

European Conference on Complex Systems

Paris, 14-18 November 2005






Agenda

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[Monday 14th](#) | [Tuesday 15th](#) | [Wednesdays 16th](#) | [Thursday 17th](#) | [Friday 18th](#)

Monday				
Morning : Invited Speakers 9:00 - 9:50 : 9:50 -10:40 : Jean-Christophe Yoccoz Coffee Break 11:10-12:00 Giorgio Parisi 				
12h - 13h30 : Lunch				
Room1 : Complex Systems Methods	Room2 : Biological Modelling	Room3 : Network Modelling	Room4 : Social Modelling	
13:30 Reconstructing the rules of 1D cellular automata using closure systems José L Balcázar , Gemma Casas-Garriga, Pablo Díaz-López (short talk) 13:50 Algebraic Hierarchies of Cellular Automata Classes M. Delorme, J. Mazoyer and G. Theyssier (short talk) 14:10 Parallel vs. Sequential	13:30 Shape spaces in formal interactions Davide Prandi, Corrado Priami and Paola Quaglia (long talk) 14:10 Modeling inference and simulation of biological networks using Constraint Logic Programming (CLP) Eric Fanchon (Institut de Biologie Structurale), Fabien Corblin (LSR- IMAG) and Laurent Trilling (LSR-IMAG) (short talk) 14:30 Emergent properties of metabolic systems and the effect of constraints on enzyme concentrations Sicard D., Dillmann C., Fiévet J.	13:30 Weighted networks: empirical results and models Marc Barthelemy, Alain Barrat, Alessandro Vespignani (long talk) 14:10 Lightweight centrality measures in networks under attack Giorgos Georgiadis, Lefteris Kirousis (long talk) 14:50 Universal scaling of inter-node distances in complex networks J. A. Holyst , J. Sienkiewicz, A. Fronczak, P. Fronczak, K. Suchecki and P. Wojcicki (short talk)	13:30 Behaviour as a Complex Adaptive System Stefano Nolfi (long talk) 14:10 On the Dynamics of Communication and Cooperation in Artificial Societies A.E. Eiben, M.C. Schut , N. Vink (long talk) 14:50 Altruism "For Free" using Tags David Hales (short talk)	

17:00 Enabling cooperative behaviour through ICT in organisations
Jostein Engesmo (short talk)

talk)		Ioannis Chatzigiannakis, Sotiris Nikolettseas and Paul Spirakis (short talk)	
17h - 19h : Poster Session			
Tuesday			
Morning : Invited Speakers			
9:00- 9:50 Tamas Vicsek			
9:50 -10:40 Luca Cardelli			
Coffee			
11:10-12:00 Henrik Lund			
			
12h - 13h30 : Lunch			
Room1 : Bio Inspired Methods	Room2 : Information Techn. Modelling	Room3 : Network Modelling	Room4 : Social Modelling
  Satellite workshop tuesday afternoon : Engineering			
13:30 On the Complexity of Physical Problems and a Swarm Algorithm for k-Clique Search in Physical Graphs Yaniv Altshuler , Arie Matsliah, Ariel Felner (long talk)	13:30 Traffic dynamics in scale-free networks Attila Fekete, Gabor Vattay, Ljupco Kocarev (long talk)	13:30 Is selection optimal for scale-free small worlds? Zs. Palotai , Cs. Farkas, A. Lorincz (long talk)	13:30 A Theory-based Dynamical Model of Innovation Process David Lane, Roberto Serra, Marco Villani, Luca Ansaloni (long talk)
14:10 The POETic Electronic Tissue and its Role in the Emulation of Large-Scale Biologically Inspired Spiking Neural Networks Models J. Manuel Moreno, Yann Thoma, Eduardo Sanchez (long talk)	14:10 Traceroute-like exploration of unknown networks: a statistical analysis Alain Barrat , Ignacio Alvarez-Hamelin, Luca Dall ', Asta, Alexei Vazquez, Alessandro Vespignani	14:10 Bounded Rationality and Repeated Network Formation Sylvain Béal , Nicolas Quérou (long talk)	14:10 Modeling Firm Skill-Set Dynamics as a Complex System Edoardo Mollona, David Hales (long talk)
14:50 Evolving artificial "brains": a	14:50 A Simulation Study of Network Discovery Strategies F . Eberhard, T . Erlebach, A. Hall (short talk)	14:50 A Generative Model of Power Law Distributions with Optimizing Agents with Constrained Information Access Laszlo Gulyas (short talk)	14:50 Metamimetic games : Modeling metadynamics in social cognition David Chavalarias (short talk)

