

11th International Scientific Conference on Physics and Control (PhysCon 2024)
Kadir Has University, Istanbul, September 9-12, 2024
Daily Schedule

Day 1 (9th September 2024, Monday)

Time	Place	ID	Speaker	Title	Chair	
13:00	Conference Hall	Keynote 1	Henrik Jensen	Self-Organised Criticality and Control	F. Alay	
14:00	Conference Hall	Invited Talk 1	Thomas Stemler	statFEM -- Dealing with Imperfect Models in a Statistical Learning Framework		
15:00	Cinema A	Contributed Talks 1.a	Daniila Semenov Alexander Aleksandrov	Synchronization Conditions of Disturbed Nonlinear Dynamical Networks with Delayed Coupling Based on Passification Method Stabilization of Nonlinear Mechanical Systems via Delayed Feedback	C. Artun	
15:00	Cinema B	Contributed Talks 1.b	Alexandr Elsakov Culberto Romero-Meléndez	On Asymptotic Properties of Indirect Control Systems with Periodic Nonlinearities Dissipativity and Turnpike Property in a Controlled Stochastic Lotka-Volterra Model with Lévy Jumps	Z. Hagos	
16:00	Cinema A	MiniSymposium 1.a	Title Burçin Ünlü Gökler Arpağ	Physics of Nonequilibrium and Complex Biological Systems - Part 1 Label-Free Characterization of Exosomes Using Raman Spectroscopy Microtubule Dynamics and Motor Protein Function: Stochastic and Langevin Dynamics Perspectives	O. Pusuluk	
16:00	Cinema B	MiniSymposium 2.a	Title Eckehard Schöll Istvan Z. Kiss	Synchronization Phenomena in Interacting Dynamical Systems: Theory and Applications - Part 1 Interplay of Synchronization and Cortical Input in Models of Cortical Networks Pinning Control of Synchronized Oscillatory Networks: Stability Hyperboloids and Relocating Influential Nodes	O. Omeľchenko	
17:00	Cinema A	IPACS General Assembly Meeting				

Day 2 (10th September 2024, Tuesday)

9:30	Conference Hall	Lecture 1	Eckehard Schöll	Nonequilibrium Phase Transitions and Nucleation Phenomena in Synchronizing Networks (Dedicated to the memory of Hermann Haken, 12.07.1927 – 14.08.2024)	H. Jensen	
10:30	Conference Hall	Lecture 2	Alexander Fradkov	Cybernetical Neuroscience		
13:00	Conference Hall	Keynote 2	Marc Timme	Fluctuation-Responses and Tipping in Strongly Perturbed Nonlinear Systems	E. Schöll	
14:00	Conference Hall	Invited Talk 2	Thomas Peron	Effects of Clustering Heterogeneity on the Spectral Density of Sparse Networks		
15:00	Cinema A	Contributed Talks 2.a	Margarita Kovaleva	Breathers Propagation in the Granular Locally-Resonant Chains	Ç. Özdeş	
15:00	Cinema B	Contributed Talks 2.b	Aliya Imangazieva Tatiana Bogatenko	Chain Control of Nonstationary Networks Plant Dynamics Peculiarities of Three Coupled Hodgkin-Huxley Neurons	T. Peron	
15:30	Cinema A	MiniSymposium 3.a	Title Ralph Andrzejak Oleh Omeľchenko	Control of Collective Dynamics and Partial Synchronization Patterns in Complex Networks - Part 1 Unbiased Quantification of the Degree of Partial Synchronization Phase Reduction Explains Chimera Shape: When Multi-Body Interaction Matters	E. Schöll	
16:00	Cinema B	Contributed Talks 3	Andrey Ankilov	Mathematical Models of System of Control of Pressure Variation in Combustion Chambers of Engines	T. Peron	
19:30	D Block Entrance	Poster Presentations				

Day 3 (11th September 2024, Wednesday)

