Program of AUTOMATA 2007

MONDAY, AUGUST 27, 2007

8:30-9:15  REGISTRATION & COFFEE

9:15-9:30  WELCOMING REMARKS

9:30-11:00 INVITED TALKS
Session Chair: Thomas Worsch

9:30-10:00  Ramon Alonso-Sanz
Cellular Automata with Memory

10:00-10:30  Nazim Fatès
Prolegomena to a theory of asynchronous and probabilistic cellular automata

10:30-11:00  COFFEE BREAK

11:00-12:30 INVITED TALKS
Session Chair: Paola Flocchini

11:00-11:30  Kenichi Morita
On universal 1-d reversible cellular automata

11:30-12:00  Katsunobu Imai
On the influence of symmetries and neighborhoods on constructing two dimensional number-conserving cellular automata rules

12:00-12:30  Henning S. Mortveit
Phase Space Equivalences of Sequential Dynamical Systems

12:30-2:00  LUNCH BREAK & POSTER SET UP

2:00-3:30  INVITED TALKS
Session Chair: Klaus Sutner

2:00-2:30  Andreas Deutsch
Cellular automaton modelling of spatio-temporal pattern formation in interacting cell systems

2:30-3:00  Vittoria Colizza
Are global epidemics predictable? The SARS case study.

3:00-3:30  Pietro Lio'
Simulating the spread of infectious disease using a spatial, agent based model
3:30-4:00  COFFEE BREAK

4:00-5:40  CONTRIBUTED TALKS
Session Chair:  Raul Rechtman

4:00-4:20  Eric Goles
Parallel and Serial Dynamics in Boolean Networks

4:20-4:40  Juan Carlos Seck Tuoh Mora
Computational implementation of De Bruijn networks and the calculus of preimages in several steps for one-dimensional cellular automata.

4:40-5:00  Brunon Kaminski
Space-time directional Lyapunov exponents for cellular automata

5:00-5:20  Paola Flocchini
Cellular Automata and Dynamic Monopolies

5:20-5:40  Vahid Dabbaghian-Abdoly
A Cellular Automata Model of the Spread of HIV in a Community of Injection Drug Users

5:40-7:20  RECEPTION & POSTER VIEWING

LIST OF POSTERS

Haralambos Hatzikirou
Lattice-gas cellular automata as microscopic models of cell migration in heterogeneous environments

Henryk Fukš
Preimage trees in cellular automata

Angel Aponte (to be confirmed)
Inappropriate Use of the Shoulder in Highways Impact over the Increase of Gas Consumption

Masaya Nohmi
Applications of finite automata which simulate behavior of cellular automata

Fumio Ohi
Spreading Rate of Elementary Cellular Automaton of Rule 40 in Wolfram Class I

Carlos A. Perez-Delgado
Quantum Cellular Automata

Mohammad Hossein Peyravi (to be confirmed)
Using Chemical Cellular Automata in Simulation of Chemical Materials

Mohammad Hossein Peyravi (to be confirmed)
In the Queue theory, Cellular Automata is a Jackson Model

Tadakazu Sato
Linear cellular automata over vector space and their applications to mathematics and physics.

Sami Torbey
Towards a framework for high-level manual programming of cellular automata

Shengkun Xie
Statistical Analysis of Behaviour of Packets in Transit in Data Communication Network Model
TUESDAY, AUGUST 28, 2007

9:00-9:30  COFFEE

9:30-10:30  INVITED TALKS
Session Chair: Witold Dzwinel

9:30-10:00  Marcus Pivato
Emergent Defect Dynamics in Two-dimensional Cellular Automata

10:00-10:30  Samira El Yacoubi
A Cellular Automata Approach for Discrete-Time Distributed Parameter Systems

10:30-11:00  COFFEE BREAK

11:00-11:30  INVITED TALKS
Session Chair: Katsuhiko Nakamura

11:00-11:30  Danuta Makowiec
On cellular automata modeling of cardiac pacemaker

11:30-12:00  Maria Elena Lárraga
Traffic flow based on safety embedded notions

12:00-12:30  Jian Yuan
Applying cellular automata in topology control of wireless sensor networks

12:30-2:00  LUNCH BREAK

2:00-3:30  INVITED TALKS
Session Chair: Eric Goles

2:00-2:30  Janusz A. Hołyst
Self-organized criticality and coevolution of network structure and dynamics

2:30-3:00  Dong-Hee Kim
Ensemble averageability in network spectra: complex yet similar networks

3:00-3:30  Josè Mendes
Strutural properties of complex networks

3:30-4:00  COFFEE BREAK

4:00-6:00  CONTRIBUTED TALKS
Session Chair: Franco Bagnoli
4:00-4:20  Thomas Worsch
How to achieve universality in a CA using the same local rule but
different neighborhoods

4:20-4:40  Witold Dzwinel
Can the spatially extended populations replicate the logistic map?

4:40-5:00  Katsuhiko Nakamura
Towards a Basis for Parallel Language Recognition by Cellular
Automata

5:00-5:20  Hidenosuke Nishio
Fix a Local Function and Change Neighborhoods

5:20-5:40  Jean-Baptiste Yunès
New extensions to some firing squad synchronization solutions

6:40-up  BANQUET

WEDNESDAY, AUGUST 29, 2007

9:00-9:30  COFFEE

9:30-10:30  INVITED TALKS
Session Chair: Brunon Kamiński

9:30-10:00  Pedro P.B. de Oliveira
Evolutionary computation techniques to look for cellular automata rules

10:00-10:30  Burton Voorhees
Transformations of Binary Valued Additive Rules

10:30-11:00  COFFEE BREAK

11:00-11:30  INVITED TALKS
Session Chair: Kenichi Morita

11:00-11:30  Angelo B. Mingarelli
A classification scheme of fuzzy cellular automata with applications to
ECA

11:30-12:00  Stefania Bandini
A Neuron-genetic approach for Pattern Recognition in Cellular
Automata

12:00-12:30  Gabriel Wainer
The Cell-DEVS formalism: modeling and simulating discrete-event cell
spaces

12:30-2:00  LUNCH BREAK
2:00-3:30  INVITED TALKS
Session Chair: Katsunobu Imai

2:00-2:30  Franco Bagnoli
Boolean Derivatives, Chaos and Synchronization in Cellular Automata

2:30-3:00  Raul Rechtman
Entropy and Chaos in a Discrete Hydrodynamical System

3:00-3:30  Raymond Kapral
Simple Dynamics for Complex Systems

3:30-4:00  COFFEE BREAK

4:00-6:00  CONTRIBUTED TALKS
Session Chair: Danuta Makowiec

4:00-4:20  David Pritchard
Efficient Divide-and-Conquer Simulations Of Symmetric FSAs

4:20-4:40  Klaus Sutner
Classification and Complexity

4:40-5:00  Edward Powley
Classifying cellular automata by automorphisms of transition diagrams

5:00-5:20  Reem Yassawi
Emulating Substitution Shifts using Cellular Automata

5:20-5:40  Silvio Capobianco
Surjectivity and surjunctivity of cellular automata in Besicovitch topology

5:40-6:00  Matthew Macauley
Order Independence in Asynchronous Cellular Automata

6:00-6:20  CONFERENCE ENDS