ICCSA 2014
Fourth International Conference on
Complex Systems and Applications

June 23-26, 2014
Le Havre, Normandie, France

Program

Satellite Workshops
SW1 - Complex Systems Digital Campus (CD-DC) UNESCO UniTwin Kickoff
SW2 - Modeling and Simulation Platforms
SW3 - Complex Networks and Dynamics
Visualization
SW5 - Combinatorial Physics and Complexity
SW6 - Dynamical systems applied to population dynamics in ecology and in epidemiology
SW7 - Memristor and Complex Networks: Theory and Applications
SW8 - Ecological dynamics in sport
SW9 - Dynamics of complex living systems
SW10 - Logistics
SW11 - Chaos theory and applications
SW13 - Slow-fast dynamics: theory and application
GS - General sessions of the conference

General Sessions
GS1 - PDE, Control, Observability
GS2 - Fractal Analysis, Social Systems
GS3 - Networks and Complex Systems
GS4 - Multi-agents Systems, Heuristics
GS5 - Bio-systems
GS6 - General Dynamical Systems
GS7 - Game Theory

ICCSA 2014 Global Program

Monday June 23, 2014

08:00 - 09:30	Welcome & Registration						
09:30 - 10:15	Opening						
10:15 - 11:45	Keynote: Leon O. Chua						
11:45 - 12:30	Keynote: Jurgen Kurths						
12:30 - 14:00	Lunch						
14:00 - 14:45	Keynote: Celso Grebogi						
14:45 - 15:30	CS-DC Unesco Unitwin kick-off opening						
15:30 - 16:00	Coffee break						
16:00 - 17:30	SW1	SW3	SW4	SW7	SW9	SW2	
17:30 - 19:00	SW1	SW3	SW4	SW6	SW9	SW2	GS6
19:00	Welcome cocktail						

	Room 1
	Room 2
	Room 3
	Room 4
	Room 5
	Room6
	Room7

Tuesday June 24, 2014

09:00 - 09:45	Keynote: James A. Yorke						
09:45 - 10:30	Keynote: Robert S. MacKay						
10:30 - 11:00	Coffee Break						
11:00 - 11:45	Keynote: Jacques Demongeot						
11:45 - 12:30	Keynote: Pierre Frankhauser						
12:30 - 14:00	Lunch						
14:00 - 14:30	SW1	SW3	SW4	SW6	SW9	SW2	GS6
14:30 - 16:30	SW1	SW3	SW4	SW6	SW11	SW2	GS6
16:30 - 17:00	Coffee Break						
17:00 - 19:00	SW1	SW3	SW5	SW13	SW11	SW2	GS5
20:00	Conference Diner						

Wednesday June 25, 2014

09:00 - 09:45	Keynote: Otto Rossler						
09:45 - 10:30	Keynote: Guy Theraulaz						
10:30 - 11:00	Coffee Break						
11:00 - 13:00	SW1	SW3	SW5	SW6	GS3		GS5
13:00 - 14:30	Lunch						
14:30 - 19:00	Visit to Etretat						

Thursday June 26, 2014

09:00 - 09:45	Keynote: Guanrong Chen						
09:45 - 10:30	Keynote: Pierre Auger						
10:30 - 11:00	Coffee Break						
11:00 - 11:30	SW1	GS2	SW10	SW13	GS3	SW8	GS5
11:30 - 12:30	SW1	GS2	SW10	SW13	GS4	SW8	GS5
12:30 - 14:00	Lunch						
14:00 - 15:00	SW1	GS2	SW10	SW13	GS4	SW8	GS1
15:00 - 15:30	SW1	GS2	SW10	SW13	GS7	SW8	GS1
15:30 - 16:30	SW1	GS2	SW10		GS7	SW8	
16:30	Conference Ending						

