

MISSI 2018 – XI International Conference on Multimedia and Network Information Systems

September 12–14, 2018, Wrocław, Poland



Organizer: Wrocław University of Science and Technology,
Wyb. Wyspiańskiego 27, Wrocław, Poland



Conference venue: Hotel Jan Paweł II,
ul. św. Idziego 2, Wrocław, Poland

Wednesday, September 12, 2018			
	Room A	Room B	Room C
9 ⁰⁰ – 10 ⁰⁰	Registration – Jan Paweł II Hotel – Main Hall		
10 ⁰⁰ – 10 ³⁰	Opening Ceremony – prof. Kazimierz Choroś		
10 ³⁰ – 11 ³⁰	Plenary Lecture 1 – prof. Bogusław Cyganek		
11 ³⁰ – 13 ⁰⁰	Session 1 Multimedia Systems I	Session 2 IWCIM I	Session 3 AMIS I
13 ⁰⁰ – 13 ³⁰	DOLBY Plenary Session – Łukasz Bratek and Maksymilian Górski		
13 ³⁰ – 14 ³⁰	Lunch Break – Restaurant and Main Hall		
14 ³⁰ – 16 ⁰⁰	Session 4 Multimedia Systems II	Session 5 IWCIM II	Session 6 AMIS II
16 ⁰⁰ – 16 ³⁰	Coffee Break		
16 ³⁰ – 18 ⁰⁰	Session 7 Multimedia Systems III	Session 8 InWebTech I	Session 9 NLP I
18 ⁰⁰ – 19 ⁰⁰	Session 10 Multimedia Systems IV	Session 11 IWCIM III	Session 12 Web Systems I
19 ⁰⁰	Conference dinner – Jan Paweł II Hotel		

Thursday, September 13, 2018			
	Room A	Room B	Room C
9 ⁰⁰ – 10 ³⁰	Session 13 VGDMT	Session 14 InWebTech II	Session 15 Web Systems II
10 ³⁰ – 11 ³⁰	Plenary Lecture 2 – prof. Andrzej Czyżewski		
11 ³⁰ – 12 ⁰⁰	Coffee Break		
12 ⁰⁰ – 14 ⁰⁰	Transfer from Ostrów Tumski (Wrocław) to Silver Mountain		
14 ³⁰ – 15 ³⁰	Panel Discussion on the Multimedia Future		
15 ³⁰ – 17 ³⁰	Silver Mountain		
17 ³⁰ – 19 ³⁰	Silver Mountain Commanders' Feast		
20 ⁰⁰ – 22 ⁰⁰	Transfer to Wrocław		

Friday, September 14, 2018			
	Room A	Room B	Room C
9 ⁰⁰ – 11 ⁰⁰	Session 16 IAP	Session 17 Web Systems III	Session 18 NLP II
11 ⁰⁰ – 11 ³⁰	Coffee Break		
11 ³⁰ – 12 ³⁰	Plenary Lecture 3 – prof. Alberto del Bimbo		
12 ³⁰ – 13 ⁰⁰	Closing Ceremony		
13 ⁰⁰ – 15 ⁰⁰	Lunch		

Plenary Lecture 1 (Wednesday, 10³⁰–11³⁰)

chair: Dosam Hwang

Modern Approaches to Multi-Dimensional Visual Signals Analysis

Bogusław Cyganek

Plenary Lecture 2 (Thursday, 10³⁰–11³⁰)

chair: Maria Trocan

New Applications of Sound and Vision Engineering

Andrzej Czyżewski

Plenary Lecture 3 (Friday, 11³⁰–12³⁰)

chair: Bożena Kostek

Identity Recognition by Incremental Learning

Alberto del Bimbo

DOLBY Plenary Session (Wednesday, 13⁰⁰–13³⁰)

chair: Kazimierz Choroś

HRTF (Head-Related Transfer Function) Personalization

Łukasz Bratek and Maksymilian Górski

Wednesday, September 12, 2018

Session 1 (11³⁰–13⁰⁰) – Multimedia Systems I:

Chairs: Bożena Kostek and Jerzy Kisilewicz

1. A Concept of Visual Knowledge Representation

Tatiana Jaworska

2. Three-Dimensional Multi-Resolution and Hardware Accelerated Compression for the Efficient Interactive Web Applications

