

CONFERENCE PROGRAM



2023 7th International Conference on Vision, Image and Signal Processing

第七届视觉、图像与信号处理国际会议

November 24-26, 2023

Dali, China | 中国·大理

Organized by:



大数据系统计算技术国家工程实验室

National Engineering laboratory for Big Data System Computing Technology

- College of Computer Science and Software Engineering
- Szu National Engineering laboratory for Big Data System Computing Technology

WELCOME LETTER

Dear Distinguished Participants,

On behalf of our entire organizing committee, it is our great pleasure to invite you to the 2023 7th International Conference on Vision, Image and Signal Processing (ICVISIP 2023), which will be held from November 24 to November 26, 2023 in Dali, China, organized by College of Computer Science and Software Engineering, SZU and National Engineering laboratory for Big Data System Computing Technology.

The 7th ICVISIP will be the first post-pandemic edition, celebrating the return to an in-person experience. We are looking forward to welcome back the image, vision, and signal processing community in a single venue, after three very challenging years. We aim to prepare a high-quality international conference, joint with many new scientific activities, networking opportunities and enjoyable social events.

ICVISIP 2023 will provide you with a comprehensive technical program all the latest developments in research and technology for vision, image, signal processing and its applications. We are confident that this conference will offer a valuable opportunity to advance the state of the art and state of the practice in these areas.

We cordially call for your contributions and look forward to meeting each one of you at ICVISIP 2023. Thank you!

On behalf of organizing committee
Professor Linlin Shen
Shenzhen University

ORGANIZING COMMITTEE

★ International Advisory Committees

Abbas M Al-bakry---University of IT and Communications, Iraq

Magdy A. El-Moursy---Electronics Research Institute, USA

Mary Mehrnoosh Eshaghian-Wilner---University of Southern California, USA

Debnath Bhattacharyya---VK.L. University, India

Saida Bouakaz---Claude Bernard University Lyon, France

Jiri JAN---Brno University of Technology, Czech Republic

Jaime Sánchez-García---CICESE-DET, Mexico

Larbi Boubchir---University of Paris 8, France

★ General Chairs

Linlin Shen---Shenzhen University, China

Badrul Hisham bin Ahmad---Universiti Teknikal Malaysia Melaka, Malaysia

★ Conference Chairs

Shiliang Sun---East China Normal University, China

★ Conference Co-Chairs

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Zhiyu XiangZhejiang University, China

★ European Chair

Stefanos Kollias---National Technical University of Athens, Greece

★ Program Chairs

Shahram Minaei---Dogus University, Turkey

Ankit Chaudhary---Northwest Missouri State University, USA

ORGANIZING COMMITTEE

★ Program Co-Chairs

Jianjun Li---Hangzhou Dianzi University, China

Zhihui Lai---Shenzhen University, China

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Huiyu Zhou---University of Leicester, UK

★ Session Chair

Xuechen Li---SZU, China

★ Award Chair

Jie Zhou---SZU, China

★ Publicity Chairs

Assem Mousa---ASDF Africa president/e-commerce tech manager

Christian Esposito---University of Salerno, Italy

★ Finance Chair

Froilan D. Mobo---Philippine Merchant Marine Academy, Philippines

★ Keynote Speech Chairs

Xiongbiao Luo---Xiamen University, China

Miroslav Voznak---VSB-Technical University of Ostrava, Czech Republic

GENERAL INFORMATION

★ Registration

The registration desk will be situated at Holiday Inn Express Dali Xiaguan during the following time: 10:00–18:00, Friday, November 24, 2023.

★ Remarks

Conference will provide free coffee breaks, lunch and dinner during conference days, beyond the fixed menu will be on personal bills.

★ A Polite Request to All Participants

Participants are requested to join this conference in a timely fashion. Presenters are reminded that the time slots should be divided fairly and equally by the number of presentations, and that they should not overrun. The session chairs are asked to assume this timekeeping role and to summarize key issues in each topic.

★ Dress Code

Business Casual, formal, or national custom is recommended.

★ Certificates

Certificates of Best Paper & Best Student Paper & Best Poster & Best Student Poster are set up in our conference, Excellent papers have the opportunity to win these awards, and Best Poster & Best Student Poster Awards will be selected from the poster sessions.

★ Preparation for Oral Presentation

All the meeting rooms are equipped with a screen, an LCD projector, and a laptop computer installed with Microsoft Power Point. You will be able to insert your USB flash drive into the computer and double check your file in PowerPoint. We recommend you to bring two copies of the file in case that one fails. You may also connect your own laptop to the provided projector; however please ensure you have the requisite connector. Regular Oral Session: about 10–15 minutes of Presentation.