ICCSA 2014 Detailed Program

Monday June 23, 2014

08:00 - 09:30	Welcome & Registration						
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15:30 - 16:00	Coffee break						
	Room 1 - SW1	Room 2 - SW3	Room 3 - SW4	Room 4 - SW7	Room 5 - SW9	Room 6 - SW2	
16:00 - 16:30	***J. Johnson, J. Aguilar, Chun-Yen Chang, K. Jaffe, M. Pélissié***	***Marton Karsai*** Controlling Contagion Process in Activity Driven Netwoks	***Salikoko S. Mufwene***	***M. Mirchev, I. Mishkovski, L. Kocarev*** Memristive Networks of Chua's Circuits	***Irene Sendina-Nadal*** Longitudinal Network Analysis of Neuronam Cultures	***Patrick Taillandier, Nicolas Marilleau***	
16:30 - 17:00		***Wilbert Rossi*** Resilience and Cascading Failure in Large-Scale Networks	What Makes Language Evolution So Complex and Difficult to Model Accurately	***A. Ascoli, V. Lanza, F. Corinto, R. Tetzlaff*** Analytical Conditions for Synchronization for a simple memristive Neural Network	***B. Xu, S. Jacquir, S. Binczak, J.-M. Bilbault*** Phase Space Reconstruction of an Experimental Cardiac Electrical Signal		
17:00 - 17:30	Integrative Science of Education	***Adam lipowski*** Emergence of Social Structures via Preferential Selection		***M. Bonnin, V. Lanza, F. Corinto*** The role of Noise on the Synchronization of Oscillators	***Emeline Fresnel*** Characterization of Cardiodynamics from First-return Maps on Delta-RR Intervals	GAMA tutorial	
							Room 7 - GS6
17:30 - 18:00		***Luis Rocha*** TempoRank: a Random Walk Centrality for Temporal Networks	***J.-L. Léonard, V. dell'Aquila, A. Gaillard-Corvaglia*** Algorithmic Complexity Applied to Geolinguistic Networks	***Damien Queslioz*** Preindustrial Non-volatile Memories Used as Memristive Devices: Different Behaviors for Complex Systems	***Louise Viger*** A Cancer Model for the Angionic Switch		***Atanu Chatterjee, Gitakrishnan Ramadurai*** Scaling Laws in Chennai Bus Network

Monday June 23, 2014

	Room 1 - SW1	Room 2 - SW3	Room 3 - SW4	Room 4 - SW6	Room 5 - SW9	Room 6 - SW2	Room 7 - GS6
18:00 - 18:30	***B. Galinon-Mélénec, S. Leleu-Merviel, F. Mori Sarti***	***Alok Kumar*** Navigating Internet with Group and Degree Information	***S. Balev, G.H.E. Duchamp, J.-L. Léonard*** Visualizing and Revisiting Dialect Intelligibility Networks: Mazatec as a Case Study	***Rachid Mchich*** Analysis of the Equilibrium Stability of a Moroccan Fishery Management Model	***Massimo Di Felice*** Controllability and Stability Analysis of a Cancer Chaotic System	***Patrick Taillandier, Nicolas Marilleau***	***Saber Nasraoui*** Instability in Magnetogravity Shear Waves
18:30 - 19:00	Integrative Social Science	***James Clough*** Citations Networks ans their Time Constraint	***Angels Massip i Bonet*** Complexity as a Framework for Understanding Transdisciplinarity	***Ali Moussaoui*** Global Dynamics of a Predator-Prey System and its Applications to Biological Control	***Aurélie Vallée*** Characterization of the Dynamics Underlying mediated Interactions of Visually Impaired and Normal Teenagers	GAMA tutorial	***I. Tchiguirinskaia, D. Schertzer, A. Giangola-Murzyn, T.C. Hoang*** Multiscale Resilience Metrics to Assess Complex System Resilience
19:00	**Welcome cocktail**						