Daniel Dworak and Maria Pietruszka

3. Using the Virtual Assistant Alexa as a Communication Channel for Road Traffic Situation

Viktória Kerekešová, František Babič, and Vladimír Gašpar

Session 2 (11³⁰–13⁰⁰) – IWCIM I:

Chairs: Maria Trocan and Davide Moroni

1. Deep Learning Techniques for Visual Food Recognition on a Mobile App

Michele De Bonis, Giuseppe Amato, Fabrizio Falchi, Claudio Gennaro, and Paolo Manghi

2. To Identify Hot Spots in Power Lines Using Infrared and Visible Sensors

Bushra Jalil, Maria Antonietta Pascali, Giuseppe Riccardo Leone, Massimo Martinelli, Davide Moroni, and Ovidio Salvetti

3. Sparse Solution to Inverse Problem of Nonlinear Dimensionality Reduction

Honggui Li and Maria Trocan

Session 3 (11³⁰–13⁰⁰) – AMIS I:

Chairs: Kamel Smaïli and Mikołaj Leszczuk

1. Cross-Lingual Speech-to-Text Summarization

Elvys Linhares Pontes, Carlos-Emiliano González-Gallardo, Juan-Manuel Torres-Moreno, and Stéphane Huet

2. A Proposed Methodology for Subjective Evaluation of Video and Text Summarization

Begoña García-Zapirain, Cristian Castillo, Artiz Badiola, Sofia Zahia, Amala Mendez, David Langlois, Denis Jouvét, Juan-Manuel Torres-Moreno, Mikołaj Leszczuk, and Kamel Smaïli

3. Collection, Analysis and Summarization of Video Content

Arian Koźbiał and Mikołaj Leszczuk

Session 4 (14³⁰–16⁰⁰) – Multimedia Systems II:

Chairs: Tatiana Jaworska and František Babič

4. Application of the Sensor Fusion for the System to Track Human Upper Limb

Łukasz Leśniczek and Krzysztof Brzostowski

5. Estimation of the Amount of Noise in Digital Images Using Finite Differences

Janusz Kowalski, Jakub Pęksiński, and Grzegorz Mikołajczak

6. Linear Filtering of Blurry Photos

Jerzy Kisilewicz

Session 5 (14³⁰–16⁰⁰) – IWCIM II:

Chairs: Maria Trocan and Davide Moroni

4. Towards Structural Monitoring and 3D Documentation of Architectural Heritage Using UAV

Danila Germanese, Giuseppe Riccardo Leone, Davide Moroni, Maria Antonietta Pascali, and Marco Tampucci

5. Remote Sensing for Maritime Monitoring and Vessel Prompt Identification

Marco Reggiannini, Marco Righi, Marco Tampucci, Luigi Bedini, Claudio Di Paola, Massimo Martinelli, Costanzo Mercurio, and Emanuele Salerno

6. Deep Learning Approach to Human Osteosarcoma Cell Detection and Classification

Mario D'Acunto, Massimo Martinelli, and Davide Moroni

Session 6 (14³⁰–16⁰⁰) – AMIS II:

Chairs: Kamel Smaïli and Mikołaj Leszczuk

4. An Integrated AMIS Prototype for Automated Summarization and Translation of Newscasts and Reports

Michał Grega, Kamel Smaïli, Mikołaj Leszczuk, Carlos-Emiliano González-Gallardo, Juan-Manuel Torres-Moreno, Elvys Linhares Pontes, Dominique Fohr, Odile Mella, Mohamed Menacer, and Denis Jouvét

5. Evaluation of Multimedia Content Summarization Algorithms

Artur Komorowski, Lucjan Janowski, and Mikołaj Leszczuk

6. A Knowledge Discovery from Full-Text Document Collections using Clustering and Interpretable Genetic-Fuzzy Systems

Filip Rudziński

7. Microservices Architecture for Content-based Indexing of Video Shots

Remigiusz Baran, Pavol Partila, and Rafał Wilk

Session 7 (16³⁰–18⁰⁰) – Multimedia Systems III:

