PhysCon 2017 - Detailed Sessions and Presentations - July 18, 2017, Tuesday

Session	ID	Order	Title	Registrant	Time
			Multistability and Its Control	A. N. Pisarchik	08:30
	10	1	Bistability in neural oscillators induced by asymmetric electrical coupling	Prof. Alexander N. Pisarchik	
	17	2	Dynamics of multistability states and formation of chimera in multilayers network	Dr. Nikita Frolov	
	18	3	The dynamics of EEG brain patterns in the process of bistable image perception	Dr. Vadim Grubov	
T1A	27	4	Theory of noise-induced intermittency in bistable dynamical systems	Dr. Olga Moskalenko	
	31	5	Multistate intermittency in erbium-doped fiber laser	Dr. Maksim Zhuravlev	
	34	6	Intermittency during bistable visual perception of ambiguous images	Dr. Maria Kurovskaya	
	82	7	The nonlinear association analysis of the EEG brain data in the process of bistable image perception	Dr. Anton Selskii	
	159	8	Study of multistable visual perception using the synergetic model	Dr. Rider Jaimes-Reátegui	10:45
			Algebraic Aspects of Control of Dynamical Systems and Applications	M. I. Garcia-Planas	11:15
	4	1	On exact controllability of singular linear dynamical systems	Prof. M. Isabel Garcia-Planas	
T2A	5	2	On consensus controllability and observability of multi-agent linear systems	Dr. Sonia Tarragona	
	7	3	Linear hamiltonian control systems under linear algebra point of view	Mr. Antonio Chanes-Espigares	
	8	4	Perturbation analysis of serial composite systems under contragredient equivalence	Ms. Tetiana Klimchuck	
	47	5	Linearization and optimal control flow in electromagnetic ball suspension system (SKYPE-CALL)	Mr. Emmanuel Niyigaba	13:15
			Quantum Optimal Control	F. Caruso, F. Cataliotti	14:45
	123	1	Discovering new physics strategies with citizen science driven, human-computer hybrid optimization	Dr. Robert Heck	
	160	2	Optimally controlled two-qubit gate with trapped atoms	Dr. Matthias Mueller	
	158	3	A practical, unitary simulator for non-Markovian complex processes	Dr. Felix Binder	
T3A	73	4	Quantum optimal control for quantum technologies	Prof. Christiane Koch	
	110	5	Control and transfer of entanglement in a system of coupled micro-toroidal resonators	Dr. José A. Roversi	
	PDP	6	Enhancing the Charging Power of Quantum Batteries	Dr. Francesco Campaioli	
	106	7	Quantum optimal control of atom motional states in single and double-well potentials	Dr. Marie Bonneau	
	140	8	Numerical Approximation in Optimal Control of Two-Level Quantum Systems	Dr. Cutberto Romero-Meléndez	16:45
			Quantum Optimal Control	F. Caruso, F. Cataliotti	17:15
T4A	72	8	The Role of Unbound Wavefunctions in Energy Quantization and Quantum Bifurcation	Mr. Kuo Chung Hsuan	
			Dynamics and Regulation of Complex Interaction Models	G. Innocenti	08:30
	54	1	Agents internal mechanisms induce consensus in evolutionary games on networks	Dr. Dario Madeo	
	65	2	Model reduction in Biochemical Reaction Kinetics	Prof. Laura Giarrè	
T1B	69	3	Pigs stealing and wolfed down piglets: the influence of kleptoparasitism on a simple trophic network	Dr. Massimo F. D. Materassi	
	76	4	Metriplectic formalism: friction and much more	Dr. Massimo F. D. Materassi	
	91	5	Stochastic dynamics in networks of excitatory-inhibitory units	Prof. Duccio Fanelli	
	146	6	Complex dynamics in a vehicle platoon with nonlinear drag and ACC controllers	Prof. Giacomo Innocenti	
	149	7	Stability of solution of a hydroelasticity problem for viscous liquid	Dr. Petr Velmisov	10:45
			Analogies between Long-Delayed and Spatially Extended Systems	F. Marino, G.Giacomelli	11:15
