Conference Introduction

Artificial intelligence has unimaginable potential. Within the next couple of years, it will revolutionize every area of our life. The technology also started to transform medicine with great vigor. In the last couple of years, the number of AI-related studies, research projects, university courses, and companies has grown exponentially, not to speak about the rapid improvement in the precision of the technology. Artificial intelligence-powered medical technologies are rapidly evolving into applicable solutions for clinical practice.2023 4th International Symposium on Artificial Intelligence for Medical Sciences (ISAIMS 2023) will be held during October 27-29, 2023 in Chengdu, China. ISAIMS is an annual conference that has been held successfully for three years and attracted more than 500 scholars and experts. ISAIMS 2023 is a hybrid conference combing both in-person and virtual experiences. ISAIMS 2023 mainly covers topics on Frontier technologies of AI, biometrics, intelligent medical robots, intelligent image recognition, intelligent diagnosis and treatment, medical artificial intelligence in the post-epidemic era, etc.

ISAIMS 2023 welcomes all high-quality research papers and presentations from related research fields. The conference will invite distinguished speakers to deliver keynote speeches and invited talks. The idea of the conference is for scientists, scholars, engineers, and students from all over the world to present ongoing research activities, and hence strengthen existing partnerships and foster new collaborations.

第四届医学人工智能国际学术会议（ISAIMS2023）将于 2023 年 10 月 27-29 日召开。会议自 2020 年至今已经成功举办三届，吸引了来自海内外相关领域学者 500 余名。本届会议将继续围绕人工智能在医学领域的最新研究成果，为来自国内外高等院校、科学研究所、企事业单位的专家、教授、学者、工程师等提供一个分享专业经验，扩大专业网络，面对面交流新思想以及展示研究成果的国际平台，探讨本领域发展所面临的关键性挑战问题和研究方向，以期推动该领域理论、技术在高校和企业的发展和应用，也为参会者建立业务或研究上的联系以及寻找未来事业上的全球合作伙伴。

Organization

Organizer

VU UNIVERSITY AMSTERDAM

荷兰阿姆斯特丹自由大学

Co-organizers

首都医科大学、河南中医药大学 、上海中医药大学、
JAIMS 期刊编辑部、河南省中西医结合学会肿瘤专委会、
中国抗癌协会中西整合食管癌专委会、郑州大学附属肿瘤医院、AEIC 学术交流中心

Supported BY

北京智通智慧科技有限公司
好心情智慧医疗

Committee

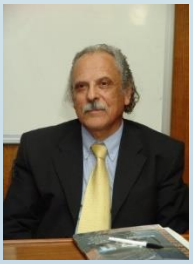
Conference Chair

Prof. Zhisheng Huang
Free University (VU), Amsterdam, The Netherlands
EiC of Journal of Artificial Intelligence for Medical Sciences

Organizing Committee Chair

Prof. Xingpeng Jiang
Central China Normal University, China

Technical Program Committee Chair



Prof. Abdel-Badeeh M. Salem
Ain Shams University, Cairo, Egypt

Publication Chair

Prof. Jinguang Gu
Wuhan University of Science and Technology, China

Prof. Dan Xie
Hubei University of Chinese Medicine, Wuhan, China

Organizing Committee

Prof. Bingxiang Yang, Wuhan University, China
Prof. Yanchun Zhang, Victoria University, Australia
Prof. Jiao Li, Institute of Medical Information, Chinese Academy of Medical Sciences, China
Prof. Xue Li, University of Queensland (UQ) in Brisbane, Australia
Prof. Ning Zhong, Maebashi Institute of Technology, Japan
Prof. Yunkai Zhai, Zhengzhou University, China
Prof. Hongying Zan, Zhengzhou University, China
Prof. Jiangang Shen, School of Chinese Medicine, University of Hong Kong, China
Prof. Hongmin Cai, South China University of Technology, China
Assoc. Prof. Chao Tong, Beihang University, China
Assoc. Prof. Bingxiang Yang, Wuhan University, China
Prof. Li Hou, The Institute of Medical Information (IMI) & Library, CAMS & PUMC, China
Dr. Guodong Zhou, Zhejiang University, China

