



CISIM 2024

23rd International Conference on Computer Information Systems and Industrial Management Applications

Białystok, September 27-29.09, 2024

**Faculty of Computer Science
Białystok University of Technology
Wiejska 45A, 15-351 Białystok, POLAND**

pb.edu.pl/cisim

ORGANIZED BY



BUT

BIAŁYSTOK UNIVERSITY OF TECHNOLOGY

in cooperation with:

- Warsaw University of Technology, Poland
- University of Calcutta, India
- Ca' Foscari University, Italy
- Institute of Computer Science, PAS, Poland
- Systems Research Institute, PAS, Poland
- Tokyo Metropolitan University, Japan
- Gachon University, South Korea
- Universidad de la Costa, Colombia
- IT4Innovations, Technical University of Ostrava, Czechia
- PTSK, Polish Society for Computer Simulation, Poland

TECHNICALLY SUPPORTED BY



CONFERENCE PATRON

Marta Kosior-Kazberuk, *Rector, BUT, Poland*

GENERAL CHAIR

Khalid Saeed, *BUT, Poland*

CONFERENCE CO-CHAIRS

Rituparna Chaki, *University of Calcutta, India*

Marek Krętownski, *BUT, Poland*

Marina Gavrilova, *University of Calgary, Canada*

ADVISORY COMMITTEE

Nabendu Chaki, *University of Calcutta, India*

Young-Im Cho, *Gachon University, South Korea*

Agostino Cortesi, *Universita Ca'Foscari, Italy*

Emiro de la Hoz Franco, *Universidad de la Costa, Colombia*

Keiko Kasamatsu, *Tokyo Metropolitan University, Japan*

Sławomir Wieruchoń, *ICS PAS, Poland*

INTERNATIONAL ORGANIZING COMMITTEE

Zenon Sosnowski, *BUT, Poland, chair*

Jose Crissien Borrero, *Universidad de la Costa, Colombia*

Pavel Moravec, *VŠB, Czech Republic*

Eri Shimokawara, *Tokyo Metropolitan University, Japan*

LOCAL ORGANIZING COMMITTEE

Mirosław Omieljanowicz, *BUT, Poland, chair*

Aleksander Sawicki, *BUT, Poland*

Dionicio Neira, *Universidad de la Costa, Colombia*

Patryk Milewski, *BUT, Poland*

Daniel Grabowski, *BUT, Poland*

KEYNOTE SPEAKERS

TO BE ANNOUNCED

INTERNATIONAL PROGRAM COMMITTEE

Khalid Saeed, *BUT, Poland, chair*

Jiří Dvorský, *VŠB, Czech Republic, chair*

Waleed Abdulla, *University of Auckland, New Zealand*

Raid Al-Tahir, *Univ of the West Indies, Tr. and Tobago*

Aditya Bagchi, *Indian Statistical Institute, India*

Valentina Emilia Balas, *University of Arad, Romania*

Anna Bartkowiak, *Wrocław University, Poland*

Daniela Borissova, *Bulgarian Academy of Sciences, Bulgaria*

Rahma Boucetta, *National Engg School of Gabes, Tunisia*

Nabendu Chaki, *University of Calcutta, India*

Rituparna Chaki, *University of Calcutta, India*

Young-Im Cho, *Gachon University, South Korea*

Melissa Acosta Coll, *Universidad de la Costa, Colombia*

Agostino Cortesi, *Ca' Foscari University of Venice, Italy*

Dipankar Dasgupta, *University of Memphis, USA*

Pierpaolo Degano, *University of Pisa, Italy*

Jose Escorcía Gutierrez, *Universidad de la Costa, Colombia*

Riccardo Focardi, *Ca' Foscari University of Venice, Italy*

Margarita Gamarra Acosta, *Universidad de la Costa, Colombia*

Marina Gavrilova, *University of Calgary, Canada*

Jan Devos, *Ghent University, Belgium*

David Dagan Feng, *University of Sydney, Australia*

Pietro Ferrara, *IBM T.J. Watson Research Center, U.S.A.*

Raju Halder, *Ca' Foscari University of Venice, Italy*

Yoshiko Hanada, *Kansai University, Japan*

Christopher Harris, *State University of New York, USA*

Kauru Hirota, *Tokyo Institute of Technology, Japan*

Władysław Homenda, *Warsaw University of Technology, Poland*

Jun-ichi Imai, *Chiba Institute of Technology, Japan*

Makio Ishihara, *Fukuoka Institute of Technology, Japan*

Valentina Janev, *Mihajlo Pupin Institute, Serbia*

Khalide Jbilou, *Université du Littoral Côte d'Opale, France*

Ryszard Kozera, *The Univ of Western Australia, Australia*

Tomáš Kozubek, *Technical Univ of Ostrava, Czech Republic*

Marek Lampart, *Technical Univ of Ostrava, Czech Republic*

Christoph Lange, *Fraunhofer, Germany*

Saerom Lee, *Kagawa University, Japan*

Jens Lehmann, *University of Bonn, Germany*

Flaminia Luccio, *Ca' Foscari University of Venice, Italy*

Pavel Moravec, *Technical Univ of Ostrava, Czech Republic*

Romuald Mosdorf, *Technical University of Białystok, Poland*

Debajyoti Mukhopadhyay, *Maharashtra Inst. of Tech, India*

Yuko Murayama, *Iwate University, Japan*

Nobuyuki Nishiuchi, *Tokyo Metropolitan University, Japan*

Tadeusz Nowicki, *Military University of Technology, Poland*

Akihiro Ogino, *Kyoto Sangyo University, Japan*

Andrzej Pacut, *Technical University of Warsaw, Poland*

Jerzy Pejaś, *WPUT in Szczecin, Poland*

Marco Pistoia, *IBM Watson Research Center, USA*