★ Preparation for Poster

Preparation for Poster Presentation Materials Prepared by the Conference Organizer: Adhesive tapes.

Materials Prepared by the Presenters: Home-made poster (s). Material: not limited, can be posted on the canvases. Recommended poster size: weight*height: A0 (841mm×1189mm).

CONFERENCE

VENUE

Conference Venue: Holiday Inn Express Dali Xiaguan

会议地点：大理下关智选假日酒店

Address: B2 Building Dianxi Commercial, Dali,
Yunnan, China, 671000

酒店地址：大理下关建设路滇西商务中心B2栋

★ 大理凤仪机场 Dali Fengyi Airport

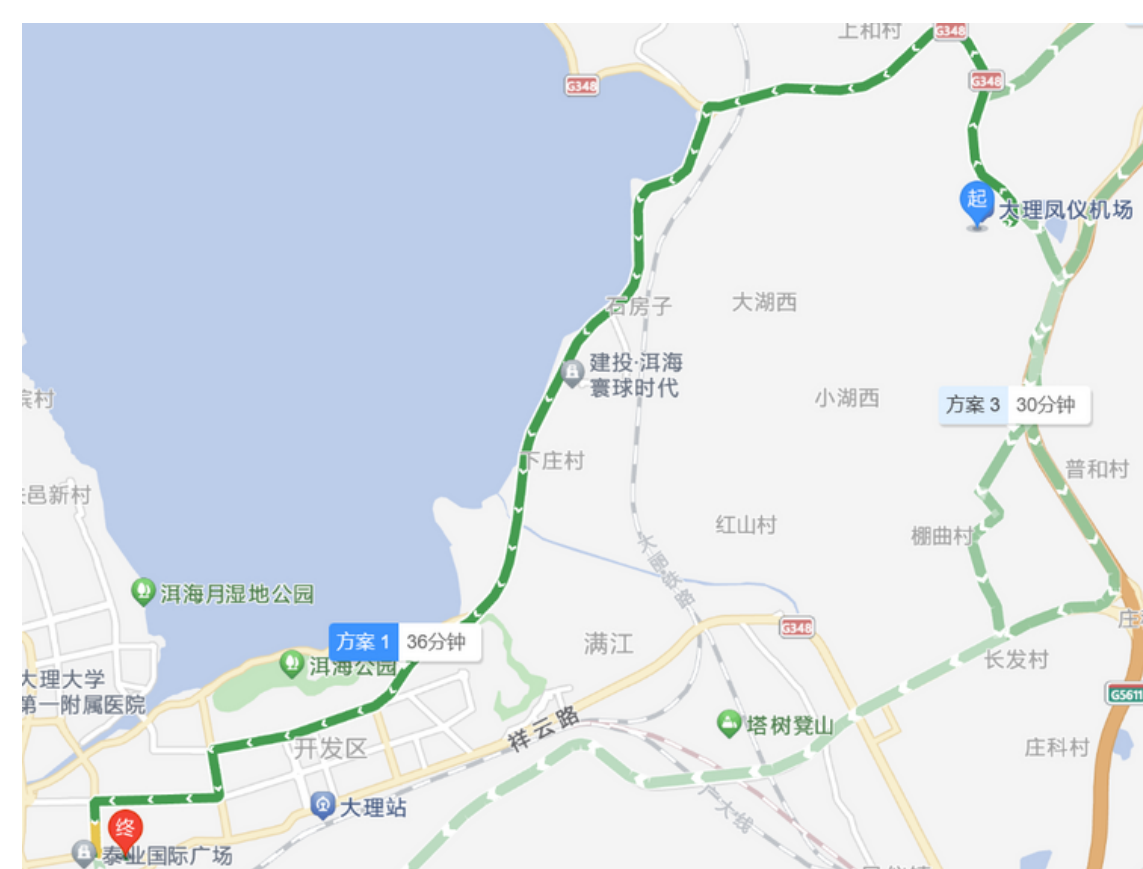
驾车距离17.6公里,约36分钟 17.6 kilometers, about 36 minutes drive