International Technical Program Committee

Prof. Atilla Elçi, Hasan Kalyoncu University, Turkey
Prof. D. P. Acharjya, School of Computing Sciences, VIT University, India
Prof. Jose Alberto Maldonado, Technical University of Valencia, Valencia, Spain
Prof. Mar Marcos, Jaume I University, Valencia, Spain
Ashraful Islam, University of Louisiana at Lafayette, USA
Assistant Prof. Atul Babbar, SGT University, India
Assistant Prof. Rushit Dave, University of Wisconsin-Eau Claire, United States
Assistant Prof. HIREN THAKKAR, SRM University, India
Hao Dang, Henan University of Chinese Medicine, Zhengzhou, China
Xu Sun, Henan Cancer Hospital, Zhengzhou, China
Satish Gajawada, IIT Roorkee Alumnus, India
Md Rafiqul Islam, University of Technology Sydney, Australia

Conference Agenda

2023 年 10 月 27 日/ 27th October, 2023	
13: 00 - 17: 00	Registration(报到注册) 1st Floor, Atour Hotel (Chengdu Taikoo Li)
2023 年 10 月 28 日/ 28th October, 2023	
Keynote Speeches Jinxiu Hall(锦绣厅)，1st Floor ZOOM conference ID：TBD　　Password：TBD	
Session Chair：TBD（09:00-12:00）	
09: 00 - 09: 10	**Opening Address** Prof. Zhisheng Huang, Free University (VU), Amsterdam, The Netherlands
嘉宾报告 / Keynote speeches	
09: 10 – 09: 50	**Speech Title: Artificial Intelligence in Bioimage Analysis** Prof. Erik Meijering, University of New South Wales, Australia
09: 50 – 10: 30	**Speech Title: Medical Image Processing Methods and Clinical Applications** Prof. Yao Lu, Sun Yat-sen University, China
10: 30 – 10: 35	**Photography & Tea Break**
10: 35 – 11: 15	**Speech Title: TBD** Prof. Shaofu Lin, Beijing University of Technology, China
11: 15 – 11: 55	**Speech Title: TBD** Assoc. Prof. Pier Paolo Piccaluga, School of Medicine, Bologna University, Italy
Oral Session I (14:00-) Jinxiu Hall(锦绣厅)，1st Floor	
14: 00 - 14: 15	**Oral 1-1：Analysis of the mechanism of antipsychotics induced abnormal ECG using Medical Ontologies and Medical Knowledge Graphs** Hongyun Qin 秦虹云, Tongji University School of Medicine, China
14: 15 - 14: 30	**Oral 1-2：Study on Rules of Medication in Breast Cancer Based on Literature Information Extraction** Kehan Zhen 镇可涵, Hubei University of Chinese Medicine, China
14: 30 - 14: 45	**Oral 1-3：Research on Intelligent Protection Technology for Dental Clinic Environment** Fan Zhang 张帆, Guizhou University, China

14: 45 - 15: 00	**Oral 1-4：Research on Intelligent Protection Technology for Dental Clinic Environment** Dandan Chen 陈丹丹, Fuzhou Medical College of Nanchang University, China
15: 00 - 15: 15	Oral 1-5:
15: 00 - 15: 30	Tea Break
	Keep Updating
Oral Session II (Online) (14:00-)	
14: 00 - 14: 15	**Oral 2-1: Screening of psoriasis core genes and biofunctional analysis based on bioinformatic analysis** Xiaoyuan He 何晓园, Changzhi Medical College, China
14: 15 - 14: 30	**Oral 2-2: Classification of Red Blood Cell Aggregation Based on Statistical Features of Ultrasonic Radiofrequency Echo Signals and Subspace K-nearest Neighbor Classifier** Hong Tang 唐红, Yunnan University, China
14: 30 - 14: 45	**Oral 2-3: Predicting Outcomes of Hepatitis using AutoML and XGBoost** Hao Wang 汪昊, Ratidar Technologies LLC
14: 45 - 15: 00	**Oral 2-4: A Two-Stage Coronary Artery Stenosis Detection Method** Panxiang Liu 刘盼想, Donghua University, China
15: 00 - 15: 15	**Oral 2-5: Assistive Classification Modeling of Laryngeal Squamous Cell Carcinoma based on data expansion and SSA-SVM** Chunni Ren 任春妮, Inner Mongolia University of Science & Technology, China
15: 00 - 15: 30	**Oral 2-6: Improved Super-harmonic Imaging of Ultrasound Contrast Agents Based on ICEEMDAN** Yangchen Fu 付阳晨, Yunnan University, China
15: 30- 15: 45	**Oral 2-7: Hemodynamic simulation of artery blood vessel plaque typing and the effect of bifurcation angle on plaque** Ai Chen 陈艾, The People's Hospital of Nanchuan, China
15: 45 - 16: 00	**Oral 2-8:**

