The 18th International Conference on Computer Science and Education (ICCSE 2023)

Xiamen University Malaysia, Selangor Darul Ehsan. Dec 1-7, 2023.

Call for Papers

Brief History

Since its establishment in 2006, the International Conference on Computer Science and Education (ICCSE) has been held in various locations including Xiamen, Wuhan, Kaifeng, Nanning, Hefei, Lishui, Singapore, Melbourne, Sri Lanka, Vancouver, Cambridge, Nagoya, Houston, Delft, Lancaster, and Ningbo. Throughout its 17-year history, ICCSE has grown into a significant gathering and communication event for computer education research in higher education institutions worldwide.

A multitude of renowned international experts, including IEEE Fellows and Academicians, in the fields of *Computer Science, Educational Technology, Science and Engineering* have actively participated in these events and delivered exceptional keynote speeches. Distinguished scholars, scientists, technologists, engineers, and professionals from leading universities of higher education, research institutes, and enterprises have contributed with their publications and presentations. Through recommendation, numerous high-quality papers have been published in well-regarded journals. ICCSE has successfully established a platform for exchanging ideas and fostering collaboration among industries, universities, and research institutes.

About ICCSE 2023

We are pleased to announce that the 18th International Conference on Computer Science & Education (ICCSE 2023) will take place in Xiamen University Malaysia from December 1-7, 2023. The event is organized by the Computer Education Research Association of Chinese Universities (CERACU) and hosted by Xiamen University Malaysia.

The conference program features a diverse range of technical presentations, including refereed papers, special workshops, invited sessions, poster sessions, panel discussions, and a special journal contributor session. The proceedings of ICCSE will be published by Springer, a highly reputable publisher. Additionally, selected papers from the conference will be recommended for publication in relevant, high-quality journals. The special journal contributor session provides an invaluable opportunity for conference paper authors to engage with editors of recommended EI-indexed international journals, who will share procedures and tips for journal paper submission.

Conference Theme

Empowering Development of High Quality Education with Digitalization

General Scope

Artificial Intelligence (AI) and Machine Learning (ML) in Education

Large Scale Model

Artificial Intelligence Generated Content

Internet of Things (IoT) and Smart Classrooms

Gamification and Game-Based Learning

Augmented Reality (AR) and Virtual Reality (VR) in Education

Digital Assessment and Evaluation

Personalized Learning and Adaptive Learning Systems

Cloud Computing and Education

Mobile Learning and Microlearning

Learning Analytics and Educational Data Mining

Educational Robotics and Automation

Blockchain and Education

Social Media and Learning Communities

Online Learning and Massive Open Online Courses (MOOCs)

Digital Citizenship and Cybersecurity in Education

Pedagogical Strategies for Smart Education and Digitalization.

Invited Session

1. Curriculum Reform for Introduction to Computer Science combine Artificial Intelligence

Session Chair: Prof LUO Juan, Hunan University, China. (juanluo@hnu.edu.cn)

Co-chair: Prof. ZHAO Huan, Hunan University, China. (hzhao@hnu.edu.cn)

Co-chair: Prof. CAI YuHui, Hunan University, China. (rj_cyh@hnu.edu.cn)

Abstract: Information technology and artificial intelligence technology have been more and more integrated with various disciplines including literature, social science and engineering. How to provide corresponding course content and tools for the Introduction to Computer Science and Introduction to Artificial Intelligence to adapt to this change is an urgent problem in the field of computer education question. The purpose of this session is to provide a forum to exchange experience and achievements in curriculum construction and reform.

Topics include but are not limited to:

- Exploration and practice of the teaching system construction of Introductory Computer Science oriented to the integration of disciplines;
- Exploration and practice of the teaching system construction of the Introduction to Artificial Intelligence oriented towards the integration of disciplines;
- Reform of teaching methods, tools and models;
- Evaluation of student learning outcomes.

