20.07.2016

Programme PNLD 2016, Monday, July 25th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
09:00 – 11:00	**Registration**		
11:00 – 11:10	**Opening**		
11:10 – 11:40	**C. Grebogi** *Compressive Sensing Based Prediction of Complex Dynamics and Complex Networks*		
11:40 – 12:10	**W. Lin** *Finding the role of time-delays*		
12:10 – 12:40	**Y.-C. Lai** *Relativistic Quantum Chaos*		
12:40 – 13:40	Lunch Break		
13:40 – 14:10	**A. Apte** *Data assimilation for high dimensional systems: role of unstable subspace*		
14:10 – 14:40	**M. Palus** *Information transfer across time scales*		
14:40 – 15:10	**A. Motter** *Network Optimization, Control, and Symmetries*		
15:10 – 15:40	Coffee Break		
	Extreme events – from dynamical systems to climate variability	**Perspectives in Synchronization Phenomena**	**Perspectives in Biochemistry**
15:40 – 16:00	**N. Boers** *Discrimination between physical and spurious links in spatially embedded functional networks reveals*	**M. Zaks** *Onset of time-dependence in ensembles of excitable elements with global repulsive coupling*	**F. Revuelta** *Transition State Theory for solvated reactions beyond recrossing-free dividing surfaces*
16:00 – 16:20	**E. Surovyatkina** *Critical fluctuations for identification of tipping elements: the Indian summer monsoon case*	**S. Yanchuk** *Noise-enhanced coupling between two oscillators with long-term plasticity*	**F. Borondo** *Scar Functions, Barriers for Chemical Reactivity, and Vibrational Basis Sets*
16:20 – 16:40	**V. Stolbova** *Mechanism of spatio-temporal transition to monsoon and prospects for Prediction*	**S. Acharyya** *Maximal synchronizability of networks and the role of edges*	**S. Allmin Pradhap Singh** *Classification of Indirect Immunofluorescence Images using Local Texture Patterns*
16:40 – 17:00	**N. Jajcay** *Synchronization and causality across time-scales of observed and modelled ENSO dynamics*	**W. A. Barbosa** *Experimental Synchronisms and Correlations in Electrically Coupled Chaotic Lasers*	**H. Fatafta** *Nonlinear analysis of allergen protein Ole e6 atomic positions*
17:00 – 17:20	**H. Modest** *Nonlinear time series analysis of atmospheric gravity waves*	**H. Cerdeira** *Collective cohesive motion of chaotic attractors*	
17:20 – 17:40	**A. Singh** *Scale-dependent reorganization of landscape under climatic change: results from an experimental investigation*	**S. Das** *Synchronization, phase slips and coherent structures in area-preserving maps*	

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Programme PNLD 2016, Tuesday, July 26th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
09:00 – 09:30	**J. Peinke** *Extreme Events in Terms of Multi-Point Statistics and Negative Entropy Production*		
09:30 – 10:00	**M. Chavez** *Tracking brain dynamics with Riemannian geometry to detect respiratory states from EEG signals*		
10:00 – 10:30	**A. Roque** *Perspectives on applications of a stochastic spiking neuron model to neural network modeling*		
10:30 – 11:00	Coffee Break		
	Extreme events - from dynamical systems to climate variability	**Dynamics and Control of Future Power Grids**	**Perspectives in Time Series Analysis**
11:00 – 11:20	**T. Bodai** *Extreme value analysis in dynamical systems: Two case studies*	**O. Kamps** *Stochastic Models for Turbulence - From Fully Developed Turbulence to Turbulent Energy Feed-In for Power Grid Models*	**M. Högele** *Coupling distances and their application to paleoclimate time series*
11:20 – 11:40	***A. Saha*** *Extreme Events in Delay-Coupled FitzHugh-Nagumo Oscillators*	**F. Hellmann** *Network matters - Power grid synchronization in the face of localized larger perturbations*	**M. Höll** *Long-range correlations in time series data and the method of detrended fluctuation analysis revisited*
11:40 – 12:00	**N. Sharafi** *The Role of Perturbation Growth in Critical Transitions and Extreme Events*	**P. Ji** *How electricity price impacts network stability and decarbonization in smart grids*	**J. Korbel** *Methods for Multifractal Spectrum Estimation in Time Series Analysis*
12:00 – 12:20	**V. M. Galfi** *Convergence of the extreme event distributions to the GEV and the GP distributions in a two-layer quasi-geostrophic atmospheric model*	**J. Schiffer** *Delay-Dependent Conditions for Stability of a Class of Port-Hamiltonian Systems with Application to Droop-Controlled Microgrids*	**G. Ambika** *Recurrence-network analysis of chaotic and noisy time series*
12:20 – 12:40	**R. Donner** *Event Coincidence Analysis for Quantifying Simultaneities in Sequences of Rare Events*	**M. Rohden** *Non-local curing strategy for oscillatory power grid networks based on the global collective redistribution of loads*	**D. Mukhin** *Extracting multidecadal climate modes by nonlinear data expansion*
12:40 – 13:40	Lunch Break		
13:40 – 14:10	**M. Jensen** *Arnold Tongues and Mode Hopping in Cell Dynamics*		
14:10 – 14:40	**A. Diaz-Guilera** *Nonlinear dynamics in multiplex networks*		
14:40 – 15:10	**U. Parlitz** *Data Driven State and Parameter Estimation*		
15:10 – 18:00	**Coffee & Posters**		

