



The Fifth Conference on
Information Theory and Complex Systems
TINKOS 2017
November 9-10, 2017



Mathematical Institute SASA, Kneza Mihaila 36, Beograd

Conference Program

NOVEMBER 9, 2017

OPENING: 11:00-11:10 : *Velimir Ilić*

COMPLEX SYSTEMS (Chair: *Velimir Ilić*)

11:10-11:35 : *Bojan M. Tomić, Milica M. Tomić* - **Complexity Research in the Humanities - Recent Examples**

11:35-12:00 : *Andjelka Hedrih, Katica (Stevanović) Hedrih* - **Mitotic Spindle as Complex Structure: Relation Between Spindle Size and Energy Distribution**

12:00-12:25 : *Kristina Stevanović, Itana Nuša Bubanja, Jelena Maksimović, Branislav Stanković, Maja Pagnacco, Stevan Maćešić, Željko Čupić, Ljiljana Kolar-Anić* - **Bifurcation in the Complex Bray-Liebhaufsky Oscillatory Reaction as a Function of the Hydrogen-peroxide Concentration**

PAUSE: 12:25-12:55

INFORMATION THEORY (Chair: *Milan Rajković*)

12:55-13:20 : *Vanja Stepanović* - **Algebraicity of the Co-domain Lattice and Related Results on Fuzzy Set Equations and Inequations**

13:20-13:45 : *Momir Arsenijević* - **Kraus Operators for a Pair of Interacting Qubits: a Case Study**

13:45-14:10 : *J. Jeknić-Dugić, M. Dugić* - **On the Concept of Local Time in Quantum Mechanics**

14:10-14:35 : *Miloš Milovnović* - **Dynamical Identity of the Brouwer Continuum**

14:35-15:00 : *Velimir Ilić, Ivan Djordjević, Miomir Stanković* - **Some Recent Results Concerning Rényi Entropy**

15:00-16:00 : **Open discussion**

NOVEMBER 10, 2017

NEURAL NETWORKS (Chair: *Marija Mitrović*)

11:00-11:25 : *Predrag Stanimirović, Marko Petković, Miroslav Ćirić* - **GNN Models for Solving Matrix Equations**

11:25-11:50 : *Aleksandar Trokicić, Branimir Todorović* - **Error Analysis of a Kernel Regression Based on a Randomized Matrix Approximation**

11:50-12:15 : *Branimir Todorović* - **Sequential Adaptation of Recurrent NARX Neural Network Structure Using Derivative Free Bayesian Filters**

PAUSE: 12:15-12:45

COMPLEX NETWORKS (Chair: *Miloš Milovanović*)

12:45-13:10 : *Zoran Bojković, Dragorad Milovanović* - **Optimal Slicing in Wireless 5G Networks**

13:10-13:35 : *Miroslav Ćirić, Jelena Ignjatović, Ivan Stanković* - **Positional Analysis of Multi-mode Fuzzy Networks**

13:35-14:00 : *Slobodan Maletić, Miroslav Andjelković, Milan Rajković* - **Topological Counterpart for Integration and Differentiation in Complex Networks**

14:00-14:25 : *Miroslav Andjelković, Bosiljka Tadić, Zoran Levnajić, Biljana Mileva Boshkoska* - **High-dimensional Structure Phenomenon in Social Brain**

14:25-14:50 : *Marija Mitrović Dankulov, Jelena Smiljanić* - **Structure and Dynamics of Event-driven Social Groups**

14:50-15:50 : **Open discussion**

CLOSING: 15:50-16:00 : *Velimir Ilić*