

THURSDAY, OCTOBER 16th

09.00 – 09.30 **REGISTRATION** | *KTU Campus Library (Studentų st. 48)*

09.30 – 10.00 **OPENING CEREMONY**

Assoc. Prof. Dr. **Jonas Čeponis**, Dean of the Faculty of Informatics, Kaunas University of Technology
 Prof. **Kęstutis Baltakys**, Vice-Rector for Research, Kaunas University of Technology
 Dr. **Audrius Lopata**, Conference Chair, Faculty of Informatics, Kaunas University of Technology

10.00 – 12.00 **KEYNOTES**

Gionata Salvietti, Dr.
Enhancing Human Capabilities: Haptic Interfaces and Sensorimotor Integration for Robotics

Bilhanan Silverajan, Dr.
Bridging Bytes and Bolts: Navigating the Regulatory Landscape of IT/OT Integration



12:00 – 12:30

12:30 – 13:30 **SESSION 1** | *KTU Campus Library*

DATA ANALYSIS

Special Session on **Intelligent Methods for Data Analysis and Computer Aided Software Engineering**

Chaired by Assoc. Prof. Dr. **Jonas Čeponis**

1. Novel Pinch Strategy Using Flexo/Extensor Tendons For A Robotic Scrub Nurse Gripper: A Preliminary Study
Manish Shukla, Domenico Prattichizzo and Gionata Salvietti

2. A Case Study of Detecting Nutrient Deficiencies in Corn Using Multispectral Satellite Imagery

Gintautas Šedys, Mantas Lukoševičius, Ernestas Petrauskas, Artūras Gotceitas, Ernestas Zaleckas and Martynas Greičius

3. Suspicious Model Detection to Improve Model-Based System Development

Marwareed Rehman, Muhammad Waseem Anwar,
Farooque Azam and Saliha Ejaz

4. Model-Driven Framework for Embedded Systems Design Automation using Natural Language Processing and Large Language Models

Muhammad Waseem Anwar, Bilal Maqbool and
Muhammad Shahroze Al

13:30 – 14:30



14:30 – 16:00

SESSION 2 (part 1) | KTU Campus Library

SOFTWARE ENGINEERING

Special Session on **Intelligent Systems and Software Engineering Advances**

Chaired by Prof. Dr. *Marcin Wozniak*

1. Emotional Speech Synthesis Approach Using Prosody-Based Clustering

Arnas Radzevičius, Žygimantas Girdauskas, Rokas Sabaitis and Aistis Raudys

2. Taxonomic Classification of Gene Sequences Using Deep Learning

Anna Zakharenko, Yuri Gordienko and Olga Rusanova

3. Improving the Performance of the Ada-DF Framework on Regular and Small Datasets

Valentyna Starodub, Armantas Ostreika, Marius Pivoras,
Leo Onyema Sochi Muoghara, Philip Sowah Patterson and
Gulshan Tarverdiyeva

4. Deep Generative Models as the Probability Transformation Functions

Vitalii Bondar, Vira Babenko, Roman Trembovetskyi, Yurii Korobeinyk and Viktoriya Dzyuba

5. Modern AI Methods Comparison for HeLa Cell Segmentation

Lukas Keršys, Andrius Kriščiūnas and Tadas Kraujalis

6. Optimizing SQL-on-Hadoop Engines for Scalable Data Analytics: A Hybrid Approach to Resource Allocation and Performance Tuning

Sadanand Sundarar



16:00 – 16:15

16:15 – 18:00

SESSION 2 (part 2) | KTU Campus Library

SOFTWARE ENGINEERING

Special Session on ***Intelligent Systems and Software Engineering Advances***

Chaired by Prof. Dr. *Filippo Sanfilippo*

1. Optimizing Echo-State Networks for Unemployment Forecasting Using a Modified Metaheuristic

Aleksandar Petrovic, Luka Jovanovic, Tamara Zivkovic, Miodrag Zivkovic, Lepa Babic, Stefan Ivanovic, Mirjana Tomic and Nebojsa Bacanin