	43	1	Patterns in networks of excitable systems with connection delays	Prof. Serhiy Yanchuk	
	55	2	Network dynamic emulated by large delay systems: from brain-inspired computing to chimera states	Dr. Bogdan Penkovskyi	
T2B	64	3	Nonlocality Induces Knotted Chains of Localized Structures in Lasers	Dr. Julien Javaloyes	
	85	4	Delayed feedback coherence resonance chimeras	Dr. Anna Zakharova	
	127	5	Repulsion and diffusion of localized states in an excitable system with delay	Dr. Stephane Barland	
	PDP	6	Reconstructing the manifold of the dynamics of a semiconductor laser with long-delayed optoelectronic feedback	Dr. Carlos Quintero-Quiroz	13:15
			Control of Self-Organized Patterns in Complex Networks	D.Fanelli, T.Carletti, J.Hizanidis, N.Kouvaris	14:45
	95	1	Controlling chimera states by local parameter modification	Dr. Philipp Hoevel	
	98	2	Control of multidimensional systems on complex network	Ms. Giulia Cencetti	
	97	3	Robust chimera states in superconducting metamaterials	Dr. Johanne Hizanidis	
T3B	92	4	Desynchronise abnormal neuron behaviour to control epileptic seizures	Prof. Timoteo Carletti	
	116	5	Turing patterns on time-varying networks	Mr. Julien Petit	
	124	6	Spectral identification of networks with diffusive coupling	Dr. Alexandre Mauroy	
	139	7	Control of pattern formation in bistable networks	Dr. Nikos Kouvaris	
	154	8	Graph spectral characterization of the XY model on complex networks	Dr. Sarah De Nigris	16:45
			Chaotic and Complex Dynamics and its Applications	E. Macau, H. Cerdeira, S.Dana	08:30
	23	1	Duffing Phase-locked Loop: equilibrium and phase jitter	Dr. Cristiane M. Batistela	
	48	2	Characteristic polynomial method for analyzing dynamics of boolean networks	Prof. Fangyue Chen	
T1C	52	3	Projective Synchronization Based on Amplitude Control	Dr. Chunbiao Li	
	101	4	Some aspects of a parametric simple pendulum dynamics	Dr. Jose C Sartorelli	
	113	5	Near-collision solutions on non-newtonian central force problem	Prof. Elbert Macau	
	152	6	Transient synchronisation in yeast cell populations of intermediate density	Dr. Marcus Hauser	
	99	7	Transition from normal to super diffusion in a one-dimensional impact system	Dr. André L.P. Livorati	10:45
			Synchronization and Complex Networks	M.Frasca, E.Schoell	11:15
	29	1	Control of panic behavior in a non identical network coupled with a geographical model	Mr. Guillaume Cantin	
	39	2	Control strategy for symmetric circular formations of mobile agents with collision avoidance	Mr. Vander Freitas	
T2C	51	3	Controlling synchronisation through adaptive phase lags	Dr. Markus Brede	
	87	4	Chimera states in networks with hierarchical connectivities	Dr. Iryna Omelchenko	
	112	5	Implementation of adaptive synchronization in networks of nonlinear circuits based on memristors	Dr. Mattia Frasca	
	138	6	Stability of Distributed Parameter Synchronization Systems with Disturbances	Prof. Vera Smirnova	
	150	7	Hierarhical organization of synchronous behavior in adaptive networks	Dr. Dmitry Kasatkin	13:15
			Synchronization and Complex Networks	M.Frasca, E.Schoell	14:45
T3C	42	1	Synchronization of two Hindmarsh-Rose neurons with thresholds coupling (SKYPE-CALL)	Dr. L.J. Ontañón-García	
			Nonlinear Dynamics, Complex Systems and Applications		
	40	2	A general method to find all attractors of multi-level discrete networks (SKYPE-CALL)	Mr. Xiao Gan	16:45

PhysCon 2017 - Detailed Sessions and Presentations - July 19, 2017, Wednesday

Session	ID	Order	Title	Registrant	
			Control, State Estimation and Optimization of Dynamical Systems	B. Ananyev, T. Filippova	08:30
