09:00  E. Koonin, G. Karyan, R. Aroutiounian  The greetings

09:20  Vladimir Redko, SRISA RAS  Cognition of simple properties of nature by a cognitive autonomous agent

10:00  Alexander Bratus, Russian University of Transport  Mathematical Model of Adaptive Immune Response Based on Kye–Lock Predication and Markov Gaussian Stochastic Processes

10:40  Reza Jafari, Shahid Beheshti University  A new evolution of social media bots: created individually but playing together

11:20  Shahin Rouhani, Sharif University  Phase Transitions in Vicsek Model

12:00  Coffee Break

12:15  Mikhail Gelfand, Skolkovo University  Noise, Randomness, and Novelty in Molecular Genetic Systems

12:45  M Katsnelson, Radboud University Nijmegen  Multiscale structural complexity of natural patterns

13:25  Lunch Break

15:30  Dániel CzégeI, Eotvos University  The universe is turtles all the way down: goal calculus formalizes evolvable hierarchical modular design

16:00  Vitaly Vanchurin  On the role of symmetries in biological evolution

16:30  Paulien Hogeweg, Utrecht University  Evolution of control strategies to alleviate multilevel conflicts

17:10  Coffee Break

17:20  Eugene Koonin, (NIH/NLM/NCBI)  Theoretical approaches in cellular evolution: modeling origin of r and K strategies, cooperation and programmed cell death

18:00  Welcome Party
Tuesday | July 02

09:00  Qian Hong, Washington University Information, Thermodynamics, and the Secret of Laws of Physics

09:40  Kamran Kaveh, Washington University Games of multicellularity

10:20  Armen Allahverdyan, AANL Stochastic thermodynamics of adaptation

11:00  Coffee Break

11:10  Mikhail Burtsev Landau AI Fellow, London Institute of Mathematical Sciences A review of neural architecture search

11:50  Oliver Rivoire, ESPCI Paris Physics and evolution of catalysis and autocatalysis

12:30  Artem Oganov, Skolkovo University Evolutionary crystal structure prediction and computational materials discovery

13:10  The city tour

Wednesday | July 03

09:40  Alexey Melkikh, Ekaterinburg University Mutations, sex, and genetic diversity: New arguments for partially directed evolution

10:20  Jin Wang Stony Brook The landscapes and fluxes

11:00  David H Wolpert, Santa Fe Institute Trade-offs between thermodynamic cost, intelligence and fitness in living organisms

11:40  D. Saakian, AANL The self-reflection and Berry Phase in evolution

12:20  Ricard Sole, Universitat Pompeu Fabra and External Professor, Santa Fe Institute Fundamental constraints to the logic of living systems

13:00  Lunch

14:10  Tuan Pham Minh. Niels Bohr Institute Dynamical Theory for Adaptive Evolutionary Process
14:45  Igor Rouzine, Sechenov Institute of Evolutionary Physiology and Biochemistry RAS Inference of fitness landscape from genomic data

15:25  Victoria Korogodina Two-level adaptation system in yeast cell

16:00  Cofee break

16:10  Rouben Aroutiounian, NAS, Research Institute of Biology, Yerevan State University Genomic markers of viral-host conflict and adaptation in COVID-19 patients

16:45  Jose Fernando Fontanari, University Sao Paulo A soluble model for synchronized rhythmic activity in social insects

17:20  Yaroslav Ispolatov, Univ. of Santiago, Santiago, Chile Multi-level evolution and group selection

18:30  The conference banquet

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Thursday | July 04

08:30  A. S. Gevorkyan, Institute for Informatics and Automation Problems, NAS of RA Irreversibility, Time’s Arrow and Complexity in a Classical Three-Body Dynamical System

09:00  Vladimir Suvorov, Auriga A solution of the Crow-Kimura evolution model on fluctuating fitness landscape

09:15  Kamyar M Roudakian, Koc University Information transfer as an evolutionary feed for emergence of critical brain network

09:30  Enno Wein, Instigate Looking on evolution from both negative and positive entropy perspectives

09:45  Angela Sargsyan, Research Institute of Biology, YSU Genetically heterogeneous and homogeneous bio-indicators of evolution

10:00  Hranush Avagyan, Institut of molecular biology, Yerevan Different Heterocycles show significant anti-SARS2 activity in vitro and in vivo

10:15  Kunihiko Kaneko, Niels Bohr Institute Beyond Evolutionary Dimensional Reduction
11:00 Edward Poghosyan, Institute for Informatics and Automation Problems, NAS of RA AI: Challenging the Origination of Cognizing

11:15 Zaven Navoyan, YSU AI and toxicology

11:30 Sevak Sargsyan, RAU AI research in RAU

11:45 Nerses Erirstyan, ISAA About ISAA

12:00 Artak Hovsepyan, National center of Commnication and AI technologies AI and Armenian texts

12:15 V. Poghosyan, Instigate AI in Instigate

12:45 Break

13:30 Mikhail Burtsev LLM

14:20 Matteo Marsili Towards machine understanding

15:10 Ricard Sole Evolution of Brains and Computers: The Roads Not Taken

16:00 Vitaly Vanchurin The World as a Neural Network: from theory of everything to artificial neural computer.

17:00 From the basic science to the advanced Artificial Intelligence, D. Saakian, AANL.

18:30 E. Koonin The closing of the conference