★ 大理火车站 Dali Railway Station

驾车距离4.5公里,约19分钟 4.5 kilometers, about 19 minutes drive



Railway Station



Airport

CONFERENCE

PROGRAM

<p>Nov. 24, 2023 (Friday) 10:00-18:00 Hotel Lobby, 1st Floor</p>	<p>10:00-18:00---Onsite Registration</p> <hr/> <p>17:00-18:00---Technical Test Session (For online participants)</p>
<p>Nov. 25, 2023 (Saturday) Multi- function Room II</p>	<p>09:00-18:00---Conference Session</p>
<p>Nov.26, 2023 (Sunday)</p>	<p>Dili Ancient Town Tours / Social Events</p> <p>Notice: The participants who are interested in this activity can go for a Dili Ancient Town Tour and other activities, please note all the expenses are at their own expense.</p>

CONFERENCE

PROGRAM —Nov 25, 2023 (Saturday)—GMT+8

09:00-09:15	Opening Ceremony—Prof. Linlin Shen
09:15-09:55	Keynote Speaker I---Prof. Witold Pedrycz
09:55-10:35	Keynote Speaker II---Prof. Minling Zhang
10:35-10:55	Morning Tea Break & Free Discussion
10:55-11:55	Keynote Speaker II---Prof. Vladan Devedzic
11:55-13:30	Lunch Time
13:30-15:45	Oral Session
15:45-16:15	Late oral registration will be scheduled during this period
16:15-16:30	Afternoon Tea Break & Free Discussion
16:30-16:45	Poster Session
16:45-18:00	Video Session I
18:00-18:30	Award & Closing Ceremony
18:30-20:00	Video Session II & Video Session III
	Dinner Time

Keynote Sessions

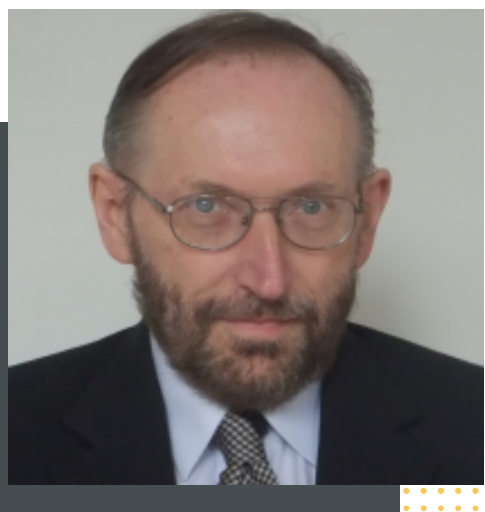
November 25, 2023 (Saturday)

09:15–09:55

Prof. Witold Pedrycz—IEEE Life Fellow, University of Alberta, Edmonton, Canada

Speech Title: Credibility of Machine Learning Architectures: Granular Computing Developments

Biography:



Witold Pedrycz (IEEE Life Fellow) is Professor in the Department of Electrical and Computer Engineering, University of Alberta, Edmonton, Canada. He is also with the Systems Research Institute of the Polish Academy of Sciences, Warsaw, Poland. Dr. Pedrycz is a foreign member of the Polish Academy of Sciences and a Fellow of the Royal Society of Canada. He is a recipient of several awards including Norbert Wiener award from the IEEE Systems, Man, and Cybernetics Society, IEEE Canada Computer Engineering Medal, a Cajastur Prize for Soft Computing from the European Centre for Soft Computing, a Killam Prize, a Fuzzy Pioneer Award from the IEEE Computational Intelligence Society, and 2019 Meritorious Service Award from the IEEE Systems Man and Cybernetics Society. His main research directions involve Computational Intelligence, Granular Computing, and Machine Learning, among others.

Professor Pedrycz serves as an Editor-in-Chief of Information Sciences, Editor-in-Chief of WIREs Data Mining and Knowledge Discovery (Wiley), and Co-editor-in-Chief of Int. J. of Granular Computing (Springer) and J. of Data Information and Management (Springer).

Abstract:

Over the recent years, we have been witnessing numerous and far-reaching developments and applications of Machine Learning (ML). Efficient and systematic design of their architectures is important. Equally important are comprehensive evaluation mechanisms aimed at the assessment of the quality of the obtained results. The credibility of ML models is also of concern to any application, especially the one exhibiting a high level of criticality commonly encountered in autonomous systems. With this regard, there are a number of burning questions: how to quantify the quality of a result produced by the ML model? What is its credibility? How to equip the models with some self-awareness mechanism so careful guidance for additional supportive experimental evidence could be triggered?

Proceeding with a conceptual and algorithmic pursuits, we advocate that these problems could be formalized in the settings of Granular Computing. We show that any numeric result be augmented by the associated information granules and the quality of the results is expressed in terms of the characteristics of information granules such as coverage and specificity. Different directions are covered including confidence/ prediction intervals, granular embedding of ML models, and granular Gaussian Process models. Several representative and direct applications in the realm of transfer learning, knowledge distillation, and federated learning are discussed.