Chairs: František Babič and Maria Pietruszka

7. A First Summarization System of a Video in a Target Language

Kamel Smaïli, Dominique Fohr, Carlos-Emiliano González-Gallardo, Michał Grega, Lucjan Janowski, Denis Jouvét, Artur Komorowski, Arian Koźbiał, David Langlois, Mikołaj Leszczuk, Odile Mella, Mohamed Menacer, Amala Mendez, Elvys Linhares Pontes, Eric SunJuan, Damian Świst, Juan-Manuel Torres-Moreno, and Begoña García-Zapirain

8. Comparative Analysis of Accuracy of Fuzzy Clustering Methods Applied for Image Processing

Hossein Yazdani and Kazimierz Choroś

9. An Efficient Method for Sign Language Recognition from Image using Convolutional Neural Network

Sebastian Kotarski and Bernadetta Maleszka

Session 8 (16³⁰–18⁰⁰) – InWebTech I:

Chairs: Francisco de Asís López-Fuentes and Jolanta Mizera-Pietraszko

1. Weight Adaptation Stability of Linear and Higher-Order Neural Units for Prediction Applications

Ricardo Rodríguez-Jorge, Jiri Bila, Jolanta Mizera-Pietraszko, and Edgar A. Martínez-García

2. Visual Analysis of Differential Evolution Algorithms

Adriana Mexicano-Santoyo, Ricardo Rodríguez-Jorge, A. Abrego, M. A. Jiménez, R. Zúñiga-Treviño, and Edgar A. Martínez-García

3. PCA Algorithms in Visualization of Big Data from Polish Digital Libraries

Grzegorz Osiński, Veslava Osińska, and Piotr Malak

Session 9 (16³⁰–18⁰⁰) – NLP I:

Chairs: Marcel Pikhart and Andrzej Siemiński

1. A Framework for Analyzing Academic Data

Dinh Tuyen Hoang, Dosam Hwang, Ngoc-Thanh Nguyen, and Trong Hai Duong

2. Verifying Usefulness of Algorithms for WordNet Based Similarity Sense Disambiguation

Andrzej Siemiński and Elżbieta Kukła

3. Comparison of Paragram and Glove Results for Similarity Benchmarks

Jakub Dutkiewicz and Czesław Jędrzejek

4. Calculating Optimal Queries from the Query Relevance File

Jakub Dutkiewicz and Czesław Jędrzejek

Session 10 (18⁰⁰–19⁰⁰) – Multimedia Systems IV:

Chairs: Tatiana Jaworska and Bernadetta Maleszka

10. Audio/Speech Coding Based on the Perceptual Sparse Representation of the Signal with DAE Neural Network Quantizer and Near-End Listening Enhancement

Vadzim Herasimovich, Alexey Petrovsky, Vladislav Avramov, and Alexander Petrovsky

11. The features and Functions of an Effective Multimedia Information Retrieval System (MMIR)

Jolanta Szulc

Session 11 (18⁰⁰–19⁰⁰) – IWCIM III:

Chairs: Maria Trocan and Davide Moroni

- 7. Detection of Suspicious Accounts on Twitter Using Word2Vec and Sentiment Analysis**
Patricia Conde-Cespedes, Julie Chavando, and Eliza Deberry
- 8. A Hybrid CNN Approach for Single Image Depth Estimation: A Case Study**
Károly Harsányi, Attila Kiss, András Majdik, and Tamas Sziranyi

Session 12 (18⁰⁰–19⁰⁰) – Web Systems I:

Chairs: Dariusz Król and Veslava Osińska

- 1. YouTube Timed Metadata Enrichment using a Collaborative Approach**
José Pedro Pinto and Paula Viana
- 2. Improving the Responsiveness of Geospatial Web Applications Through Client-Side Processing**
Kamila Środa, Marek Łabuz, and Sebastian Ernst

Thursday, September 13, 2018

Session 13 (9⁰⁰–10³⁰) – VGDMT:

Chairs: Marek Kopel and Grzegorz Muszyński

- 1. Accident Prevention System During Immersion in Virtual Reality**
Dawid Połap, Karolina Kęsik, and Marcin Woźniak
- 2. Design and Development of “Battle Drone” Computer-Based Trading Card Game (CTCG)**
Reza Andrea, Nursobah, and Marek Kopel
- 3. Wide Field of View Projection Using Rasterization**
Grzegorz Muszyński, Krzysztof Guzek, and Piotr Napieralski

