8th International Young Scientists Conference in Computational science 2019 (YSC 2019)

24– 28 June, 2019Heraklion, Greece

Venue:
Foundation for Research and Technology - Hellas (FORTH), Institute of Computer Science
N. Plastira 100
Vassilika Vouton, GR-700 13 Heraklion, Crete, Greece
Amphitheatre, FORTH's Main Building, 1st floor

Monday, 24th June

09:00 – 09:30	**Registration**
09:30 – 10:00	**Welcome Address**
10:00 – 11:00	**Keynote lecture:** **Ioannis Pantazis, Foundation for Research and Technology - Hellas (FORTH)** **Generative Adversarial Networks and their Application in Speech Processing**
11:00 – 11:30	**Coffee Break**
11:30 – 12:30	**Young Scientists Presentations** **Session Chair: Ioannis Pantazis** **Yannis Sfakianakis** Syntix: A profiling based resource estimator for CUDA kernels **Sergey Smirnov** Integration of ParaSCIP solvers running on several clusters on the base of Everest cloud platform **Alexey Strukov** Evaluation of modern tools and techniques for storing time-series data **Mikhail Melnik** Workflow scheduling using Neural Networks and Reinforcement Learning
12:30 – 13:30	**Lunch Time**
13:30 – 15:00	**Young Scientists Presentations** **Session Chair: Christos Kozanitis** **Alexey Dudchenko** Diagnoses Detection in Short Snippets of Narrative Medical Texts **Sofia Grechishcheva** Risk markers identification in EHR using natural language processing: hemorrhagic and ischemic stroke cases **Anastasia Funkner** Motif identification in vitalsigns of chronic patients **Katerina Beklemisheva** Numerical methods for modeling focused ultrasound in biomedical problems **Ksenia Balabaeva** Comparison of Temporal and Non-Temporal Features Effect on Machine Learning Models Quality and Interpretability for Chronic Heart Failure Patients **Ilya Derevitskiy** Analysis course of the disease of type 2 diabetes patients using Markov chains and clustering method
15:00 – 15:30	**Coffee Break**
15:30 – 16:30	**Keynote lecture:** **Christos Kozanitis, Foundation for Research and Technology - Hellas (FORTH)** **A walk on the intersection of systems for Machine Learning, and Machine Learning for Systems**
16:30 – 17:30	**Young Scientists Presentations** **Session Chair: Vangelis Harmandaris** **Elizaveta Stavinova** Forecasting of foreign trips by transactional data: a comparative study **Alexander Kalinin** Improving statistical relational learning with graph embeddings for socio-economic data retrieval **Anton Petukhov** Analysis of the geospatial activity profiles of bank customers **Anton Lysenko** Temporal point processes for purchase categories forecasting
17:30 – 19:00	**Welcome reception**

Tuesday, 25th June

09:00 – 10:00	**Keynote lecture:** **Michael Thelwall, University of Wolverhampton** **Sentiment analysis and applications: How SentiStrength works, other sentiment analysis approaches, Twitter applications.**
10:00 – 11:00	**Keynote lecture:** **Michael Thelwall, University of Wolverhampton** **Data mining the social web: Analyses of Goodreads, TripAdvisor and YouTube**
11:00 – 11:30	**Coffee Break**
11:30 – 12:30	**Keynote lecture:** **Michael Thelwall, University of Wolverhampton** **Data mining academic publications: A word frequency comparison approach to detect gender differences**
12:30 – 13:30	**Lunch Time**
13:30 – 14:30	**Keynote lecture:** **Julian Sienkiewicz, Warsaw University of Technology** **Impact of lexical and sentiment factors on the popularity of scientific papers**
14:30 – 15:30	**Keynote lecture:** **Alexander Visheratin, ITMO University** **Spatiotemporal analysis of social media data for urban problems solving**
15:30 – 16:00	**Coffee Break**
16:00 – 17:30	**Young Scientists Presentations** **Session Chair: Alexander Visheratin** **Irina Deeva** Computational Personality Prediction Based on Digital Footprint of A Social Media User **Mukhina Ksenia** Urban events prediction via convolutional neural networks and Instagram data **Amir Uteuov** Topic model for online communities' interests prediction **Maria Khodorchenko** Distant supervision and knowledge transfer for domain-oriented text classification in online social networks **Maria Khodorchenko** Ensemble-based method of answers retrieval for domain specific questions from text-based documentation **Ilya Yakimuk** Modelling Behavioral Patterns of Drug Addiction Based on Sociological Data
17:30 – 18:30	**Tour to FORTH**