2023 年 10 月 28 日/ 28th October, 2023 海报展示/Poster Presentations
Poster 1：Numerical Simulation and Verification of Thromboembolism Treatment Effect Based on Different Vascular Compression Degrees Hongyu Cheng 程鸿宇, Wenzhou University, China
Poster 2：GLFSU-Net: Global and Local Features Fusion Using Separable U-Net to Improve Anatomical Landmark Detection in 2D X-Ray Radiography Images Jixiang Ding 丁纪翔, School of Computer Science and Technology, Huaqiao University,China
Poster 3：Medication Patterns of Traditional Chinese Medicine for Acute Mastitis Treatment: A Text Data Mining Approach on Sheng Ji Zong Lu Dongdong Wei 韦冬冬, Shandong University of Traditional Chinese Medicine, China
Poster 4：A Gastrointestinal Endoscope Navigation Method with PoseLSTM Feifan Lin 林飞凡, Xiangtan University, China
Poster 5：Differentiable Attention Unet-like Nerual Architecture Search for Multimodal Magnetic Resonance Imaging-based Glioma Segmentaion Jing Qin 秦璟, University of Electronic Science and Technology of China
Poster 6：Progress of artificial intelligence ultrasound in cancer diagnosis Ying Huang 黄莺, Chongqing People's Hospital, China
Poster 7：Dynamic fMRI specific complexity classification of MRI-negative temporal lobe epilepsy combined with machine learning Hao Cheng 程浩, Hebei University of Technology, China
Poster 8：Progress and prospect of artificial intelligence in the diagnosis and treatment of liver cancer Jianhao 余剑豪, Jilin International Studies University, China
Poster 9：Design and research of strabismus correction therapy game system based on eye tracking technology Baizhen Zhu 朱柏臻, Xiamen University of Technology, China
Poster 10：A four-class classification of ocular diseases based on multi-model comparative training Chaoran Sun 孙超然, Nankai University Binhai College, China
Poster 11：A composite quality assessment of traditional Chinese medicine tongue images based on shallow and deep features fusion Tengda Zhang 张腾达, Guangzhou University of Chinese Medicine, China
Poster 12：Noninvasive evaluation platform for portal hypertension-convolutional neural network deep learning algorithm for diagnosing portal hypertension Junhao Ping 平君豪, The First School of Clinical Medicine, Lanzhou University, China
Poster 13：Intelligent orthopedic traction bed - a pioneer of intelligent medical devices with intelligent diagnosis and treatment functions under the background of medical big data Ge Xu 徐歌, The First School of Clinical Medicine, Lanzhou University, China
Poster 14：Identification and prognostic modeling of clinical factors associated with Gastric Cancer based on the TCGA database Siyue Fan 凡思月, Shanghai Institute of Technology, China

Poster 15：Preoperative Glioma Grading Based on Hierarchical Information

Fuchun Liu 刘富春, South China University of Technology, China

Opening Address

Prof. Zhisheng Huang

Free University (VU), Amsterdam, The Netherlands

Professor Zhisheng Huang is a tenured senior researcher at the Department of Artificial Intelligence of VU University Amsterdam, the Netherlands, and a full professor at the School of Computer Science and Engineering of Wuhan University of Science and Technology, China. Prof. Huang obtained a doctorate degree in computer science and logic at the University of Amsterdam in 1994. He has published more than 200 papers, and more than 9 books in Artificial Intelligence, logics, and multimedia. He received the best paper award for the paper entitled “Feasibility Estimation for Clinical Trials” at the 2014 International Conference on Health Informatics (HEALTHINF/BIOSTEC).

