstantinos Zagoris and Ioannis Pratikakis : <i>Scene Text Detection on Images using Cellular Automata</i>
17.20	Belan Stepan and Belan Nikolay : <i>Use of Cellular Automata to Create an Artificial System of Image Classification and Recognition</i>
17.40	Konstantinos Ioannidis, Ioannis Andreadis and Georgios Ch. Sirakoulis : <i>An edge preserving image resizing method based on Cellular Automata</i>
18.00	Ioannis Kostavelis, Evangelos Boukas, Lazaros Nalpantidis and Antonios Gasteratos : <i>Path Tracing on Polar Depth Maps for Robot Navigation</i>
18.20	Konstantinos Charalampous, Angelos Amanatiadis and Antonios Gasteratos : <i>Efficient robot path planning in the presence of dynamically expanding obstacles</i>

Poster Session

Every day from September 25 th to September 27 th 2012	
16.00	<i>Poster Session opening</i>
16.10	Mario Di Traglia : <i>Cellular Automata and Random Field: statistical analysis of complex space-time systems</i>
16.10	Ioanna Spyropoulou: <i>Cellular Automata model properties: representation of saturation flow and capacity</i>
16.10	Oleksandr Makarenko Anton Musienko, Anna Popova, Gennadiy Poveshenko, Evgeniy Samorodov, Alexander Trofimenko : <i>Cellular Automata, Agents with Mobility and GIS for Practical Problems</i>
16.10	Steffie Van Nieuland, Jan M. Baetens, Ine S. Pauwels, Bernard De Baets, Ans M. Mouton and Peter L.M. Goethals: <i>A spatially explicit migration model for pike (Esox lucius L.)</i>
16.10	Gaoxiang Gu, Zheng Wang and Jing Wu : <i>Multi Agent-Based Simulation on Technology Diffusion of China</i>
16.10	Georgios I. Tsormpatzoglou and Ioannis G. Karafyllidis : <i>Periodicity in Quantum Cellular Automata</i>
16.40	<i>Poster Session closure</i>