

2018 Federated Conference on Computer Science and Information Systems (FedCSIS)

CONFERENCE REPORT

The 2018 edition of the Federated Conference on Computer Science and Information Systems (FedCSIS; www.fedcsis.org) was held in Poznań, Poland on September 9-12, 2018. FedCSIS 2018 was hosted by the Faculty of Mathematics and Computer Science of the Adam Mickiewicz University (UAM). This year, FedCSIS was organized by 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, Wrocław University of Economics and Adam Mickiewicz University. Intel, Gambit, Samsung, Silver Bullet Labs, eSensei and Data Center PPNT have sponsored the conference.

FedCSIS consists of multiple events that are grouped into **thematic areas**, characterized by various degree of integration between constituting events. Areas that are listed below without the indication of the year ('18) signify "abstract areas" with no direct paper submissions (i.e. paper submissions have been made available only to individual events that belong to them).

- ***AAIA'18 – 13th International Symposium Advances in Artificial Intelligence and Applications***
 - AIMaViG'18 – 3rd International Workshop on Artificial Intelligence in Machine Vision and Graphics
 - AIMA'18 – 8th International Workshop on Artificial Intelligence in Medical Applications
 - AIRIM'18 – 3rd International Workshop on AI aspects of Reasoning, Information, and Memory
 - ASIR'18 – 8th International Workshop on Advances in Semantic Information Retrieval
 - DMGATE'18 – 1st International Workshop on AI Methods in Data Mining Challenges
 - SEN-MAS'18 – 6th International Workshop on Smart Energy Networks & Multi-Agent Systems
 - WCO'18 – 11th International Workshop on Computational Optimization
- **CSS – Computer Science & Systems**
 - BEDA'18 – 1st International Workshop on Biomedical & Health Engineering and Data Analysis
 - CANA'18 – 11th Workshop on Computer Aspects of Numerical Algorithms

- C&SS'18 – 5th International Conference on Cryptography and Security Systems
- CPORA'18 – 3rd Workshop on Constraint Programming and Operation Research Applications
- LTA'18 – 3rd International Workshop on Language Technologies and Applications
- MMAP'18 – 11th International Symposium on Multimedia Applications and Processing
- **iNetSApp – International Conference on Innovative Network Systems and Applications**
 - INSERT'18 – 2nd International Conference on Security, Privacy, and Trust
 - IoT-ECAW'18 – 2nd Workshop on Internet of Things - Enablers, Challenges and Applications
- **IT4MBS – Information Technology for Management, Business & Society**
 - AITM'18 – 15th Conference on Advanced Information Technologies for Management
 - ISM'18 – 13th Conference on Information Systems Management
 - KAM'18 – 24th Conference on Knowledge Acquisition and Management
- **SSD&A – Software Systems Development & Applications**
 - MDASD'18 – 5th Workshop on Model Driven Approaches in System Development
 - MIDI'18 – 6th Conference on Multimedia, Interaction, Design and Innovation
 - LASD'18 – 2nd International Conference on Lean and Agile Software Development
 - SEW-38 & IWCP5-5 – Joint 38th IEEE Software Engineering Workshop (SEW-38) and 5th International Workshop on Cyber-Physical Systems (IWCP5-5)
- **DS-RAIT'18 – 5th Doctoral Symposium on Recent Advances in Information Technology**

During the FedCSIS 2018 conference, the following Keynote Lectures have been delivered (these talks have been video-recorded and will be made available online; slides of talks will also be available):

- Aksit, Mehmet, University of Twente, *“The Role of Computer Science and Software Technology in Organizing Universities for Industry 4.0 and Beyond”*
- Bosch, Jan, Chalmers University Technology, *“Towards a Digital Business Operating System”*
- Duch, Włodzisław, Nicolaus Copernicus University, *“Neurocognitive informatics for understanding brain functions”*
- O'Connor, Rory, V., Dublin City University, *“Demystifying the World of ICT Standardisation: An Insiders Viewpoint”*

Additionally, two special workshops – “*Optimization of your life science application*” and “*Optimization with Intel Distribution for Python - faster math programming with Intel MKL*” took place. These workshops have been organized by Intel.

FedCSIS 2018 was Chaired by prof. Krzysztof Jassem, while dr. Paweł Skórzewski acted as the Chair of the Organizing Committee.

Technical co-sponsors of the FedCSIS 2018 conference included: IEEE Region 8, IEEE Poland Section, IEEE Computer Society Technical Committee on Intelligent Informatics, 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, ACM Special Interest Group on Applied Computing, Lodz (Poland) ACM Chapter, IFIP, Committee of Computer Science of Polish Academy of Sciences, Polish Operational and Systems Research Society, Eastern Cluster ICT Poland, Mazovia Cluster ICT.

The 2018 edition of an AAIA'18 Data Mining Challenge was a continuation of the topic from the previous year – data analytics related to video games. In particular, it was focused on a popular collectible card video game *Hearthstone: Heroes of Warcraft*. This year, 82 teams (from 204 registered), from 28 countries, actively took part in the competition, delivering 54 solution reports. The winners of the competition were Quang Hieu Vu, ZALORA, and Dymitr Ruta, EBTIC, Khalifa University, the second place went to Ling Cen, EBTIC, Khalifa University, and Andrzej Ruta, ING Bank Slaski, while the third place was awarded to Jan Jakubik, Wrocław University of Science and Technology. Awards for the winners of the contest were sponsored by: Silver Bullet Labs, eSensei, and the Mazovia Chapter of the Polish Information Processing Society.

During the AAIA 2018, the Professor Zdzisław Pawlak Prize for the best paper was awarded for the 13th time. By the decision of the Award Committee, the winners were: in the category Best Student Paper: “*Modular Multi-Objective Deep Reinforcement Learning with Decision Values*”, by: Tomasz Tajmajer from University of Warsaw, Poland. In the category Best Paper Award: “*Sensitivity in Multi-Ensemble Scheduling*”, by: Joerg Bremerand and Sebastian Lehnhoff from University of Oldenburg, Germany. Awards for the winners were co-sponsored by the Mazovia Chapter of the Polish Information Processing Society.

English was the exclusive conference language. In 2018, the FedCSIS conference attracted 349 submissions. Out of submitted contributions, after obtaining at least two reviews for each paper, 74 articles were accepted as regular full papers (acceptance rate of 21,2%), 73 articles were accepted as regular short papers, 30 as regular communication papers, and 14 as position papers. Out of these papers, approximately 49% came from Poland and 51% from other (42) 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 978-83-949419-5-6, ISBN USB 978-83-949419-6-3, ISBN Art 978-83-949419-7-0, IEEE Catalog Number CFP1885N-ART (ART), CFP1885N-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 978-83-949419-8-7, ISBN USB 978-83-949419-9-4, Communication Papers ISBN Web 978-83-952357-0-2, ISBN USB 978-83-952357-1-9). Moreover, Proceedings, Position Papers and Communication Papers of the FedCSIS 2018 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