

14th Conference on Computer Science and Information Systems (FedCSIS 2019)

CONFERENCE REPORT

The 14th edition of the Conference on Computer Science and Information Systems (FedCSIS 2019; www.fedcsis.org) was held in Leipzig, Germany on September 1-4, 2019. FedCSIS 2019 was organized by the Information Systems Institute of the Faculty of Economics and Management Science, of Leipzig University, which was supported the Polish Information Processing Society (Mazovia Chapter), IEEE Poland Section Computer Society Chapter (C-16), Systems Research Institute Polish Academy of Sciences, Warsaw University of Technology and Wrocław University of Economics. Intel, HICRON and eSensei have sponsored the conference.

FedCSIS 2019 consisted of the following five Tracks divided into Technical Sessions, and a Doctoral Symposium.

- **Track 1: Artificial Intelligence and Applications**
 - Advances in Artificial Intelligence and Applications (14th Symposium AAIA'19)
 - Computational Optimization (12th Workshop WCO'19)
 - Smart Energy Networks & Multi-Agent Systems (7th Workshop SEN-MAS'19)
- **Track 2: Computer Science & Systems**
 - Advances in Computer Science & Systems (ACSS)
 - Computer Aspects of Numerical Algorithms (12th Workshop CANA'19)
 - Cryptography and Security Systems (6th Conference C&SS'19)
 - Language Technologies and Applications (4th Workshop LTA'19)
 - Advances in Programming Languages (7th Workshop WAPL'19)
 - Multimedia Applications and Processing (12th Symposium MMAP'19)
 - Scalable Computing (10th Workshop WSC'19)
- **Track 3: Network Systems and Applications**
 - Advances in Network Systems and Applications (ANSA)
 - Internet of Things - Enablers, Challenges and Applications (3rd Workshop IoT-ECAW'19)
- **Track 4: Information Systems and Technology**
 - Advances in Information Systems and Technology (AIST)

- Advanced Information Technologies for Management (16th Conference AITM'19)
- Data Science in Health (DSH'19) (1st Special Session DSH'19)
- Data Analysis and Computation for Digital Ecosystems (1st Workshop InC2Eco'19)
- Information Systems Management (14th Conference ISM'19)
- Knowledge Acquisition and Management (25th Conference KAM'19)
- **Track 5: Software and System Engineering**
 - Advances in Software and System Engineering (ASSE)
 - Cyber-Physical Systems (6th Workshop IWCP5-6)
 - Lean and Agile Software Development (3rd International Conference LASD'19)
 - Multimedia, Interaction, Design and Innovation (7th Conference MIDI'19)
 - Software Engineering (39th IEEE Workshop SEW-39)
- **Track 6: DS-RAIT'19 - 6th Doctoral Symposium on Recent Advances in Information Technology**

During the FedCSIS 2019 conference, the following Keynote Lectures were delivered (slides of talks are available, while the videos of presentation will be made available online):

- Alba, Enrique Alba, University of Málaga, Málaga, Spain, *Intelligent Systems for Smart Cities*
- Herrera, Francisco, University of Granada, Granada, Spain, *Deep Data and Big Learning: More quality data for better knowledge*
- Spanoudakis, George, City University of London, London, UK, *Cyber security risks: Comprehensive mitigation through technical, contractual and financial mitigation mechanisms*

FedCSIS 2019 was Chaired by prof. Bogdan Franczyk, while Prof. Rainer Unland acted as the Chair of the Organizing Committee.

Technical co-sponsors of the FedCSIS 2019 conference included: IEEE Region 8, IEEE Poland Section, IEEE Czechoslovakia Section Computer Society Chapter, IEEE Poland Section (Gdansk) Computer Society Chapter, IEEE SMC Technical Committee on Computational Collective Intelligence, IEEE Poland Section Systems, Man, and Cybernetics Society Chapter, IEEE Poland Section Control System Society Chapter, IEEE Poland Section Computational Intelligence Society Chapter, Committee of Computer Science of Polish Academy of Sciences, Polish

Operational and Systems Research Society, Eastern Cluster ICT Poland, Mazovia Cluster ICT.

The 2019 edition of the Data Mining Challenge entitled “Clash Royale Challenge: How to Select Training Decks for Win-rate Prediction” was focused on the problem of selecting an optimal training data subset for learning how to predict win-rates of the most popular Clash Royale decks. This year, 68 teams (from 115 registered), from 18 countries, actively took part in the competition, delivering over 40 solution reports. The winner of the competition was Dymitr Ruta, EBTIC, Khalifa University; the second place went to Ling Cen, EBTIC, Khalifa University, and Quang Hieu Vu, ZALORA; while the third place was awarded to Cenru Liu, Ngee Ann Polytechnic, and Jiahao Cen, Nanyang Polytechnic. Awards for the winners of the contest were sponsored by: eSensei, and the Mazovia Chapter of the Polish Information Processing Society.

During the AAIA 2019, the Professor Zdzisław Pawlak Prize for the best paper was awarded for the 14th time. By the decision of the Award Committee, the winners were: in the category Best Student Paper: “*A Specialized Evolutionary Approach to the bi-objective Travelling Thief Problem*”, by: Maciej Laszczyk from Wrocław University of Science and Technology, Poland. In the category Best Paper Award: “*Improving Real-Time Performance of U-Nets for Machine Vision in Laser Process Control*”, by: Przemysław Dolata and Jacek Reiner from Wrocław University of Science and Technology, Poland. Awards for the winners were sponsored by the Mazovia Chapter of the Polish Information Processing Society.

English was the exclusive conference language. In 2019, the FedCSIS conference attracted 298 submissions. Out of submitted contributions, after obtaining at least two reviews for each paper, 62 articles were accepted as regular full papers (acceptance rate of 20,8%), 62 articles were accepted as regular short papers, 16 as regular communication papers, and 11 as position papers. Accepted contributions represent 39 countries.

Conference materials were initially published on USB pen drives (as Preprints) and distributed to conference participants. After the conference, full and short papers were submitted to the IEEE Digital Library (ISBN Web 978-83-952357-8-8, ISBN USB 978-83-952357-9-5, ISBN Art 978-83-955416-0-5, IEEE Catalog Number CFP1985N-ART (ART), CFP1985N-USB (USB), ISSN 2300-5963); furthermore, they will be sent to the Clarivate Web of Science for indexing. Position Papers and Communication Papers were published as separate volumes (ISSN 2300-5963, Position Papers ISBN Web 978-83-955416-1-2 ISBN USB 978-83-955416-2-9,

Communication Papers ISBN Web 978-83-955416-3-6, ISBN USB 978-83-955416-4-3). Moreover, Proceedings, Position Papers and Communication Papers of the FedCSIS 2019 Conference (in their final version) were posted at the conference WWW site - available through the Archive section of the www.fedcsis.org web-site (alongside the Proceedings from **all** past conferences). It should be stressed that **only** papers presented in the conference were published in either form (the FedCSIS conference series strictly adheres to the “IEEE No-show Policy”).

Respectfully submitted by the FedCSIS Conference Series Chairs,

Maria Ganzha,
Leszek Maciaszek,
Marcin Paprzycki