**biomimetic
Evolutionary
Neuro-**
P.
Ittész,Z.Szathmáry,
S. Szathmáry, S.
Számadó,
E.Szathmáry (short
talk)



15:10 - 15:40 Coffee Break

**Room1 : Complex
Systems Methods**

Room2 : Biological Modelling

Room3 : Network Modelling

Room4 : Social Modelling

**15:40 Message
passing
algorithms for
non-linear nodes
and data
compression**
Stefano Ciliberti ,
Marc Mezard,
Riccardo Zecchina
(long talk)

**16:20
Combinatorial
auctions: From
statistical physics
to new algorithms**
Michele Leone,
Mauro Sellitto,
Martin Weigt
(short talk)

**16:40 A spin glass
model of human
logic systems**
Fariel Shafee
(short talk)

**17:00 Statistical
Physics of
Boolean Control
Networks**
L. Correale, M.
Leone, A. Pagnani
, M. Weigt and R.
Zecchina (short
talk)

**17:20 Flows of
information as
the driving force
behind chemical
pattern formation**
Kristian Lindgren
and Anders
Eriksson (short
talk)

**15:40 Complex Qualitative
Models in Biology: a new
approach**
P. Veber , M. Le Borgne, A.
Siegel, O. Radulescu (long talk)

**16:20 An overview of the
quest for regulatory pathways
in microarray data**
Nizar Touleimat , Florence d-
Buc and Marie Dutreix (short
talk)

**16:40 Dynamics and pattern
formation in invasive tumor
growth**
Evgeniy Khain and Leonard M.
Sander (short talk)

**17:00 Self-organisation and
other emergent properties in a
simple biological system of
microtubules.**
James Tabony (short talk)

**17:20 Concentration and
spectral robustness of
biological networks with
hierarchical distribution of
time scales**
A.N.Gorban and O.Radulescu
(short talk)

**15:40 Spreading on
networks: a topographic view**
Geoffrey S Canright and Kenth
Engø-Monsen (long talk)

**16:20 Correlation Model of
Worm Propagation on Scale-
Free Networks**
Zoran Nikoloski , Narsingh
Deo, Ludek Kucera (long talk)

**17:00 Variability of the
infection time in scale-free
networks**
Pascal Crépey, Fabian Alvarez,
Marc Barthélemy (short talk)

**15:40 Towards a
functional formalism for
modelling complex
industrial systems**
D. Krob - S. Bliduze (long
talk)

**16:20 Production
networks and failure
avalanches**
Gérard Weisbuch, Stefano
Battiston (long talk)

**17:00 Noise sensitivity of
portfolio selection under
various risk measures**
I . Kondor (short talk)

17h - 19h : Poster Session

Tuesday 15 : Satellite Workshops

Coordinator : David Hales

14h30 - 16h30 : [Engineering 1](#)

Coffee break

17h - 19h00 : [Engineering with complexity and emergence](#)



Wednesday

Morning : Invited Speakers

9:00- 9:50 [Peter Schuster](#)

9:50 -10:40 [Douglas White](#)

Coffee

11:10-12:00 [Wolf Singer](#)



12h - 13h30 : Lunch

**Room1 : Bio
Inspired Methods**

**Room2 : Information Techn.
Modelling**

Room3 : Network Modelling

Room4 : Social Modelling



Satellite workshop tuesday afternoon : [Engineering](#)