Time	Place	ID	Speaker	Title	Chair
9:30	Cinema A	MiniSymposium 1.b	Title Kamyar Roudakian Onur Pusuluk	Physics of Nonequilibrium and Complex Biological Systems - Part 2 Information Transfer as an Evolutionary Feed for Emergence of Critical Brain Network Harnessing Classical and Quantum Correlations: From Thermodynamic Laws to Enhanced Biochemical	G. Arpağ
9:30	Cinema B	MiniSymposium 3.b	Title Galina Streikova Frederico Costa	Control of Collective Dynamics and Partial Synchronization Patterns in Complex Networks - Part 2 Lévy Noise Controlled Dynamics of Neural Networks Targeting Cellular Bioelectrical Differences with Non-Thermal Systemic Electromagnetic Fields in the Human Body	R. Andrzejak
10:30	Cinema A	MiniSymposium 2.b	Title Zeray Hagos Gebrezabher Bruno Boaretto	Synchronization Phenomena in Interacting Dynamical Systems: Theory and Applications - Part 2 Emergence of Hypernetworks via Higher-Order Phase Reduction from Weakly Coupled Oscillator Networks Control of Synchronization Due to Ion Conductance Variations: A Pathway to Synchronization in Neuronal Networks	O. Omeľchenko
10:30	Cinema B	Contributed Talks 4	Sergey Borisenok Bekzod Mirzakabilov	Effective Feedback Control Algorithms for Nitrogen-Vacancy-Cavity Quantum Sensing Flutter of the Transition Process of the Hereditary Deformable Elongated Plate	A. Rezaeiazhad
13:00	Conference Hall	Keynote 3	Yamir Moreno	Network Epidemiology: From Modeling Diseases to Their Control	A. Fradkov
14:00	Conference Hall	Invited Talk 3	Hildegard Meyer-Ortmanns	Controlling the Mean Time to Extinction for Populations of Bacteria	
15:00	Cinema A	MiniSymposium 4	Title Michał Fedorowicz Wei Hao Tey Konstantinos Kourliouros	Attractors of Random Dynamical Systems with Bounded Noise: A Control Theoretic Approach Regularity of Boundaries of Attractors for Linear Differential Equations with Bounded Noise Bifurcations of the Henon Map with Additive Bounded Noise Geometric Theory of Random Dynamical Systems with Bounded Noise: Boundaries of Attractors and Pontryagin's Maximum Principle	K. Kourliouros
15:00	Cinema B	MiniSymposium 5	Title Xiaozheng Fu Alexander Fradkov Sergei Plotnikov	Estimation and Optimization in Networks Asymptotic Convergence of a Continuous-time Decentralized Online Estimation Algorithm with the Additive Communication Noises Parameter Estimation of Fitz-Hugh-Nagumo Neural Networks Based on the Speed-Gradient and Filtering Adaptive Parameter Estimation for a Class of Neural Mass Networks	A. Fradkov & T. Li
16:30	Conference Hall	Special Talk 1	Nihat Berker	The Competition Between Chaotic Spin-Glass Phase and Entropic Liquid-Crystal Phase in a Dirty Magnet	U. Tirnakli

Day 4 (12th September 2024, Thursday)

Time	Place	ID	Speaker	Title	Chair
10:00	Cinema A	Contributed Talks 5.a	Valeri Makarov Margarita Simonyan Denis Goldobin	Assessing the Irregularity of Multidimensional Biological Recording Local Nocturnal EEG Activity of Healthy People Depending on Chronotype Regimes of Global Oscillations Induced by Discrete Synaptic Events in Balanced Neural Networks	W. H. Tey
10:00	Cinema B	Contributed Talks 5.b	Erbil Can Artun Andrea Lama Nikita V. Barabash	Spin-Glass Sponges: Spin Glasses with Fractal Surfaces Shepherding in Complex Systems: Integrating Control Theory and Statistical Physics Bifurcations of Smale Horseshoes' chains in a Double-Scroll	O. Pusuluk
13:00	Conference Hall	Keynote 4	Michael Small	Choosing Embedding Lag and Why it Matters	T. Stemler
14:00	Conference Hall	Invited Talk 4	Jeff Moehlis	Controlling Populations of Neural Oscillators	
15:00	Conference Hall	Special Talk 2	Sondan Durukanoğlu Feyiz	Uninterrupted Motion of Molecular Wheels on Cu Metal Surfaces	D. Eroglu