

2016 Federated Conference on Computer Science and Information Systems (FedCSIS)

CONFERENCE REPORT

The 2016 edition of the Federated Conference on Computer Science and Information Systems (FedCSIS; www.fedcsis.org) was held in Gdańsk, Poland on September 11-14, 2016. FedCSIS 2016 was hosted by the Faculty of Electronics, Telecommunications and Informatics (ETI) of the Gdańsk University of Technology. This year, FedCSIS was organized by the Polish Information Processing Society (Mazovia Chapter), Systems Research Institute Polish Academy of Sciences, Warsaw University of Technology, Wrocław University of Economics, and Gdańsk University of Technology. Polish Ministry of Science and Higher Education, Intel and Dituel 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 ('16) signify "abstract areas" with no direct paper submissions (i.e. paper submissions are available only to individual events that belong to them).

- **AAIA'16 – 11th International Symposium Advances in Artificial Intelligence and Applications**
 - AIMaVIG'16 – 2nd International Workshop on Artificial Intelligence in Machine Vision and Graphics
 - AIMA'16 – 6th International Workshop on Artificial Intelligence in Medical Applications
 - AIRIM'16 – 1st International Workshop on AI aspects of Reasoning, Information, and Memory
 - ASIR'16 – 6th International Workshop on Advances in Semantic Information Retrieval
 - DSTUI'16 – 6th International Workshop on Dealing with Spatial and Temporal Uncertainty and Imprecision
 - LTA'16 – 1st International Workshop on Language Technologies and Applications
 - WCO'16 – 9th International Workshop on Computational Optimization
- **CSS - Computer Science & Systems**
 - AIPC'16 – 1st International Workshop on Advances in Image Processing and Colorization
 - CANA'16 – 9th Computer Aspects of Numerical Algorithms
 - CPORA'16 – 1st Workshop on Constraint Programming and Operation Research Applications
 - IWCPs'16 – 3rd International Workshop on Cyber-Physical Systems
 - MMAP'16 – 9th International Symposium on Multimedia Applications and Processing
 - WSC'16 – 8th Workshop on Scalable Computing
- **ECRM – Education, Curricula & Research Methods**
 - IEES'16 – 1st International E-education Symposium - Education of the Future

- DS-RAIT'16 – 3rd Doctoral Symposium on Recent Advances in Information Technology
- **iNetSApp'16 – 4th International Conference on Innovative Network Systems and Applications**
 - EAIS'16 – 3rd Workshop on Emerging Aspects in Information Security
 - SoFAST-WS'16 – 5th International Symposium on Frontiers in Network Applications, Network Systems and Web Services
 - WSN'16 – 5th International Conference on Wireless Sensor Networks
- **IT4MBS – Information Technology for Management, Business & Society**
 - ABICT'16 – 7th International Workshop on Advances in Business ICT
 - AITM'16 – 14th Conference on Advanced Information Technologies for Management
 - ISM'16 – 11th Conference on Information Systems Management
 - KAM'16 – 22nd Conference on Knowledge Acquisition and Management
 - UHH'16 – 2nd International Workshop on Ubiquitous Home Healthcare
- **JAWS – Joint Agent-oriented Workshops in Synergy**
 - MAS&S'16 – 10th International Workshop on Multi-Agent Systems and Simulations
 - SEN-MAS'16 – 4th International Workshop on Smart Energy Networks & Multi-Agent Systems
- **SSD&A – Software Systems Development & Applications**
 - BTMSPA'16 – 1st Symposium on Balancing Traditional and Modern Software Process Approaches
 - MDASD'16 – 4th Workshop on Model Driven Approaches in System Development
 - MIDI'16 – 4th Conference on Multimedia, Interaction, Design and Innovation
 - SEW-36 – The 36th IEEE Software Engineering Workshop

During the FedCSIS 2016 conference, the following Keynote Lectures have been delivered:

- Frederik Ahlemann (University of Duisburg-Essen, Germany), *How digital transformation shapes corporate IT: Ten theses about the IT organization of the future*
- Stan Matwin (Dalhousie University, University of Ottawa, Canada and Institute of Computer Science, Polish Academy of Science), *Big Water Meets Big Data: Analytics of the AIS Ship Tracking Data*
- Michael Segal (Ben-Gurion University of the Negev, Israel), *Location always matters: how to improve performance of dynamic networks?*
- Clemens Szyperski (Microsoft, USA), *Service focus and focused service composition*

FedCSIS 2016 was organized under the auspices of dr Jarosław Gowin, Minister of Science and Higher Education, Anna Streżyńska, Minister of Digital Affairs, Paweł Adamowicz, Mayor of the City of Gdańsk, Wojciech Szczurek Mayor of the City of Gdynia, and prof. Henryk Krawczyk, Rector of the Gdańsk University of Technology. The conference was Chaired by prof. Krzysztof Goczyła, while Zenon Filipiak acted as the Chair of the Organizing Committee.

Technical co-sponsors of the FedCSIS 2016 conference included: IEEE Region 8, IEEE SMC Technical Committee on Computational Collective Intelligence, IEEE Computer Society Technical Committee on Intelligent Informatics, IEEE Poland Section, Computer Society Chapter Poland, Gdańsk Computer Society Chapter Poland, Polish Chapter of the

IEEE Computational Intelligence Society, ACM Special Interest Group on Applied Computing, Łódź ACM Chapter, European Alliance for Innovation (EAI), Committee of Computer Science of the Polish Academy of Sciences, Polish Operational and Systems Research Society, Mazovia Cluster ICT Poland and Eastern Cluster ICT Poland.