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09:45 - 10:30	Keynote: Robert S. MacKay						
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12:30 - 14:00	Lunch						
	Room 1 - SW1	Room 2 - SW3	Room 3 - SW4	Room 4 - SW6	Room 5 - SW9	Room 6 - SW2	Room 7 - GS6
14:00 - 14:30	***Salima Taïbi, M. Funabashi***	***Jürgen Kurths*** How Basin Stability Complements the Linear-Stability Paradigm	***Marco Patriarca***	***Jean-Jules Tewa*** Global Dynamics of a Predator-Prey System and its Applications to Biological Control	***Oriol Pont*** Singularity Analysis: a Method for Properly Characterizing Complexity in Cardiodynamics	***Martin Potier***	***Y. Zhao, Y. Zhang, M. Shi, C. Liu*** Absolute Stability of a Class of Stochastic Switched Systems
14:30 - 15:00	Integrative Ecology	***Dimitri Papadimitriou*** Stochastic Optimal Control in Cooperative Multi-agent Systems	Models of Langage Competition	***Nadia Raïssi*** Multi-fishery Management: Differential Games Approach	Room 5 - SW11 ***Bob Gilmore*** Tale of Two Maps	MGS Tutorial	***K. Zhang, X. Liu, W.-C. Xie*** Global Exponential Stability of Discrete-time Delay Systems Sbject to Impulsive Perturbations
15:00 - 15:30	***Jörg Lehnert, Hector Zenil, Oscar Cordon***	***J.-G. Caputo*** Wave Propagation in Nonlinear Networks	***Adam Lipowski*** Dynamics of Naming Games: Why is it Slow and How to Make it Faster?	***Tri Nguyen Huu*** Modelling Dynamics of Ungulates Populations in Amboseli National Park, Kenya	***Martin Rosalie*** Templates of Two Foliated Attractors: Lorentz and Chen Systems	***Y. Pigné, S. Balev, A. Dutot***	***Radko Kriz, Petr Hainc*** Chaos in Tropospheric Ozone Concentration Time Series
15:30 - 16:00		***Fabien Tarissan*** Real-world Spreading Phenomena: experiments on a large-scale P2P System	***Didier Demolin*** Evaluating the Complexity of Phonological Systems	***Slimane Ben Miled*** Mathematical Model for Larvae Fish Recruitment: Effects of Temperature Fluctuations	***C. Letellier, G.H. Oliveira Salgado & L.A. Aguirre*** Fractional-order Systems: Does the Derivative Order Differ from a Bifurcation Parameter?		***A. Balti, V. Lanza, M.A. Aziz-Alaoui*** On the Study of Periodic Solutions in the Hodgkin-Huxley Model
16:00 - 16:30	Multi-level Modelling	***Vincent Traag*** Dynamics of Media Attention	***Roundtable*** Space, Topology, Diffusion & Language: Prospects for Future Research	***Gustavo Cruz*** Dynamics of a Cancerous Tumor Growth Under the Effect of Therapy	***L. Larger, R. Lavrov, A. Bayon Fuentes, M. Jacquot, Y.C. Chembo, V.S. Udaltsov*** Dual Delay Electro-Optic Phase Oscillators: a Nonlinear Non-local Dynamics for High Performance Secure Optical Chaos Communications	GraphStream Tutorial	***Juan Carlos Pacual*** Logistic Model for Customer Dynamics in the Mobile Telecommunication
16:30 - 17:00	*Coffee Break*						