Keynote Speech 1

Prof. Erik Meijering

University of New South Wales, Australia

Erik Meijering is a Professor of Biomedical Image Computing in the School of Computer Science and Engineering (CSE), University of New SouthWales (UNSW), Sydney, Australia. His research interests are in Computer Vision and Artificial Intelligence for Quantitative Biomedical Image Analysis, on which he has published more than 160 peer-reviewed papers. He received his MSc degree in Electrical Engineering from Delft University of Technology (1996) and his PhD degree in Medical Image Analysis from Utrecht University (2000), both in the Netherlands. Before moving to UNSW (in 2019), he was a Postdoctoral Fellow (2000-2002) at the Swiss Federal Institute of Technology in Lausanne, Switzerland, and an Assistant Professor (2002-2008) and later Associate Professor (2008-2019) at Erasmus University Medical Center in the Netherlands. He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) and served on the IEEE SPS Technical Committee on Bio Imaging and Signal Processing (BISP), the IEEE EMBS Technical Committee on Biomedical Imaging and Image Processing (BIIP), and the cross-Society IEEE Life Sciences Technical Community (LSTC). He also was/is an Associate Editor for the IEEE Transactions on Medical Imaging (since 2004), the International Journal on Biomedical Imaging (2006-2009), the IEEE Transactions on Image Processing (2008-2011), and Biological Imaging (since 2020), has co-edited various journal special issues and co-organized conferences in the field, notably the IEEE International Symposium on Biomedical Imaging (ISBI) and the International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), and served/serves on a great variety of other international conference, advisory, and review boards.

Speech Title: Artificial Intelligence in Bioimage Analysis

Advanced biomedical imaging technologies play a key role in both healthcare and the life sciences, as they allow visualizing the structure and function of organs, tissues, cells, and even single molecules with very high sensitivity and specificity. Biomedical imaging devices typically generate vast amounts of multiparametric spatiotemporal imaging data, containing much more relevant and subtle information than can be processed by humans, even if they are experts. Hence there is an ever-growing need for computational methods to analyze these data automatically, not only to cope with the sheer volume of the image data sets, but also to reach a higher level of accuracy, objectivity, and reproducibility. To this end we develop advanced computer vision methods for a wide range of problems, including restoration, enhancement, super-resolution, and registration of images, as well as detection, segmentation, quantification, classification, and tracking of objects in these images. To cope with the high complexity of these problems, we rely increasingly on machine learning approaches for this, in particular deep learning using artificial neural networks. In addition to developing new methods, we are strong proponents of evaluating and benchmarking methods thoroughly and making them publicly available in the form of user-friendly software tools. This talk will highlight some of the methods we have been developing, especially for the analysis of cellular and intracellular dynamic processes and morphologies, to facilitate biological studies of the molecular mechanisms of life in health and disease.

Keynote Speech 2

Prof. Yao Lu

Sun Yat-sen University, China

Speech Title: Medical Image Processing Methods and Clinical Applications

Mathematical image processing methods have extensive applications in the field of medical imaging. In recent years, many traditional mathematical image processing methods have been replaced by deep learning methods in practical applications. However, there are many ideas in mathematical image processing methods that can be integrated with deep learning frameworks, including sparsity, multi-scale, multi-objective optimization, etc. In this talk, we first review the image processing methods in different tasks in the field of medical imaging, and then discuss the clinical applications of medical image processing methods based on practical problems.