Keynote Sessions

November 25, 2023 (Saturday)

09:55–10:35

Prof. Minling Zhang—Southeast University, China
Speech Title: Research on Multi-Dimensional Classification

Biography:



Witold Pedrycz (IEEE Life Fellow) is Professor in the Department of Electrical and Computer Engineering, University of Alberta, Edmonton, Canada. He is also with the Systems Research Institute of the Polish Academy of Sciences, Warsaw, Poland. Dr. Pedrycz is a foreign member of the Polish Academy of Sciences and a Fellow of the Royal Society of Canada. He is a recipient of several awards including Norbert Wiener award from the IEEE Systems, Man, and Cybernetics Society, IEEE Canada Computer Engineering Medal, a Cajastur Prize for Soft Computing from the European Centre for Soft Computing, a Killam Prize, a Fuzzy Pioneer Award from the IEEE Computational Intelligence Society, and 2019 Meritorious Service Award from the IEEE Systems Man and Cybernetics Society. His main research directions involve Computational Intelligence, Granular Computing, and Machine Learning, among others.

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Abstract:

Min-Ling Zhang received the BSc, MSc, and PhD degrees in computer science from Nanjing University, China, in 2001, 2004 and 2007, respectively. Currently, he is a Professor at the School of Computer Science and Engineering, Southeast University, China. His main research interests include machine learning and data mining. In recent years, Dr. Zhang has served as the General Co-Chairs of ACML'18, Program Co-Chairs of PAKDD'19, CCF-ICAI'19, ACML'17, CCFAI'17, PRICAI'16, Senior PC member or Area Chair of AAAI 2022–2023, IJCAI 2017–2023, KDD 2021–2023, ICDM 2015–2022, etc. He is also on the editorial board of IEEE Transactions on Pattern Analysis and Machine Intelligence, ACM Transactions on Intelligent Systems and Technology, Science China Information Sciences, Frontiers of Computer Science, Machine Intelligence Research, etc. Dr. Zhang is the Steering Committee Member of ACML and PAKDD, Vice Chair of the CAAI Machine Learning Society, standing committee member of the CCF Artificial Intelligence & Pattern Recognition Society. He is a Distinguished Member of CCF, CAAI, and Senior Member of AAAI, ACM, IEEE.

Keynote Sessions

November 25, 2023 (Saturday)

10:55–11:55

Prof. Vladan Devedzic—University of Belgrade, Belgrade, Serbia

Speech Title: I've been around for a long, long year: AI in image processing and image generation

Biography:



Vladan Devedzic is a Professor of Computer Science and Software Engineering at the University of Belgrade, Faculty of Organizational Sciences, Belgrade, Serbia. His major long-term professional goal is a continuous effort to bring close together the ideas from the broad fields of Artificial Intelligence (AI) and Software Engineering. To this end, his current efforts and research interests are oriented towards practical engineering aspects of developing intelligent software systems that reflect the latest developments in AI and also towards foundational and epistemological aspects of AI. He has authored/co-authored more than 370 research papers (about 60 of them have been published in internationally recognized journals by publishers such as ACM, IEEE, Elsevier, etc.), six books (2 of them are monographs published by Springer), and several chapters in books on intelligent systems and software engineering edited by distinguished scientists. Vladan Devedzic has also developed several practical systems and tools, and actively participates and has participated in a number of other research and development projects (funded by EU programs like FP6, FP7, SEE-ERA, Erasmus+, LLP, etc.). He is the founder and the Chair of the GOOD OLD AI research network. Since 2021, he is a Corresponding Member of the Serbian Academy of Sciences and Arts (SASA).

Abstract:

The recent rapid development of Artificial Intelligence (AI), especially Machine Learning (ML), along with hardware advances and the growth of digital imaging technologies, has brought exciting progress in the fields of image processing, image generation, video processing, video generation, and computer vision in general. More specifically, advanced AI technologies and models have been used in image-to-image translation, sketch-to-image generation, conditional image generation, text-to-image generation, panoramic image generation, and scene graph image generation. The introductory part of this talk briefly surveys advanced AI techniques and tools underlying these applications, focusing primarily on image processing and image generation – deep learning techniques such as convolutional neural networks (CNNs) and generative adversarial networks (GANs) that can learn the underlying distribution of images and generate new images that are similar to the training data.



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Organized by:



大数据系统计算技术国家工程实验室

National Engineering Laboratory for Big Data System Computing Technology