Session 14 (9⁰⁰–10³⁰) – InWebTech II:

Chairs: Francisco de Asís López-Fuentes and Jolanta Mizera-Pietraszko

- 4. Recognition of the Pathology of the Human Movement with the Use of Mobile Technology and Machine Learning**
Kazimierz Frączkowski and Sandra Łaska
- 5. A Multimedia Platform for Mexican Cultural Heritage Diffusion**
Francisco de Asís López-Fuentes and Alejandro Ibañez-Ramírez
- 6. Authentication Mechanism to Access Multiple-Domain Multimedia Data**
Alejandro Ibañez-Ramírez and Francisco de Asís López-Fuentes

Session 15 (9⁰⁰–10³⁰) – Web Systems II:

Chairs: Czesław Jędrzejek and Mohammad Rashedur Rahman

- 3. Isotone Galois Connections and Generalized One-Sided Concept Lattices**
Peter Butka, Jozef Pócs, and Jana Pócsová
- 4. Transfer Learning in GMDH-Type Neural Networks**
Aminu Abdullahi and Mukti Akter
- 5. Modelling of Taxi Dispatch Problem Using Heuristic Algorithms**
Dariusz Król

Friday, September 14, 2018

Session 16 (9⁰⁰–11⁰⁰) – IAP:

Chairs: Bożena Kostek and Marek Kopel

- 1. Spatial Audio Scene Characterization (SASC): Automatic Classification of Five-Channel Surround Sound Recordings According to the Foreground and Background Content**
Sławomir K. Zieliński
- 2. Automatic Clustering of EEG-Based Data Associated with Brain Activity**
Adam Kurowski, Katarzyna Mrozik, Bożena Kostek, and Andrzej Czyżewski
- 3. Comparative Analysis of Spectral and Cepstral Feature Extraction Techniques for Phoneme Modelling**
Grazina Korvel, Olga Kurasova, and Bożena Kostek
- 4. Selection of Features for Multimodal Vocalic Segments Classification**
Szymon Zaporowski and Andrzej Czyżewski

Session 17 (9⁰⁰–11⁰⁰) – Web Systems III:

Chairs: Dariusz Król and Mohammad Rashedur Rahman

- 6. Malware Detection Using Black-Box Neural Method**
Czesław Jędrzejek and Dominik Pieczyński
- 7. Intrusion Detection and Risk Evaluation in Online Transactions Using Partitioning Methods**
Hossein Yazdani and Kazimierz Choroś
- 8. Prediction of Autism Severity Level in Bangladesh Using Fuzzy Logic: FIS and ANFIS**
Rahbar Ahsan, Tauseef Tasin Chowdhury, Wasit Ahmed, Mahrin Alam Mahia, Tahmin Mishma, Mahbubur Rahman Mishal, and Mohammad Rashedur Rahman
- 9. HRTF (Head-Related Transfer Function) Personalization**
Maksymilian Górski

Session 18 (9⁰⁰–11⁰⁰) – NLP II:

Chairs: Rashedur Rahman and Andrzej Siemiński

- 5. Survey on Neural Machine Translation into Polish**
Krzysztof Wołk and Krzysztof Marasek
- 6. Multilingual and Intercultural Competence for ICT: Accessing and Assessing Electronic Information in the Global World**
Marcel Pikhart
- 7. Selection of Most Suitable Secondary School Alternative by Multi-Criteria Fuzzy Analytic Hierarchy Process**
N.S.M. Rezaul Rahman, Abdul Ahad Chowdhury, Abdullah-Al Nahian Siraj, Mohammad Rashedur Rahman, Rezaul Karim, and K. M. Arafat Alam
- 8. Comparison of the Novel Classification Methods on the Reuters-21578 Corpus**
Anna Zdrojewska, Jakub Dutkiewicz, Czesław Jędrzejek, and Maciej Olejnik
- 9. Author Identification Using Machine Learning and Stylometry on Noise Arabic Documents**
Samira Bourib and Halim Sayoud