Keynote Speech 3

Prof. Shaofu Lin

Beijing University of Technology, China

Speech Title: TBD

Keynote Speech 4

Assoc. Prof. Pier Paolo Piccaluga

School of Medicine, Bologna University, Italy

Pier Paolo Piccaluga, MD, Ph.D. is currently an Associate Professor of Pathology at the Department of Experimental, Diagnostic and Specialty Medicine, Bologna University School of Medicine—Institute of Hematology and Medical Oncology, and executive physician at The Biobank of Research, IRCCS S. Orsola-Malpighi Hospital. In 2018, he was appointed to teaching posts at the Queen Mary University of London and Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya. He is the author of several international publications in journals such as Nature Medicine, Journal of Clinical Investigation, Journal of Experimental Medicine, Journal of Clinical Oncology, Blood, Lancet Oncology, and Lancet Infectious Diseases. Dr. Piccaluga is ranked a Top Italian Scientist (TIS) by VIA-Academy.

Speech Title: TBD

Instructions for Presentations

Oral Presentation

1. Timing: a maximum of 15 minutes total, including speaking time and discussion. Please make sure your presentation is well timed. Please keep in mind that the program is full and that the speaker after you would like their allocated time available to them.
2. You can use CD or USB flash drive (memory stick), make sure you scanned viruses in your own computer. Each speaker is required to meet her/his session chair in the corresponding session rooms 10 minutes before the session starts and copy the slide file (PPT or PDF) to the computer.
3. It is suggested that you email a copy of your presentation to your personal inbox as a backup. If for some reason the files can't be accessed from your flash drive, you will be able to download them to the computer from your email.
4. Please note that each session room will be equipped with a LCD projector, screen, point device, microphone, and a laptop with general presentation software such as Microsoft PowerPoint and Adobe Reader. Please make sure that your files are compatible and readable with our operation system by using commonly used fronts and symbols. If you plan to use your own computer, please try the connection and make sure it works before your presentation.
5. Movies: If your PowerPoint files contain movie, please make sure that they are well formatted and connected to the main files.

Poster Presentation

1. Maximum poster size is 59.4 CM wide by 84.1 CM high（A1）.
2. Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart.
3. Please note that during your poster session, the author should stay by your poster paper to explain and discuss your paper with visiting delegates.

Notice for Participants

欢迎各位专家学者们参加第四届医学人工智能国际学术会议（ISAIMS2023），为了您在会议期间方便顺利，请注意以下事项：

Welcome all leaders and researchers to the 2023 4th International Symposium on Artificial Intelligence for Medical Sciences(ISAIMS 2023). For your convenience during the conference, please pay attention to the following concerns:

线上参会：

1. 会议将通过线上及线下同步召开，线上参会请先下载 **ZOOM** 最新版。
   下载链接：https://zoom.us/download
2. 参会者可通过以下**任意一个**方式进入线上会议室：（**请将名称改为自己的姓名拼音。**）
   a. 输入**对应的会议 ID 和密码**，参见**会议日程**表格。
   b. 点击链接以启动 ZOOM，直接进入会议室。

会场链接:

TBD

会议号：**TBD** 密码：**TBD**

1. The conference will be held on **ZOOM Meeting**. To participate online, please download the latest version of ZOOM first
   Download link: https://zoom.us/download

2.You can access the online conference room by **either** of the following two ways: (**Please use your real name in the meeting room.**)

a. Input the ZOOM Meeting ID and the Password respectively, which is shown on the conference agenda.

OR

b. Click the link:

Main Conference: TBD

Conference ID：TBD Password: TBD

2.参会期间，如需提问，可待演讲完毕后，在对话框中发送“2”，主持人将会为您解除静音。

2. During the conference, if you would like to ask questions to the speaker, please send number “2” in the chat box after the speech. The host will unmute you.

线下参会：

1.会议地址：成都太古里河畔亚朵酒店-锦绣厅（1 楼）

2.酒店信息：成都太古里河畔亚朵酒店（四川省 成都 成华区望平街滨河路 8 号）

1. Address: Atour Hotel (Chengdu Taikoo Li)

2. Hotel information: No. 8 Wangping Binhe Road, Chenghua District, Chengdu, Sichuan, China