2. Impact of Smaller Datasets on Training and Fine-Tuning for Novel View Synthesis and 3D Reconstruction

Arminas Šidlauskas and Andrius Kriščiūnas

3. Comparison of a Metaheuristic Algorithm and Enhanced Hybrid Algorithms for Inverse Problem in Computed Tomography

Jakub Miarka, Mateusz Goik, Rafał Brociek, Mariusz Pleszczyński and Andrzej Sikora

4. Dynamic Injection of LoRA Adapters via Prompt Semantics for Modular Stylization in Diffusion Models

Alicja Polowczyk and Agnieszka Polowczyk

5. Investigation of Provable Data Possession Method for Virtual Machine File System

Dangis Rimkus, Vytautas Barauskas, Darius Naujokaitis, Kęstutis Paulikas and Aušra Gadeikytė

6. A Descent-Ascent Principle Based Heuristic Algorithm for the Quadratic Assignment Problem

Alfonsas Misevičius, Gintaras Palubeckis, Dovilė Verenė and Gintarė Žekienė

7. Enhancing Artificial Bee Colony Performance with Nelder-Mead Method

Jakub Miarka, Mateusz Goik, Rafał Brociek and Adam Zielionka

13:00 – 17:00

CLOSED SESSION | KTU LIBRARY AMPHITHEATRE

AI for Supporting Inclusive Education in Secondary School (AI4IE)

Conducted and moderated in Lithuanian by *Laura Daniusevičiūtė-Brazaitė*

13:00 – 13:30

REGISTRATION

13:30 – 13:35

OPENING CEREMONY

13:35 – 13:50

Presentation of the project **“Breakthrough in Educational Research — AI for Supporting Inclusive Education in Secondary School (AI4IE)”**

Laura Daniusevičiūtė-Brazaitė

13:50 – 14:20

Presentation of the KTU project **“AI-based Inclusive Education: Present and Future Scenarios Analysis”**

Lina Gaižiūnienė

14:20 – 14:30

DISCUSSIONS



14:30 – 14:50

14:50 – 15:20	Presentation of the Erasmus+ project “Artificial Intelligence-Based Inclusive Higher Education (INEDU)” <i>Daina Gudonienė</i>
15:20 – 16:20	Practical Application of AI Tools in the Educational Process <i>Aušra Gadeikytė and Renata Burbaitė</i>
16:20 – 16:30	DISCUSSIONS
16:30 – 17:00	FINAL REMARKS

FRIDAY, OCTOBER 17th

09:00 – 09:30 **REGISTRATION** | *KTU Campus Library (Studentų st. 48)*

09:30 – 10:30 **KEYNOTE**
Serafeim Moustakidis, Dr.
Bringing Biomechanics into the AI Era: A New Frontier for Gait and Joint Health



10:30 – 11:00

11:00 – 12:00 **SESSION 3** | *KTU Campus Library*

E-LEARNING

Special Session on **E-Learning Methods and Technologies**

Chaired by Prof. Dr. **Cengiz Hakan Aydin** and Dr. **Ramūnas Kubiliūnas**

1. Artificial Intelligence and Inclusive Education: What is the Teacher's Vision for the Future?

Laura Daniusevičiūtė-Brazaitė, Lina Gaižiūnienė and Raminta Pučėtaitė

2. An Interdisciplinary Approach to Tackling the Field of Human Factors in the Cybersecurity of Financial Organizations: Concepts, Strategies & Recommendations

Eva-Maria Griesbacher, Martin Griesbacher, Paul Rabel and Robin Renwick

3. The Practices of Applying Artificial Intelligence in Engineering Education

Daina Gudonienė, Donatas Iliška, Gintaras Palubeckis, Donata Šermukšnė, Pijus Balčius, Justyna Janik, Bozena Majerek and Yolanda E-Martín

4. Virtual Reality for Truck Driver Training

Eglė Butkevičiūtė, Lukas Paulauskas, Mantas Lukoševičius, Mikas Binkis and Mindaugas Vasiljevas