2. Topic: VR, AR, and MR Technologies in Education

Chair: Carsten Lecon, Aalen University, Germany. (carsten.lecon@hs-aalen.de)

Abstract: Virtual 3D Learning Environments are not only used for the visualization of complex learning matters, but get increasing importance in learning environments (currently, accelerated by the Corona pandemic). Students for example act as avatars in artificially generated worlds, in which they learn, develop, and present simultaneously. Full immersion is possible by so called head mounted displays. Nowadays, these are less

expensive, so that many users can use this technique. Furthermore, Augmented Reality (AR) und Mixed Reality (MR) applications become more and more important in industrial application – and also in learning environments.

Topics are included but not limited to:

- Virtual 3D Environments for collaborative learning
- Conversational Agents in virtual environments
- AR and VR Learning Settings for Higher Education and School Education
- Teaching VR/ AR/ MR techniques in Higher Education
- Didactic and pedagogical aspects when designing VR/ AR/ MR applications
- Evaluation of AR/ VR / MR applications
- Kinetosis in VR environments

3. Mathematical Model for Biosignals and Biomedical Imaging

Chair: Hiroki TAKADA, University of Fukui, Japan. (takada@u-fukui.ac.jp)

Abstract: In today's world, academically examining the safety of viewing them is necessary where digital images and videos are flooding our homes. In this section, the new development of the biosignals and the biomedical Imaging are introduced and utilized in this field. Mathematical models including the artificial intelligence have been regarded as fundamental technique for the bio-signal. In connection with 5G/beyond 5G technology and networks, the biosignals and their utilization have been attracting attention. The application of the AI, which has made remarkable progress in recent years, to this field will also be discussed.

This invited session will collect papers of the following subjects, but not limited to:

- Machine Learning/AI
- Biomedical Imaging
- Computer–Human Interact
- Control and Communication
- Deep Learning
- Mechatronics and Robotics
- Visualization of Big Data
- Techniques, Models, and Algorithms

4. Machine learning and its applications in social science

Chair: Yang Weng, Sichuan University, China. (wengyang@scu.edu.cn)

Abstract: Social scientists find themselves in an era of abundant data, increasingly turning to machine learning tools to extract valuable insights from datasets of varying sizes. This session aims to elucidate how the integration of machine learning into the realm of social sciences necessitates a reevaluation of not only the application of machine learning methods but also the adoption of best practices within the field. Diverging from the conventional applications of machine learning in computer science and statistics, its utilization in social scientific endeavors involves the exploration of new concepts, quantification of their prevalence, evaluation of causal relationships, and the formulation of predictive models. The wealth of data and available resources facilitates a

departure from the deductive approach traditionally employed in social sciences, ushering in a more sequential, interactive, and ultimately inductive approach to the process of inference.

Workshop

The Education Digitalization Workshop serves as a collaborative platform for educators, researchers, and practitioners to explore and discuss innovative approaches and best practices in the field of education digitalization. This workshop aims to provide valuable insights into the latest technologies and tools for digital education, and to facilitate the sharing of ideas and experiences among participants. As part of the efforts, the workshop will invite papers for an individual volume of ICCSE 2023 proceedings, which will serve as a valuable resource for anyone interested in digital education.

Paper Submission

Authors should submit the full version of their manuscripts online through the Springer manuscript system, via https://equinocs.springernature.com/service/iccse2023 .

All submissions must be written in English. The submitted manuscripts should contain sufficient details including key concepts and novel features of the work, and must be formatted according to Springer Proceedings Template. Templates and other author information are available at https://www.springer.com/gp/computer-science/lncs/conference-proceedings-guidelines .

Important Dates

Paper Submission Deadline: ~~Oct 08, 2023~~ **Oct 30, 2023.**
Decision Notification: **Nov 10, 2023**
Submission of Final Versions and Author Registration: **Nov 15, 2023**

Registration for Conference and Conference Dates: **Dec. 1-7, 2023**
Academic activities Dates: **Dec. 1-5, 2023**
Workshops & Lab Visit: **Dec. 6-7, 2023**

Contact Us

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