Tuesday June 24, 2014

	Room 1 - SW1	Room 2 - SW3	Room 3 - SW5	Room 4 - SW13	Room 5 - SW11	Room 6 - SW2	Room 7 - GS5
17:00 - 17:30	***S. Occelli, M. Fontana, C. Rozenblat, S. Ghernaouti***	***Marya Bazzy*** Community Structure in Multilayer Networks	***Gérard H.E. Duchamp, Hoang Ngoc minh*** An Interface Between Physics and number Theory via an Analytic Version of Cartier-Quillen-Milnor-Moore Theorem	***J. Starke*** Analysis of Particle Models by Implicit Equation-Free Methods	***L. Pastur, C. Pivot, F. Lusseyran, C. Letellier*** Time-delayed Feedback Control for Phase Coherent and Phase Noncoherent Chaotic Regimes	***Mathieu Leclair, Romain Reuillon***	***M. Jelassi, S. Ben Miled, N. Bellamine, J. Demongeot*** Modeling the Obesity: a Short Review of Literature
17:30 - 18:00	Territorial Intelligence	***Floriana Gargiulo*** Driving Forces of Researcher's Mobility	***Bui van Chiên*** Algebra on Words with q-Deformed Stuffle Product and Expressing Polyzetas	***A. Kuznetsov*** Can a Delay Differential Equation Produce Relaxation Oscillations?	***Adrien Kerfourn*** Phase Synchronisation in a Ring of Rössler Systems		***Yafia Radouane, M.A. Aziz-Alaoui*** Qualitative Properties in Two-Patches of Predator-Prey System with Unidirectional Migration of Prey and Effect of Migrated Population
18:00 - 18:30	***Roundtable***	***Nicolas Retiere*** Are Power Grids Scale Invariant?	***Hoan Quoc Ngo*** A Scheme of Noncommutative Combinatorial Number Theory and Physics	***I. Kosiuk*** Mathematical Analysis of Complex Networks of Protein Interactions	***Martin Rosalie & Christophe Letellier*** Topologically Inequivalent Attractors Solution for the Chua Circuit	OpenMole Tutorial	***A. Walid, Y. Radouane, M.A. Aziz-Alaoui*** Qualitative Properties and Turing Bifurcation in a Two Species predator-Prey System with Diffusion on a Circular Domain
18:30 - 19:00	Complex Systems Science and Engineering, the Big Data Deluge and the Internet of Objects	***Arnaud Knippel*** Oscillations of Networks: the Role of Soft Nodes	***Nguyên Hoang Nghia*** A Combinatorial Non-commutative Hopf Algebra of Graphs	***N. Popovic*** A Geometric Analysis of Fast-slow Models for Stochastic Gene Expression			***D. Louati Maâroufi, S. Ben Miled, N. Bellamine Ben Saoud*** Hermadeb an Evolutionary Individual Based Model for the Energy Allocation in Hermaphrodite
20:00	**Conference Diner**						

Wednesday June 25, 2014

09:00 - 09:45	**Keynote: Otto Rossler**						
09:45 - 10:30	**Keynote: Guy Theraulaz**						
10:30 - 11:00	**Coffee Break**						
	Room 1 - SW1	**Room 2 - SW3**	**Room 3 - SW5**	**Room 4 - SW6**	**Room 5 - GS3**		**Room 7 - GS5**
11:00 - 11:30	***Thierry Saint-Gérand*** Territorial Intelligence	***Jari Saramäki*** Temporal Patterns in Mobile Call Netwoks	***Cyril Banderier*** Dirichlet Series, Mellin Transform, Number Theory and Physics	***Martin Potier*** Managing the Interoperability Between Models of a Complex System - Application to Prey-Predator Multi-Modeling	***Pierre Parrend, Pierre Collet*** SCRUM is a Complex System		***A. Ignatenko, A.Kolodkin, N. Brady, R. Balling, B. Peters*** Comparison of ODE-Based Models for Reactive Oxygen Species Regulation System
11:30 - 12:00	***P. Parrend, Z. Han, C.S. Tapiero, P. Collet*** Integrative Governance of Complex Systems	***Peng Ji*** Cluster Explosive Synchronization in Complex Networks	***Christian Lavault*** On Miki-Gessel Bernoulli Identities	***Nadia Raïssi*** Management of Salt Water in Irrigation	***Haifa Rabai, Rodolphe Charrier, Cyrille Bertelle*** Detecting a Sub Group of Chaotic Nodes in an Interaction Network		***V.L.E. Phan, B. Ambrosio, M.A. Aziz-Alaoui*** Mathematical Analysis of a Complex Network of Neuronal Reaction-Diffusion PDE Systems
12:00 - 12:30		***Ben Amor*** Diffusion on Atomistic, Network Models of Proteins Identifies Allosteric Sites and Allosteric Pathways	***Ladji Kane*** Combinatoire et Algorithmique des Factorisations Tangentes à l'Identité	***Fulgence Mansal*** Mathematical Model of a Fishery with Demand/Supply Dynamics	***Giovanna Ferrarro, Antonio Iovanella*** A Network Science Approach to Inter-Organizational Networks: the Case Study of Entreprise Europe Network		***M. Bordet, S. Morfu, M. Rosse*** Colored Noise Effects on Ghost Stochastic Resonance
12:30 - 13:00		***E. Fanchon*** Semi-formal Methodology for the Modelling of High-dimensional and Uncertain Dynamical Systems: Application to the Iron Homeostasis Network	***Benoît Cagnard*** Sarkovski and the Automata	***Adel Ferchichi*** Fishing Policy for a Global Hermaphrodite Model	***Venus Marza, Mehdi Dehghan, Behzad Akbari*** Motif-based Topology Formation for Peer-to-Peer Video Streaming Networks		***B. de Bono, P. Grenon, M. Helvenstein, N. Kokash, S.-R. Thomas*** ApiNATOMY: The Generation of Interactive CircuitBoard Views of Complex Physiology Knowledge
13:00 - 14:30	**Lunch**						
14:30 - 19:00	**Visit to Etretat**						