Furthermore, the 11th International Symposium Advances in Artificial Intelligence and Applications (AAIA'16) was organized in technical cooperation with: International Fuzzy Systems Association, European Society for Fuzzy Logic and Technology, International Rough Set Society and Polish Neural Networks Society.

Within the framework of the AAIA'16 Symposium, a Data Mining Competition, focused on “Predicting Dangerous Seismic Events in Active Coal Mines” has been organized (this is the third time that such a competition took place in association with the FedCSIS conference series). The winners of the competition, in which 106 teams from 31 countries actively took part, were: first place Michal Tadeusiak (team tadeusz) from Deepsense.io, Poland, second place Robert Bogucki, Jan Lasek, Jan Kanty Milczek, Michał Tadeusiak (teamdeepsense.io from Deepsense.io, Poland and third place Yasser Tabandeh (team yata) from Golgohar Mining & Industrial Company, Iran. Awards for the winners were sponsored by: Research and Development Center EMAG and the Mazovia Chapter of the Polish Information Processing Society.

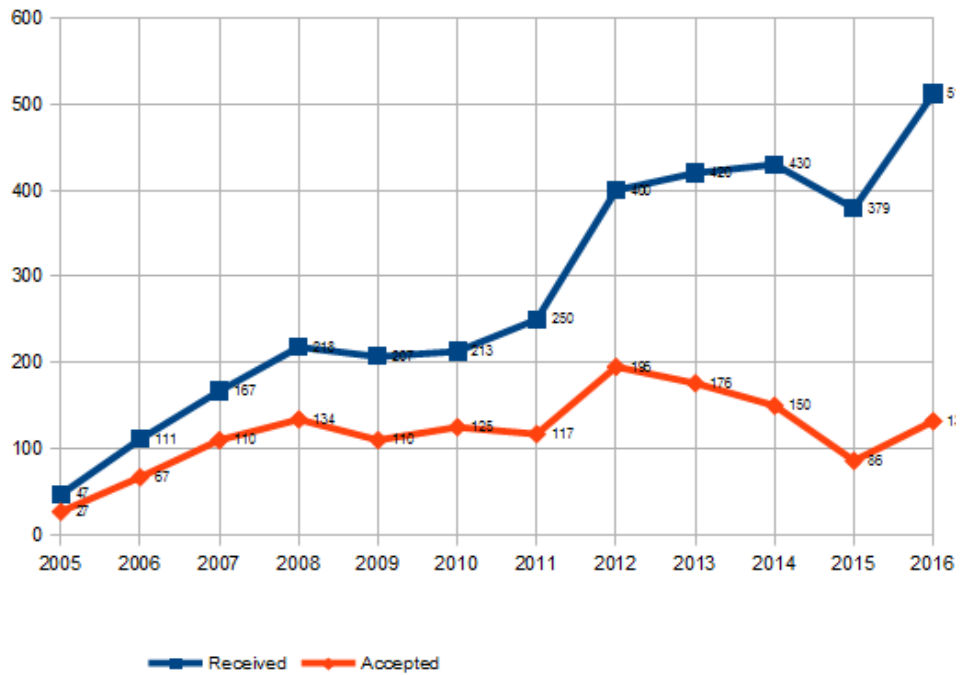
This year (2016) is the year of the 90th anniversary of the birth and the 10th anniversary of the death of Professor Zdzisław Pawlak. Therefore, a special plenary panel devoted to the “Legacy of Professor Zdzisław Pawlak” has been organized. During the panel, friends, students and collaborators of Prof. Pawlak shared their memories and reflections. Furthermore, during the AAIA 2016, the Professor Zdzisław Pawlak prize for the best paper was awarded for the eleventh time. This year the winners were: Andy Lücking (Best Paper) for the paper entitled: “Modeling Co-Verbal Gesture Perception in Type Theory with Records”, and Jan Jakubik (Best Student Paper), who co-authored the paper entitled “Sparse Coding Methods for Music Induced Emotion Recognition”. Awards for the winners were co-sponsored by the Mazovia Chapter of the Polish Information Processing Society.

English was the exclusive conference language. In 2016, the FedCSIS conference attracted 512 submissions (an increase of 141 over the previous year); largest in the history of the FedCSIS conference series). Out of submitted contributions, after obtaining at least two reviews for each paper, 130 articles were accepted as full / regular papers (acceptance rate of 25.39%), 99 articles were accepted as short papers, and 36 as position papers. Out of these papers, approximately 50% came from Poland and 50% from other (40) countries.

Conference materials were initially published on USB Pen Drives (as Preprints) and distributed to conference participants. After the conference, full and short papers have been submitted to the IEEE Digital Library (ISBN 978-83-60910-92-7, IEEE Catalog Number CFP1685N-ART, ISSN 2300-5963); furthermore, they will be sent to the Thomson Reuters Web of Science for indexing. Position Papers have been published as a separate volume (ISBN 978-83-60810-93-4, ISSN 2300-5963). Furthermore, Proceedings and Position Papers of the FedCSIS 2016 Conference (in their final version) have been posted at the conference WWW site – available through the Archive section of the

www.fedcsis.org web-site (joining 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”).

The figure below represents the number of papers received and accepted as regular papers. It contains data starting from 2005, when the conference series started as a Scientific Session organized within the Autumn Meeting of the Polish Information Processing Society, through years 2006-10 when it was run under the name International Multiconference on Computer Science and Information Systems (IMCSIT), and 2011-16 when the current name and formula have been adopted.



Respectfully submitted by the FedCSIS Conference Series Chairs,

Maria Ganzha,
Leszek Maciaszek,
Marcin Paprzycki