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20.07.2016

Programme PNLD 2016, Wednesday, July 27th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
09:00 – 09:30	**T. Gross** *Meta-Foodwebs – an attractive class of dynamic multi-layer networks*		
09:30 – 10:00	**J. Gomez-Gardenes** *Human Mobility and the spread of Vector-Borne Diseases in Complex Metapopulations*		
10:00 – 10:30	**A. Arenas** *Emergent physics of processes interacting on multiplex network structures*		
10:30 – 11:00	Coffee Break		
	Tipping and nonlinearity in regional and global social systems coevolving with nature	**Biomedical Data Analysis**	**Perspectives in Fluid Dynamics**
11:00 – 11:20	**K. Klemm** *Temporal interactions facilitate endemicity in the susceptible-infected-susceptible epidemic model*	**T. Penzel** *Cardiorespiratory Coupling in Sleep*	**C. Haynes** *Nonlinear propagation through an unknown atmosphere*
11:20 – 11:40	**J. C. Losada** *Mapping the online communication patterns of political conversations*	**D. Reddy Pa** *Prediction of Congenital Heart Disease in Neonates using Ultrasound Images And Physiological Parameters*	**V. Juknevicius** *Long range height variations in surface growth*
11:40 – 12:00	**D. Labavic** *Changing the rules of the game as an emergent feature of the dynamics*	**S. Joshi** *Non Linear Dynamics of ECG and PPG Signals in Pregnancy*	**M. Lindner** *Spatio-temporal organization of dynamics in a two-dimensional periodically driven vortex flow: a Lagrangian flow network perspective*
12:00 – 12:20	**J. Donges** *Clustered marginalization of minorities during social transitions induced by co-evolution of behaviour and network structure*	**J. Krämer** *Quality Features of Electrocardiograms or: Quantification of Noise in the ECG*	**S. Martens** *Control of traveling localized spots*
12:20 – 12:40		**H. Krause** *Cardiorespiratory Coordination by Chance?*	**S. Sen** *Dynamic Characterization of Single Phase Natural Circulation Loops*
12:40 – 13:40	Lunch Break		

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20.07.2016

Programme PNLD 2016, Wednesday, July 27th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
13:40 – 14:10	**F. Family** *Chaotic Dynamics in Kicked Ratchets*		
14:10 – 14:40	**T. Kapitaniak** *Chimera States for Coupled Pendula*		
14:40 – 15:10	**G. Menon** *Spatio-temporal fluctuations in chromatin compaction states of stem cells*		
15:10 – 15:40	Coffee Break		
	Tipping and nonlinearity in regional and global social systems coevolving with nature	**Biomedical Data Analysis**	**Perspectives in Complex Networks**
15:40 – 16:00	**S. Hallerberg** *Predictability of critical transitions*	**H. Malberg** *Contactless approaches of cardiovascular measurement technologies: A challenge for non-linear dynamics*	**U. Feudel** *Self-induced switchings between multiple space–time patterns on complex networks of excitable units*
16:00 – 16:20	**R. M. Benito** *Agricultural activity shapes the communication and migration patterns in Senegal*	**K. Marri** *Multifractal scaling exponent based approach to quantify nonlinearity in surface EMG signals under dynamic fatiguing contractions*	**L. Schimansky-Geier** *Structures in heterogeneous stochastic networks*
16:20 – 16:40	**T. Kittel** *Timing of Transients: Quantifying Return Times and Transient Behavior in Complex Systems*	**T. Lilienkamp** *Transient Effects of Spatial-Temporal Chaos in Excitable Media*	**M. Wiedermann** *Networks with nodes embedded in a metric space*
16:40 – 17:00	**J. G. Brida** *The Mankiw-Romer-Weil model with a decreasing population growth*	**N. P. Das** *Unpinning of scroll waves under the influence of thermal gradient in a reaction diffusion system*	**C. Shen** *Development and application of coarse-graining methods to multiscale dynamics in complex networks*
17:00 – 17:20	**D. Rybski** *Non-linear damage functions for climate change intensified natural hazards*	**N. Wessel** *Assessing cardiac autonomic function via heart rate variability analysis requires monitoring respiration*	**X. B. Lu** *State VAR Compensator in Synchronization Of Power-Grid Networks*
17:20 – 17:40			
18:00	**Conference BBQ**		