Wednesday, 26th June

09:00 – 10:15	**Young Scientists Presentations** **Session Chair: Peter Gladilin** **Mika Latonsaari** Better planning and foretelling through data modeling and data analytics throughout the lifecycle of a building **Andrei Mikalauskas** Modeling of Nonlinear Vibration Protection Systems of Mining Machines **Ivan Khodnenko** Detection of lost circulation in drilling wells employing sensor data using machine learning technique **Vladimir Kuzmin** "Situation polygon" as an intelligent environment for strategic decision-making support on development of Russian energy sector" **Daria Gaskova** Technology of the Intelligent Environment application for cyber threat analysis at energy facilities
10:15 – 11:15	**Keynote lecture: Peter Gladilin, ITMO University** **TBA**
11:15 – 11:45	**Coffee Break**
11:45 – 13:00	**Poster Session** "Atomistic Simulation Study of Star-shaped Polystyrene Melts", Eirini Gkolfi "H3: High speed, High Volume, Highly available storage service", Giorgos Kalaentzis "Coarse-Graining of Molecular Systems through Bayesian Statistics", Sofia–Ioanna Kavousanou "Molecular Dynamics Simulations of Graphene-Peptide Nanocomposites", Andriani Keliri "Machine Learning Algorithms for Parameterizing Potential Energy Surfaces of Molecular Systems", Eirini Kostoglou "Computational time reversal imaging in framed structures", Marios I. Mavrikis, Christos G. Panagiotopoulos, Georgios E. Stavroulakis "Atomistic Molecular Dynamics Simulations of Hybrid Polymer/Nanoparticle Systems", Anastasia Papadaki, Albert John Power "SWAP: Preemptive Elastic Scheduling in MultiGPU servers", Manos Pavlidakis. "Multiscale Modelling of Ultrafast Laser Matter Interactions", E. Petrakakis, G. D. Tsibidis, Stratakis "User-level RDMA with IOMMU support on ARM platforms", Antonis Psistakis "An efficient memory mapped key value store for flash storage", George Saloustros "Support for different service levels through transparent migration of pages in distributed memory systems", Manolis Skordalakis "Virtual Nodes in Slurm", Yannis Vardas "A Rack-scale Key-value Store for Flash Storage and RDMA", Michalis Vardoulakis "Russian Court Decisions Data Analysis Using Distributed Computing and Machine Learning to Improve Lawmaking and Law Enforcement" Oleg Metsker "Mortality Prediction of Cardiovascular Patients Based on Echocardiographic Data and Machine Learning" Kirill Kutyrev "Anomaly detection using adaptive suppression" Artur Grigorev "Development of personalized mobile assistant for chronic disease patients: diabetes mellitus case study" Maksim Kabyshev "The development of a data collection and analysis system based on social network users data" Stanislav Sobolevsky "Dynamic Difficulty Adjustment with a simplification ability using neuroevolution" Mariia Shakhova
13:00 – 14:00	**Lunch Time**
14:00 – 22:00	**Cultural Event**

Thursday, 27th July

09:00 – 10:00	**Keynote lecture: Curtis Atkisson, University of California at Davis** **From modeling to data and back again: How to design models to test questions in the real world and how to use the real world to design models**
10:00 – 11:00	**Keynote lecture: Curtis Atkisson, University of California at Davis** **Using high dimensional social networks to understand cooperation: Models and data and more models**
11:00 – 11:30	**Coffee Break**
11:30 – 12:30	**Keynote lecture: Stanisław Saganowski, Wrocław University of Science and Technology** **Group Evolution Prediction in complex networks**
12:30 – 13:30	**Lunch Time**
13:30 – 14:30	**Keynote lecture: Julian Sienkiewicz, Warsaw University of Technology** **Categorical and Geographical Separation in Science**
14:30 – 15:30	**Keynote lecture: AljošaRehar, Sebastijan Maček, Slovenian Press Agency** **Knowledge Transfer Use Case: Article Tracking Prototype**
15:30 – 16:00	**Coffee Break**
16:00 – 17:00	**Keynote lecture: Janusz Hołyst, Warsaw University of Technology** **Finding spread sources in complex networks**
17:00 – 18:00	**Young Scientists Presentations** **Session Chair: Alexandra Klimova** **Irina Deeva:** Pattern Recognition in Non-Stationary Environmental Time Series Using Regression with Regularisation **Amir Uteuov:** The cities weather forecasting by crowdsourced atmospheric data **Mikhail Maslyaev**: Discovery of the data-driven differential equation-based models of continuous metocean process **Jeerana Noymanee:** Flood Forecasting with Machine Learning Technique on Hydrological Modeling

Friday, 28th June

09:00 – 10:30	**Young Scientists Presentations** **Session Chair: Evangelia Kalligiannaki** **Iana Mazur:** Modeling of a freeform element with a variable light distribution **Ksenia Ikonnikova:** Reconstruction of 3D structure for nanoscale biological objects from experiments data on super-bright X-ray free electron lasers (XFELs): dependence of the 3D resolution on the experiment parameters **Georgia Baxevani:** Study of the transient dynamics of coarse-grained molecular systems with the path-space force-matching method **Maria Arnittali:** Structure of Biomolecules through Molecular Dynamics Simulations **Dameli Assaulova:** Data analysis of single particle imaging experiments of viruses at the XFEL sources **Marina Balakhontceva:** Intelligent Approach for Heterogeneous Data Integration: Information Processes Analysis Engine in Clinical Remote Monitoring Systems
10:30 – 11:00	**Coffee Break**
11:00 – 12:00	**Keynote lecture:** **Evangelia Kalligiannaki, Foundation for Research and Technology - Hellas (FORTH)** **Data-driven coarse-grained dynamics of molecular systems**
12:00 – 13:00	**Keynote lecture: Polivios Pratikakis,** **University of Crete, Foundation for Research and Technology - Hellas (FORTH)** **Graph-Analytics with Spark**
13:00 – 14:00	**Lunch time**
14:00 – 15:00	**Young Scientists Presentations** **Session Chair: Marina Balakhontceva** **Alexander Semenov:** Application suggesting attractive walking routes for pedestrians using an example of Saint-Petersburg city **Ebrahim Kajabad:** People Detection and Finding Attractive Areas by the use of Movement Detection Analysis and Deep Learning approach **Kirill Bochkarev:** Detecting advertising on building facades with computer vision **Nikita Shchepin:** Building behavioral AI using trust and reputation model based on mask model **Nikita Shchepin:** Applying Behavior characteristics to decision-making process to create believable game AI
15:00 – 16:00	**Keynote lecture: Marina Balakhontceva, ITMO University** **Digital Healthcare: understanding complex processes through diverse data, models, and knowledge**
16:00 – 17:30	Coffee Break
17:30 – 18:00	Final remarks and group photo