**13:30 Design
Patterns from
Biology for
Distributed
Computing**
Ozalp Babaoglu,
Geoffrey Canright,
Andreas Deutsch,
Gianni Di Caro,
Frederick
Ducatelle, Luca
Gambardella,
Niloy Ganguly,
Mark Jelasity,
Roberto
Montemanni ,
Alberto Montresor
(long talk)

**14:10 Elements
about the
Emergence Issue
: A survey of
emergence**

**13:30 On emergent
phenomena in everyday
activities taking place in Aml
spaces**
Ioannis D. Zaharakis, Achilles
D. Kameas (short talk)

**13:50 Improved message
passing D for inference in
densely connected systems**
Juan P. Neirotti and David Saad
(short talk)

**14:10 Evolutionary Game
Theory with Applications to
Adaptive Routing**
Simon Fischer and Berthold
Vöcking (short talk)

**14:30 Atomic Selfish Routing
in Networks: A Survey**
Spyros Kontogiannis, Paul
Spirakis (short talk)

**13:30 Resource allocation on
sparse graphs**
Michael K .Y . Wong, David
Saad and Zhuo Gao (short talk)

**13:50 Partitioning networks
into classes of mutually
isolated vertices**
J. Diaz, L. Kirousis, X . Perez
(short talk)

**14:10 Clustering and
robustness in networks**
Y Grondin, D J Raine (short
talk)

**14:30 On the Propagation of
Congestion Waves in the
Internet**

J. Steger , P. Vadera, G.
Vattay (short talk)

**14:50 Towards Self-
Organizing Query Routing**

**13:30 Optimization and
control of the urban
spatial dynamic**
Ferdinando Semboloni (long
talk)

**14:10 Modelling detail
stores spatial distribution**
Pablo Jensen, Hernan
Larralde, Margaret Edwards
(short talk)

**14:30 Simulation of
pedestrians and cars in an
urban network**
Arnaud Banos, Sylvain
Lassarre (short talk)

**14:50 Transition to
Coherent Oscillatory
Behaviour in a Route
Choice Game**
Dirk Helbing, Martin
Schoenhof, Hans-Ulrich

<p>emergence definitions Joris Deguet, Yves Demazeau, Laurent Magnin (long talk)</p> <p>14:50 Behavior transitions provided by dynamical features of recurrent neural network - a case study of complex phenomena in behavior based robotics Martin Huelse, Steffen Wischmann and Frank Pasemann (short talk)</p>	<p>14:50 Measuring Preferential Attachment in a Hyper-Textual Dictionary Reference Network Eksi Sözlük , Amac Herdagdelen, Eser Aygun, Haluk Bingol (short talk)</p>	<p>and Processing for Peer-to-Peer Web Search Gerhard Weikum, David Hales, Christian Schindelhauer , Peter Triantafillou (short talk)</p>	<p>Stark, and Janusz A. Holyst (short talk)</p>
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15:10 - 15:40 Coffee Break