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20.07.2016

Programme PNLD 2016, Thursday, July 28th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
09:00 – 09:30	**T. Pereira** Impact of isolation on endemic diseases		
09:30 – 10:00	**I. Fischer** *Complex Dynamics of a Laser System with State-Dependent Delay*		
10:00 – 10:30	**B. Tadic** *Graph representations of time series: New perspectives on collective dynamics of nonlinear and disordered systems*		
10:30 – 11:00	Coffee Break		
	Recurrence Analysis	**Perspectives in Synchronization Phenomena**	**Perspectives in Complex Systems and Bifurcations**
11:00 – 11:20	**P. beim Graben** *Symbolic Recurrence Structure Analyses*	**P. H. Louodop Fotso** *Dynamics of modified relay-coupled chaotic systems*	**F. Feudel** *Bifurcations of Convection Driven Dynamos in a rotating Spherical Shell*
11:20 – 11:40	**D. Eroglu** *From Huberman-Rudnick scaling law to scaling behavior of recurrence-based measures at the vicinity of chaos*	**A. Sharma** *Conjugate coupling promotes coherence activity in weakly coupled heterogeneous active media*	**M. Diestelhorst** *Pyroelectric Detection near a Period Doubling Bifurcation*
11:40 – 12:00	**E. N. Macau** *Reurrency Density Enhanced Aproach*	**J. Totz** *Coherence-incoherence patterns in a large array of chemical relaxation oscillators*	**R. Banisch** *Understanding the geometry of transport: diffusion maps for Lagrangian trajectory data unravel coherent sets*
12:00 – 12:20	**T. Stemler** *The Transformation Cost Time Series method for analysing irregular sampled data*	**V. Vlasov** *Hub induced remote synchronization in complex networks of Kuramoto oscillators*	**R. Großmann** *Mesoscale pattern formation of self-propelled rods with velocity reversal*
12:20 – 12:40	**B. Goswami** *Identifying sudden dynamical changes in time series with uncertainties*	**H. Meyer-Ortmanns** *Physical Aging in Excitable and Oscillatory Systems*	
12:40 – 13:40	Lunch Break		

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20.07.2016

Programme PNLD 2016, Thursday, July 28th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
13:40 – 14:10	**M. Small** *Australian Complex Networks*		
14:10 – 14:40	**M. Baptista** *Information flow and causality in, and inference of, complex networks*		
14:40 – 15:10	**C. Pando** *Rare Events, Localization and Synchrony in Coupled Lasers*		
15:10 – 15:40	Coffee Break		
	Recurrence Analysis	**Perspectives in Biochemistry**	
15:40 – 16:00	**N. Marwan** *Analysing spatially extended high-dimensional dynamics by recurrence plots*	**A. Imparato** *Stochastic thermodynamics in many-particle systems*	
16:00 – 16:20	**M. Riedl** *Extended quantification of the generalized recurrence plot*	**P. Meyer** *Anomalous statistical properties due to dynamical intermittency*	
16:20 – 16:40	**M. Sips** *Important computing challenge of Recurrence Quantification Analysis (RQA) and the potential of basic RQA measures for Visual Analytics*	**C. Räth** *Complex Plasmas: A versatile system to study self-organization effects in strongly coupled systems on the microcanonical level*	
16:40 – 17:00	**S. Spiegel** *Approximate Recurrence Quantification Analysis (aRQA) in Code of Best Practice*	**R. Tchitnga** *Simple autonomous circuits with unexpected higher degrees of freedom for chaos and hyperchaos*	
17:00 – 17:20	**P. S. S. Anand** *Modeling and Prediction based on Recurrent Neighborhoods of a Dynamical System*	**S. Rüdiger** *Fast and slow excitability in models of intracellular calcium release*	
17:20 – 17:40			