Thursday June 26, 2014

09:00 - 09:45	Keynote: Guanrong Chen						
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10:30 - 11:00	Coffee Break						
	Room 1 - SW1	Room 2 - GS2	Room 3 - SW10	Room 4 - SW13	Room 5 - GS3	Room 6 - SW8	Room 7 - GS5
11:00 - 11:30	***K. Mikula, A. Santos, N. Peyriéras***	***B. Elissalde, F. Lucchini, L. Grassot, Y. Salamand*** Urban Events and Emerging Phenomena	***B. Oumayma, B.A. Nahla, E.-G. Talbi*** Optimization Ajgorithms for Solving Multi-Objective Vehicle Routing Problems with Fuzzy Demands	***F. Veerman*** Pulse Patterns in Singularly Perturbed Reaction-Diffusion Systems	***Kiyoumars Roushangar, Saied Sadaghian*** Estimation of Total Sediment Transport into Madani Dam Reservoir	***Ludovic Seifert***: Introduction ***Keith Davids***: "Properties of Complex Adaptive Systems Underspin principles of Transfer in Individuak and Team Sports	***S. Morfu, P. Marquie, G. Lassere, M. Bordet*** A Comparative Study of Noise Effects in a Fitzhugh-Nagumo Circuit
11:30 - 12:00	Integrative Biology	***N. Verdière, V. Lanza, R. Charrier, D Provitolo, E. Dubos-Paillard, C. Bertelle, M.A. Aziz-Alaoui*** Mathematical Modelling of Human Behaviors During Catastrophic Events	***H.I. Hendi, A. Ahmad, M. Bouneffa, C. Fonlupt*** Logistics Optimization Using Ontologies	***E. Kutafina*** Complex Periodic Oscillation Patterns in Prototypical Three Time Scale Model	Room 5 - GS4 ***Marco Patriarca, Els Heinsalu*** Kinetic-exchange Models: a Short Review	***11:40 - Ian Renshaw*** Affective Learning Design: Building Emotions into Representation Learning Design	***A. Garnier, C. Huneau, A. Vidal, F. Wendling, H. Benali*** Identification of Dynamical Behaviors in Epileptic Discharges Using a Neural Mass Model with Double Excitatory Feedbacks
12:00 - 12:30		***J.-F. Brethé, M. Campo, R. Charrier, N. Corson, F. Druaux, C. Harik El Houssein, F. Guérin, F. Guinand, H. Rabai, E. Leclercq, D. Lefebvre, D. Olivier, A. Saad, R. Thouvarecq*** About the Detection of Panic in Individual and Collective Human Behaviors	***S. Rachad, H. Fouraji, B. Bensassi*** Modeling a Prodcution System by Parametric Identification Approach	***B. Ambriosio*** Weakly Coupled Two Slow-Two Fast Systems, Folded Singularities and Mixed Mode Oscillations	***M.A. Salman, C. Bertelle, E. Sanlaville*** A New Load Balancing Strategy for Distributed Computing Systems	***12:05 - Dominique Orth*** Representative Learning Design in Climbing	***L. Larger, B. Penkovsky, A. Baylon Fuentes, M. Jacquot, Y.K. Chembo, Y. Maistrenko*** New Paradigm in Delay Dynamics: Virtual Chimera States and Brain-Inspired Processing
12:30 - 14:00	Lunch						

