



## CONFERENCE AGENDA

### Thursday, 28th September 2023

#### 10.00 – 10.15 Conference opening

- Dr Artur Niewiadomski, Director of the Institute of Computer Science at Siedlce University of Natural Sciences and Humanities (UPH), Chairman of the Scientific Committee of the Conference
- Dr hab. inż. Zbigniew Karczmarzyk, Vicerector of Siedlce University of Natural Sciences and Humanities
- Dr hab. Cezary Sempruch, Dean of Faculty of Exact and Natural Sciences at Siedlce University of Natural Sciences and Humanities
- Dr Dariusz Mikułowski, Chairman of the Conference Organizing Committee

#### 10.15 – 11.00 Inaugural lecture on Watanabe Theorem and Fundamental Issues in Clustering, Prof. dr hab. inż. Mieczysław Kłopotek, Institute of Computer Science Polish Academy of Sciences, Poland

#### 11:00 – 11:30 Coffee break

#### 11:30 – 13:30 Session I: Knowledge identification and analysis methods

Moderator: dr hab. Stanisław Ambroszkiewicz, prof. UPH  
dr Anna Wawrzyńczak-Szaban

1. Ryszard Choraś - "Biometric Identification based on Forearm Vein Patterns"
2. Dariusz Mikułowski, Stefan Svetsky and Branislav Misota - "WPAD-BVI a universal knowledge exchange tool enabling multilingual outputs with support for visually impaired users"
3. Marcin Stępnik and Waldemar Bartyna - "The VR Therapy platform for social anxiety treatment"
4. Bartłomiej Starosta, Mieczysław Kłopotek and Sławomir T. Wierchoń - "Towards Explainability of Hashtags in the Light of Graph Spectral Clustering Methods"
5. Mieczysław Kłopotek - "Spectral Clustering Versus Watanabe Theorem"

#### 13:30 – 14:00 Coffee break

#### 14:00 – 16:00 Session II: Intelligent Information and Communication Systems

Moderator: dr Mirosław Szaban  
dr Waldemar Bartyna

1. Dariusz Mikułowski and Tomasz Żochowski - "Comparative Analysis of Mathematic Filters for Proper Positioning of the Mobile User Device Using BLE Transmitters and Multilateration Technique"
2. Piotr Świtalski and Andrzej Salamończyk - "Universal structural map for indoor navigation in university campus"
3. Mariya Shyshkina - "The cloud-based systems of open science to support the project team activity"
4. Mateusz Przychodzki and Artur Niewiadomski - "Application of Artificial Neural Networks and NEAT Algorithm to Control a Quadcopter"
5. Dariusz Ruciński - "Selected applications of models based on quantum computing"

#### 16:30 – 18:00 Discussion meeting and lunch

### Friday, 29th September 2023

#### 9.00 – 9.45 Opening lecture on Artificial Intelligence. Challenges and Threats

Prof. dr hab. inż. Andrzej Barczak, Institute of Computer Science, Siedlce University of Natural Sciences and Humanities

#### 9:45 – 10:15 Coffee break

#### 10:15 – 12:15 Session III: Applications of Artificial Intelligence Methods

Moderator: dr Grzegorz Terlikowski  
dr Marcin Stępnik

1. Maciej Nazarczuk and Artur Niewiadomski - "A Pathfinding Module for the Indoor Navigation System NaviSecure"
2. Marek Pilski, Dariusz Mikułowski and Grzegorz Terlikowski - "An Indoor Campus Navigation System For Users With Disabilities"
3. Jerzy Tchórzewski and Sebastian Rosochacki - "Selection of the programming environment for neural modeling of the power and electricity demand generation system in terms of unmanned factories"
4. Radosław Marłęga and Jerzy Tchórzewski - "Smart Village as an action system supporting people with special information and communication needs"
5. Muhammad Bilal, Shafia Bilal and Rizwan Khan - "Nonlinear Lassa Fever dynamical design Mathematical Model Awareness Programmes Analysed by Intelligent Neuro-Computing"

#### 12.15 – 12.45 Business presentations

#### 12:45 – 13:00 Official closing of the conference

13:00 – 14:30 Visiting the Diocesan Museum in Siedlce, including the Painting of the Ecstasy of St. Franciszek El Greco (after prior registration on the Conference website or at the Conference Secretary)