	21	1	Arbitrary Disturbance Rejection in the Tracking Problem for Flat Multi-Link Manipulator	Mr. Yury Rassadin	
	26	2	Wave Phenomena of the Kuramoto-Sivashinsky equation	Prof. Zhaosheng Feng	
	38	3	Parameter optimization for estimation of linear non-stationary systems	Prof. Boris Ananyev	
W1A	53	4	On control problem with constraints of asymptotic character	Dr. Artem Baklanov	
	68	5	Entropy methods of management of gaussian stochastic systems	Mr. Garnik Gevorgyan	
	71	6	State Estimation Approaches for Control Systems with State Constraints and Uncertainty	Prof. Tatiana F. Filippova	
	83	7	Reachable Sets for a Class of Nonlinear Impulsive Control Systems	Dr. Oxana Matviychuk	
	90	8	Approximation and relaxation of mechanical systems with discontinuous velocities	Dr. Maxim Staritsyn	
	96	9	Algorithm for solving two-level hierarchical minimax program control problem in nonlinear discrete-time dynamical system	Prof. Andrey Shorikov	10:45
			Control, State Estimation and Optimization of Dynamical Systems	B. Ananyev, T. Filippova	11:15
	104	1	Hamiltonian constructions in solutions of optimization problems in navigation	Prof. Nina Subbotina	
	107	2	The stability of discontinuous solutions of bilinear systems with delay	Prof. Alexander Sesekin	
	135	3	A reach set mpc scheme for the cooperative control of autonomous underwater vehicles	Eng. Rui Gomes	
W2A	136	4	Impulsive Control Systems with Trajectories of Bounded p-Variation	Dr. Maxim Staritsyn	
	141	5	Optimization and control theory in shell models of turbulence	Prof. Sílvio Gama	
	144	6	Non-linear pi and pid regulators in mechanical system control	Prof. Aleksandr Andreev	
	145	7	Control of a cart with a dissipative oscillator	Prof. Igor Ananievski	
	151	8	MPC based coordination for the sustainable management of production factors in agriculture	Prof. Fernando Lobo Pereira	13:15
			MEMS, Nanotechnologies and Sensors	F. Marino	14:45
	14	1	Mass sensing of microbeads using a weakly coupled cantilever	Mr. Takumi Nakamura	
	20	2	Design and Manufacturing Relative Humidity Sensor by Photonic Crystal Fibers	Dr. Aseel Mahmood	
W3A	57	3	Mass sensing utilizing sensorless self-excitation of piezoelectric device	Mr. Yudai Tanaka	
	79	4	Effect of carrier competition on the performance of double quantum dot solar cell	Prof. Kais A. Al Naimee	
	93	5	Method of additional inductance selection for full-bridge boost converter	Dr. Olga Slita	
	109	6	Intercalation and expansion of novel graphite bisulfate compounds	Eng. Angela Longo	
	131	7	Sensorless Generalized Hinf Optimal Control of a Magnetic Suspension System	Mr. Ruslan Biryukov	16:45
			Control and Optimization in Physics and Engineering	A.Fradkov, A. Ovseevich, R.Meucci	08:30
	3	1	Synthesis of safe controllers for nonlinear systems using dynamic programming techniques	Mr. Jorge Silva	
	9	2	Asymptotic control theory for a closed string	Prof. Alexander Ovseevich	
	16	3	Synthesis of a multifunctional tracking system for electromechanical control plants	Prof. Sergey Kochetkov	
W1B	22	4	On the hybrid stability of the collocated virtual holonomic constraints based walking design	Prof. Sergej Celikovsky	
	32	5	Signal Processing in Astroinertial Attitude Determination System for the Space Robots	Prof. Yevgeny Somov	
	37	6	Robust control design for linear systems with exogenous and system disturbances	Dr. Kirill Zheleznov	
	49	7	On the Determination of Parametric Linear Quadratic Regulators for Parametric Systems	Dr. Graziano Chesi	
	60	8	Decentralized controller design for a class of interconnected systems	Mr. Yuezu Lv	