Room1 : Complex Systems Methods	Room2 : Information Techn. Modelling	Room3 : Cognition Modelling	Room4 : Social Modelling
<p>15:40 Understanding Fractal Analysis? The case of Fractal Linguistics Jelinek, H.F., Jones, C., Warfel, M., Lucas, C., Depardieu, C., Aurel, G. (long talk)</p> <p>16:20 Ambiguity in Art Igor Yevin (long talk)</p> <p>17:00 Hierarchical Organization in Smooth Dynamical Systems Martin Nilsson Jacobi (short talk)</p> <p>17:20 Toward a multi-scale approach for modelling and simulation of complex system Thi Minh Luan Nguyen, Christophe Lecerf, Ivan Lavallée (short talk)</p>	<p>15:40 Emergent Group-Level Selection in a Peer-to-Peer Network David Hales (long talk)</p> <p>16:20 Measuring the Dynamical State of the Internet: Large Scale Network Tomography via the ETOMIC Infrastructure Gabor Simon, Jozsef Steger , Peter Haga, Istvan Csabai , Gabor Vattay (long talk)</p> <p>17:00 MEDUSA: a functional model of Internet substructure Scott Kirkpatrick, Shai Carmi , Eran Shir (short talk)</p> <p>17:20 Mining the Inner Structure of the Webgraph Debora Donato, Stefano Leonardi and Panayiotis Tsaparas (short talk)</p>	<p>15:40 An Economic Theory of Language Gabor Fath and Miklos Sarvary (long talk)</p> <p>16:20 Stability conditions in the evolution of compositional languages: issues in scaling population sizes Paul Vogt (short talk)</p> <p>16:40 Self-Organizing Communication in Language Games A. Baronchelli, M. Felici , E.Caglioti , V. Loreto and L. Steels (short talk)</p> <p>17:00 The self-organization of combinatorial vocalization systems Pierre-Yves Oudeyer (short talk)</p> <p>17:20 When language breaks into pieces. A conflict between communication through isolated signals and language. Ramon Ferrer i Cancho (short talk)</p>	<p>15:40 A Multi-Level Model for Spatial Dynamics of Systems of Cities through Innovation Processes Denise Pumain (short talk)</p> <p>16:00 Modelling urban networks dynamics with multi-agent systems Lena Sanders (short talk)</p> <p>16:20 Analysing the resilience of complex resources management systems – a stylised simulation model of human-nature interactions in a river basin Maja Schlueter & Claudia Pahl-Wostl (short talk)</p> <p>16:40 Reflexivity as a constitutive property of a complex urban system Sylvie Occelli , Luca Staricco (short talk)</p> <p>17:00 Complex-City: the Shift of Urban Science from Classic to an Evolutionary Approach Giovanni A. Rabino (short talk)</p> <p>17:20 The problem of</p>

design in complexity research
Theodore Zamenopoulos
and Katerina Alexiou (short talk)

17h - 19h : Poster Session

Wednesday 16 : Satellite Workshops

Coordinator : David Hales

14h30 - 16h30 : Engineering 1

Coffee break

17h - 19h00 : Engineering with complexity and emergence



Thursday 17 : Satellite Workshops

Coffee breaks : AM : 11h-11h30 ; PM : 17h-17h30

Session 1

Session 2

**Session 3
Emergent properties**

**Session 3
Time delay**

**Session 5
Statistical
physics 1**

08h30 - 13h00

Cities and regions as collective intelligence 1
Denise Pumain

Peer to peer data management...
Christian Schindelhauer

Emergent properties...
Aziz Alaoui

Complex time-delay systems
Fatihcan Atay

Common trends in statistical physics...
Michele Leone



Lunch

14h30 – 19h00

Cities and regions as collective intelligence 2
Denise Pumain

Embracing complexity in design
Katerina Alexiou

Emergent properties
Aziz Alaoui

Complex time-delay systems
Fatihcan Atay

Common trends in statistical physics...
Michele Leone



Friday 18 : Satellite Workshops

Coffee breaks : AM : 11h-11h30 ; PM : 17h-17h30

Session 1

Session 2

**Session 3
Chemical**

**Session 3
Multi agent**

**Session 5
Complex networks**

08h30 - 13h00

<u>Industry facing complexity</u> Paul Bougine	<u>Emergence of grammar</u> Luc Steels	<u>Complex chemical system design</u> John McCaskill	<u>Multi-agents for modelling...</u> Salima Hassas	<u>Dynamical processes on complex networks</u> Alain Barrat
<div>?</div> <div>Lunch</div>				
14h30 – 19h00				
<u>Industry facing complexity</u> Paul Bougine	<u>Emergence of grammar</u> Luc Steels	<u>Complex chemical system design</u> John McCaskill	<u>Multi-agents for modelling...</u> Salima Hassas	<u>Dynamical processes on complex networks</u> Alain Barrat

Contacts



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