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20.07.2016

Programme PNLD 2016, Friday, July 29th

	Room A [0'119]	Room B [0'101]	Room C [1'306]
	Perspectives in Life Sciences	**Recurrence Analysis**	**Perspectives in Synchronization Phenomena**
09:00 – 09:20	**J. Kromer** *From sensory neurons to sperm navigation: strategies for optimal performance in the presence of noise*	**T. Kovacs** *Recurrence time analysis in exoplanetary dynamics*	**N. Molkenthin** *Geometric Constraints and Scaling Laws in Spatial Networks*
09:20 – 09:40	**N. Kouvaris** *Chimera-like States in Modular Neural Networks*	**P. Mouawad** *On Symbolic Dynamics and Recurrence Quantification Analysis for Affect Recognition in Voice and Music*	**N. Punetha** *The emergence of chimeras through induced multistability*
09:40 – 10:00	**A. Lavrova** *Shaping Spiking Patterns Through Synaptic Parameters*	**P. Oswiecimka** *Non-uniformities of Fractal Organization of Complex Time Series*	**S. Stein** *Effects of Viscoelastic Coupling in Systems of Coupled Oscillators*
10:00 – 10:20	**T. Manos** *Effect of Stimulation Frequency and Intensity on Long-Lasting Anti-Kindling*		**S. P. Kuznetsov** *Chaos in three coupled rotators: From Anosov dynamics to hyperbolic attractors*
10:20 – 10:40	**C. Meena** *Chimera States in Star Networks*		**F. Peter** *Synchronization in Finite-Size Networks: Fluctuations of the Global Phase*
10:40 – 11:10	Coffee Break		
11:10 – 11:40	**S. Mukherjee** *Age of Information and Fitness of Ideas in Science & Innovation*		
11:40 – 12:10	**R. Winkelmann** *Combustion of available fossil-fuel resources sufficient to eliminate the Antarctic Ice Sheet*		
12:10 – 12:30	**Closing**		