Thursday June 26, 2014

	Room 1 - SW1	Room 2 - GS2	Room 3 - SW10	Room 4 - SW13	Room 5 - GS4	Room 6 - SW8	Room 7 - GS1
14:00 - 14:30	***Jean-Marc Meunier, Charles Tijus***	***Daniel Schertzer, Loulia Tchiguirinskaia*** Intermittency, Multifractal Vector Fields, Lie Cascade and Stochastic Clifford Algebra	***J.-Y. Colin, H. Mathieu, M. Nakechbandi*** Computing Dynamic Routes in Maritime Logistic Networks	***E. Benoit*** Slow Fast Vector Fields of Dimension 2+2	***Yann Secq, Philippe Mathieu*** Does Your Trading Strategy Beats Mine? An Agent-based Approach to Evaluate Trading Efficiency	***John Komar*** Dynamics of Movement Stability During Motor Learning	***L. Ezzahri, A. Boutoulout, H. Bourray*** Boundary Constrained Controllability Problem
14:30 - 15:00	Integrative Cognitive Science	***J. Raimbault, A. Banos, R. Doursat*** A Hybrid Network/Grid Model of Urban Morphogenesis and Optimization	***H. Dkhil, A. Yassine, H. Chabchoub*** Multi-objective Optimizationfor the Integrated Problem of Container Location and Vehicle Scheduling at Automated Container Terminal	***S. Fernandez-Garcia*** Canards in Planar Piecewise Linear Systems	***M.A. Salman, C. Bertelle, E. Sanlaville*** Interaction Capturing Model in a Distributed Computing System	***14:25 - Rodolphe Charrier*** Arm and Leg Oscillation Modelling in Swimming	***I. El Harrakii, A. Boutoulout, H. Bourray*** Boundary Flux Controllability Problem: Approach and Simulation
15:00 - 15:30	***Maria Eunice Gonzales*** Integrative Social Science	***J.F. Gonzàlez Suitt, R. Doursat, A. Banos*** Service Régularity Loss in High-Frequency Feeder Bus Lines: Causes adn Self-Driven Remedies	***H. Fouraiji, S. Rachad, B. Bensassi*** Identification of a Production System Using Hammerstein-Wiener and Narx Models	***J.M. Ginoux*** Canards Existence in R^2+2	**Room 4 - GS7** ***Mustapha Arfi, Carla Selmi*** Mixed Strategies and w-Rational Languages Probability Computation	***14:50 - Jérémie Boulanger, Ludovic Seifert*** Automatic Detection of Climbing Affoirdances	***A. Khazari, A. Boutoulout, H. Bourray, I. El Harraki*** Regional Gradient Observability: Sectorial Approach
15:30 - 16:00	***Roundtable*** How to Organise the Research and Education in Complex Systems Science and Engineering?	***Patrick Taillandier*** GAMAGraM: Graphical modeling with the GAMA platform	***K. Danach, W. Khalil, F. Chagas, L. Junior, S. Gelareh*** Routing Parallel Heterogeneous Machines in Maintenance Planning: A Hyper-Heuristic Approach		***Yichao Zhang, M.A. Aziz-Alaoui, Cyrille Bertelle*** Local Nash Equilibrium	***15:15 - Régis Thouvarecq*** Stochasticity and Determinism of Postural Coordination During Standing Task ***15:40 - Carla Caballero Sanchez*** Analysing Motor Control Factors of Balance Revealed by Principal Component Analysis	
16:00 - 16:30			***Ilham Slimani, Said Achchab*** Game Theory to Study the Behavior Probabilities in the Supply Chain			***16:05 - Nicolas Benguigui*** Dynamics for Controlling Actions in Fast Ball Sports	
16:30	**Conference Ending**						


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