	77	9	On stability of the electromagnetic suspension rotor in space of control parameters	Dr. Sergey Malkin	10:45
			Control and Optimization in Physics and Engineering	A.Fradkov, A. Ovseevich, R.Meucci	11:15
	81	1	Approximate assessment of the work of adiabatic processes for idealized cycles	Dr. Delfino Ladino-Luna	
	105	2	Algorithm for compensation of residual imbalance of a flexible rotor on active magnetic bearings	Dr. Vasily Litvinov	
	108	3	Phase Control : Comparison between Pulsed and Sinusoidal Perturbations	Prof. Riccardo Meucci	
W2B	114	4	A locally optimal way to approach q-gaussian distribution	Mr. Dmitry Shalymov	
	115	5	SG-algorithm in the problem of the elastic-plastic waveform propagation in solids	Mr. Dmitry Shalymov	
	118	6	SG-dynamical models for non-equilibrium thermodynamic systems	Mr. Dmitry Shalymov	
	119	7	Automatic scaling in 3d map building for slam	Dr. Mario Jordán	
	120	8	Depth range adaptation to variable scale in 3d-scenarios for dense slam	Dr. Mario Jordán	13:15
			Control and Optimization in Physics and Engineering	A.Fradkov, A. Ovseevich, R.Meucci	14:45
	125	1	Dynamics modeling for subcritical reactor controlled by linear accelerator	Dr. Anna Golovkina	
	128	2	Optimal Control Strategies for Legged Locomotion	Dr. Fernando Lobo-Pereira	
W3B	134	3	Inverse kinematics in ultralight UAV control problem with additional on-board microcomputer	Mr. Konstantin Amelin	
	142	4	Parametric-resonance-based control of buoy cardanic system for a beacon signalization	Dr. Mario Jordán	
	147	5	Nonlinear Laws for Guidance and Attitude Control of an Agile Land-survey Satellite	Prof. Yevgeny Somov	
	157	6	Beam dynamics optimization in a linear accelerator	Ms. Maria Mizintseva	
	126	7	Dynamical control of tripartite entangled states	Dr. José A. Roversi	16:45
			Nonlinear Dynamics, Complex Systems and Applications	M.V. Shamolin, R. Grigoriev	08:30
	2	1	Cases of integrability corresponding to the motion of a pendulum in the three-dimensional space	Prof. Maxim V. Shamolin	
	15	2	Third Order Superharmonic Resonance and Spatial Motion of a String	Mr. Kohei Mitaka	
	25	3	Control of limit cycle bifurcations in the Kukles cubic system	Dr. Valery A. Gaiko	
W1C	50	4	An experimental study on the out-of-plane motion under the external primary resonance in strings	Mr. Sungyeup Kim	
	56	5	The Study of Nonlinear Differential Systems	Prof. Valentin Irtegov	
	58	6	Identification of the parameters of the Maxwell model using self-excited oscillation	Mr. Yuming Luo	
	66	7	Injection Locking of High-β Quantum Dot Microlasers	Ms. Elisabeth Schlottmann	
	70	8	Memory effects, transient growth, and wave breakup in a model of paced atrium	Prof. Roman Grigoriev	
	74	9	Experimental evidence of detecting hidden frequency in chaos communications	Ms. Banaz Rasheed	10:45
			Nonlinear Dynamics, Complex Systems and Applications	M.V. Shamolin, R. Grigoriev	11:15
	121	1	Heterogeneity facilitates Persistent Infection	Mr. Promit Moitra	
	122	2	Evolutionary Dynamics Control via its CML Conversion	Prof. Ivan Zelinka	
W2C	129	3	Spectral Profiling of Writing Process	Dr. Zeev Volkovich	
	133	4	Control of stochastic gene expression by a nonlinear biological oscillator	Dr. Samuel Zambrano	
	156	5	Filtered optical feedback in quantum dot light emitting diode	Prof. Kais A. Al Naimee	
	162	6	Study of SH-SY5Y Cancer Cells Response to Ionizing Radiation by Vibrational Spectroscopies	Prof. Maria Lepore	
	PDP	7	The algorithm for the analysis of combined chaotic-stochastic processes	Dr. Ina Taralova	13:15