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20.07.2016

Programme PNLD 2016, List of Posters

01	S. Acharyya	State estimation using gradient descent method
02	A. Agarwal	Multi-timescale network analysis: An approach to study spatiotemporal rainfall pattern in south Germany
03	S. Auer	Intermittent Power Sources in a Future Smart Grid
04	W. Barfuss	Reinforcement Learning in Social-Ecological System Models
05	L. Bauer	Chimera States in Epidemic Models
06	K. Berg	Cardiorespiratory Coordination in Pregnancy
07	A. Bodrova	Brownian motion with time-dependent diffusion coefficient
08	V. Buyadzhi	Non-linear dynamics of quantum-generator and laser systems with elements of a chaos
09	V. Buyadzhi	Computational studying interaction dynamics of complex systems within a chaos theory method: Application to neurophysiology
10	A. Carrión García	Complexity characterization based on surrogate data for short oscillating time series
11	C. Ciemer	The temporal evolution of the correlation structure of daily rainfall in South America
12	D. A. Diaz-Romero	Fault diagnosis applied to nonlinear dynamical systems by topological invariants
13	G. Drotos	The framework of snapshot attractors in the characterization of teleconnections during climate changes
14	N. Ekhtiari	Effect of Sobradinho reservoir (Brazil) on regional climate
15	J. S. Eyebe Fouda	Advanced three-state test for complexity measure in time series
16	F. Ghanbarnejad	Cooperative disease spreading with mobile agents
17	A. Glushkov	New chaos-statistical computational method of forecasting evolutionary dynamics of environmental systems: Atmospheric pollutants dynamics
18	A. Glushkov	Chaos-geometric attractor and quantum neural networks approach to simulation chaotic evolutionary dynamics of complex systems
19	P. Granitza	Cardiorespiratory Coordination in Cheyne-Stokes Respiration
20	W. He	A novel method for detecting abrupt dynamic change based on the changing Hurst exponent of spatial images
21	J. Hizanidis	Chimeras in locally coupled SQUIDs: Lions, goats and snakes
22	F. Iannelli	Effective Distance for Epidemic Spreading on Complex Networks
23	M. Kähne	The Interplay between Degree Correlations and Stable Activity in Complex Networks
24	V. Kishore	Robustness of network against extreme events
25	T. Kittel	Topology of sustainable management of dynamical systems with desirable states: from defining planetary boundaries to safe operating spaces in the Earth system
26	V. Kleparskiy V. Sheynis	Large-Scale Socio-Economic System Dynamics: Investments and Human Potential
27	J. Lopez Sauceda	The nature of biological shapes according to complex systems: How closest is an urban shape from a biological architecture.
28	A. V. Mahajan	Transition to Frozen antiferromagnetic pattern in Delayed Logistic Map
29	R. Maheswaran	Multi-timescale network analysis: An approach to study spatiotemporal rainfall pattern in south Germany
30	D. Maia	Persistence of Networks Synchronization under Nonidentical Coupling Functions
31	K. Marri	Evaluation of dynamic transitions in fatiguing contractions using surface EMG signals and recurrence quantification methods
32	C. Meena	Effect of Heterogeneity in Models of El-Niño Southern Oscillations
33	C. Mitra	An integrative quantifier of multistability in complex systems based on ecological resilience
34	S. Molnos	Investigating Changes in the Hadley Cell using Sensitivity Experiments
35	J. Moore	Accommodating geometry in local projective noise reduction
36	F. Müller-Hansen	Patterns and dynamics of land-use transitions in the Brazilian Amazon
37	B. R. Nana Nbendjo	Identification of horseshoes chaos in a cable-stayed bridge subjected to randomly moving loads
38	T. Niedermayer	Wave control by cooperative excitation of cardiac tissue
39	J. Nitzbon	Connections between Survivability and Network T opology in Simple Power Grid Models
40	J. Nötel	Active particles with angular driving
41	U. Özturk	Event-Synchronization based Assessment of Spatiotemporal Behavior of the Seasonal Extreme Rainfall over Japan
42	R. F. Pena	Self-consistency in the second-order correlation statistics: from network to a single-neuron scheme
43	R. F. Pena	Up-down states in a neural network model and their relation with the individual neurons
44	F. Peter	Complex for being Small: Synchronization in Finite-Size Networks
45	R. Pitale	Effective Characteristics Prediction of Human Heart Behavior to Propose a Brief Protocol for Different Yoga Postures using Non-Linear Methods
46	P. Pradhan	Optimization of urban food networks and its climate benefits
47	P. Radtke	Stochastic Dynamics of Resistive Switching
48	K. Rehfeld	On linear vs. nonlinear mechanisms behind state- and timescale-dependency of climate variability
49	S. Ruschel	Impact of isolation on endemic diseases
50	P. Schultz	Survivability: How Dangerous Transients Affect the Stability of Dynamical Systems
51	J. Singha	Splay states and splay chimera states in coupled map lattices
52	L. Sommerlade	Time-Variant Estimation of Connectivity
53	V. Stolbova	The climate-finance macro-network: mapping the exposures of the financial system to climate policy risks in the Euro Area
54	L. Strenge	(S)Warm up - towards a hybrid model for swarm type DC microgrids
55	J. Stroud	Learning motor movements via targeted gain modulation in recurrent neuronal networks
56	K. Tajane	Effective Pattern Prediction of Human Heart Behavior to Propose a Brief Protocol for Circadian Rhythm by Using Non Linear Dynamics
57	A. Tamasevicius	Inhibition of spikes in an array of synchronized FitzHugh-Nagumo oscillators by external periodic forcing
58	R. Tönjes	Complex Rotating Waves and Long Transients in a Ring-Network of Electrochemical Oscillators with Sparse Random Cross-Connections
59	B. Wahl	Granger-causality maps of diffusion processes
60	S. Wan	Evolutionary modeling-based approach for model errors correction
61	D. Wendi	Analysis of Change in Complex Flood Hazzard Dynamics Using Recurrence Property
62	R. Yamapi	Dynamics of Disordered Complex Network of Coupled Hindmarsh-Rose Neuronal Models
63	R. Zhi	The Prediction Theory of Record Breaking Daily Temperature Events
64	G. Zimatore	Recurrence Quantification Analysis on The Business Cycles

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