Piotr Porwik, *University of Silesia, Poland*

Jan Preis-Heje, *Ghent University, Netherlands*

S P Raja, *Vel Tech University, Chennai, India*

Isabel Ramos, *University of Minho, Portugal*

Kenneth Regan, *University at Buffalo, USA*

Anirban Sarkar, *NIT, Durgapure, India*

Ewa Skubalska-Rafajłowicz, *Wrocław Univ of Tech, Poland*

Kateřina Slaninová, Tech. Univ of Ostrava, *Czech Republic*
Zenon Sosnowski, Białystok Univ of Tech, *Poland*
Jarosław Stepaniuk, Białystok Univ of Tech, *Poland*
Marcin Szpyrka, AGH Univ. of Sc and Tech, Kraków, *Poland*
Hiroshi Takenouchi, Fukuoka Institute of Technology, *Japan*
Andrea Torsello, Ca' Foscari University of Venice, *Italy*
Daishi Watabe, Saitama Institute of Technology, *Japan*
Qiang Wei, Tsinghua University, Beijing, *China*
Sławomir Wierzchoń, Polish Academy of Sc, Warsaw, *Poland*
Michał Woźniak, Wrocław University of Technology, *Poland*
Kaori Yoshida, Kyushu Institute of Technology, *Japan*
Sławomir Zadrozny, Polish Academy of Sciences, *Poland*

PURPOSE OF CONFERENCE

This conference aims to bring many important research streams together. Computer Information Systems and their applications in Image Analysis and Processing, Biometrics in both behavioral and physiological categories comprise researches in Information Processing Systems and Human Identification and Recognition Techniques. Therefore, researchers are encouraged to submit their contributions in both theoretical and practical aspects of the following Topics.

TOPICS

- Biometrics and Security

Preprocessing Methods, Feature Extraction, DNA and EEG, Multi-modal Biometric Methods, Medical Analysis, Border Control, Cryptosystems, Speech and Speaker Verification and all other topics on Human Description, Classification, Identification and Recognition; Kansei Engineering, Affective Systems and Human Emotion Measuring Techniques

- Computer Information Systems

Signal & Image Analysis and Processing, Computer Graphics and Vision, Object Classification and Recognition, Artificial Intelligence, Ambient Intelligence, Ubiquitous Systems, Mobile and Pervasive Computing, Security, Mobile Ad-hoc and Sensor Network Service-oriented Framework and Middleware

- Classification and clustering with applications

Classification, Clustering, SVM, Neural gas, Bayesian Models, Neural Networks

- Geoinformation Science and Technologies

Geovisualization, Spatial Data Analysis, Geoapplication

Development, Geoinformation Science and Technologies, Geocomputation

- Machine learning and High Performance Computing

Classification, Clustering, Deep Learning, SVM, Bayesian Models, Code Optimization, Large Scale Data Analysis, Cloud and Grid Computing

- Industrial Management and other Applications

Commerce, Engineering Economy and Cost Analysis, Engineering Education and Training, Global Manufacturing and Management, Human Factors, Information Processing and Engineering, Intelligent Systems, Manufacturing Systems, Operations Research, Production Planning and Control, Project Management, Quality Control and Management, Reliability and Maintenance Engineering, Safety, Security and Risk Management, Service Innovation and Management, Supply Chain Management, Systems Modeling and Simulation, Technology and Knowledge Management, Digital Twin Engineering.

IMPORTANT DATES

Paper submission: March 15, 2024

Decision Notification: April 26, 2024

Camera-ready & Registration: May 24, 2024

PREVIOUS CONFERENCES

CISIM 2023, Tokyo, Japan
<https://wi.pb.edu.pl/cisim2023/>

CISIM 2022 Colombia
<https://wi.pb.edu.pl/cisim2022/>

CISIM 2021 Elk, Poland
<https://wi.pb.edu.pl/cisim2021/>

CISIM 2020, Białystok, Poland
<https://wi.pb.edu.pl/cisim2020/>

CISIM 2019 Serbia
<https://wi.pb.edu.pl/cisim2019/>

CISIM 2018 Czech Republic
<https://wi.pb.edu.pl/cisim2018/>

CISIM 2017 Poland
<https://wi.pb.edu.pl/cisim2017/>

CISIM 2016 Vilnius
<http://www.uwb.lt/cisim2016/>

CISIM 2015 Warsaw
<http://www.mini.pw.edu.pl/cisim2015/>

CISIM 2014 Viet Nam
<http://cisim2014.tdt.edu.vn>

CISIM 2013 Poland
<http://home.agh.edu.pl/~saeed/cisim2013/>

CISIM 2012 Italy
<http://www.dsi.unive.it/CISIM/>

CISIM 2011 India
<http://cisim.cucse.org/>

CISIM 2010 Poland
<http://home.agh.edu.pl/~saeed/cisim/>

CISIM 2009 India
<http://www.mirlabs.org/cisim09/>

CISIM 2008 Czech Republic
<http://arg.vsb.cz/cisim/>

CISIM 2007 Elk
<http://private.wsfiz.edu.pl/mosdorf/cisim07/>

ACS-CISIM 2005-2006
<http://acs.wi.ps.pl>

CISIM 2003-2004 Elk
<http://private.wsfiz.edu.pl/mosdorf/cisim04/>