12:00 – 12:15

12:15 – 13:15

SESSION 4 | KTU Campus Library

INFORMATION SYSTEMS

Special Session on **E-Health Information Systems**

Chairs: Prof. *Olga Riklikienė* (Chair), Prof. *Rima Kregždytė* (Co-chair) and Prof. *Povilas Ignatavičius* (Co-chair)

1. Detecting Stressful Driving Situations of Drivers Using Wearable PPG Sensors: A Case Study

Eglė Butkevičiūtė, Tomas Blažauskas, Mindaugas Vasiljevas, Mantas Lukoševičius, Mikas Binkis, Benas Ranauskas, Dominykas Barisas and Lukas Paulauskas

2. Virtual Reality During Wound Dressing Changes and Injections Among Children in Community Nursing: Implementation in Practice

Lina Spirgienė and Evelina Stančaitytė

3. Application of Information Technologies in Healthcare Education, Research and Practice: Lithuanian Case

Evelina Alūzaitė, Patrikas Armalis, Eglė Butkevičiūtė, Povilas Ignatavičius, Rima Kregždytė, Kristina Mikkonen, Lina Spirgienė, Andrėjus Subočius, Jūratė Tomkevičiūtė and Olga Riklikienė

4. Structuring Immersion Levels in the Reality–Virtuality Continuum: A Multi-Sensory Approach

Filippo Sanfilippo, Patrikas Armalis, Ugnė Aukšoraitytė and Tomas Blažauskas

13:15 – 14:45



14:45 - 16:00

SESSION 5 (part 1) | KTU Campus Library

CYBER SECURITY

Special Session on **Cyber Security**

Chaired by Prof. Dr. *Šarūnas Grigaliūnas*

1. A Quantitative Security Framework for Evaluating Cyber Resilience and Energy Efficiency of IoT MQTT Protocol

Edgaras Baranauskas, Šarūnas Grigaliūnas and Rasa Brūzgienė

2. Data Protection Standards in the Quantum Era

Maksim Iavich and Oksana Kovalchuk

3. KG-AndroidDefender: Knowledge Graph Embedding for Explainable Malware Family Classification

Chen Yi, Junping Zhou, Fangbing Yue and Guoai Xu

4. A Privacy and Security Focused System for Customer Data Management in E-Commerce

Linas Ablonskis, Rimantas Butleris, Audrius Lopata, Giedrius Sirevičius, Simonas Stepanovas and Mindaugas Vasiljevas

5. Cybersecurity Certification Based Program, for Hardware Security Systems

Kyriaki Tsantikidou, Valeria Loscri and Nicolas Sklavos



16:00 – 16:30

16:30 – 17:45

SESSION 5 (part 2) | KTU Campus Library

CYBER SECURITY

Special Session on **Cyber Security**

Chaired by Assoc. Prof. Dr. *Ilona Veitaitė*

1. The Impact of Threats in Cyberspace on the Process of Internet Fragmentation

Vladimer Svanadze, Maksim Iavich and Giorgi Iashvili

2. Deep Neural Network-Based Framework for Enhanced Malware Variant Detection

Wei Dai, Junping Zhou, Fangbing Yue and Guoai Xu

3. Strengthening KPI Correlation Analysis with Machine Learning for Deeper Financial Insights

Ilona Veitaitė, Audrius Lopata and Saulius Gudas

4. Comparative Analysis of Generative AI Model Efficiency in Chief Information Security Officer (CISO) Tasks

Ilona Veitaitė, Renata Danielienė, Kęstutis Driaunys, Martynas Bartnykas, Rokas Stankūnas, Ieva Šilingaitė and Dainora Kuliešienė

5. Enhancing Static Code Analysis with AI-Assisted Detection of Security Vulnerabilities and Code Quality Issues

Augustinas Labutis, Jonas Čeponis, Šarūnas Grigaliūnas and Rasa Brūzgienė

17:45 – 18:00

BEST PAPER AWARDS AND CONFERENCE CLOSING | KTU Campus Library

Awarded by Dr. *Audrius Lopata*

18:00 – 20:00

