

The International Conference on Computer Science and Education (ICCSE)

CRC-CE/FACE since 2006

1. About Us

The conference is organized by National Research Council of Computer Education in Colleges & Universities, China (CRC-CE), 致力于为国内外信息科学与工程教育领域专家、学者、师生搭起一座互相沟通的桥梁，通过专题研讨会、展览、宣讲等多种形式进行有益交流，为产业界与教育界间各要素的优化组合贡献力量，为学术领域攻坚克难、产教融合的落地和发展建言献策。

2. History of ICCSE

Since 2006, the International Conference on Computer Science and Education (ICCSE) has been held in: (1)Xiamen, (2)Wuhan, (3)Kaifeng, (4)Nanning, (5)Hefei, (6)Singapore, (7)Melbourne, (8)Sri Lanka, (9)Vancouver, (10)Cambridge, (11)Nagoya, (12)Houston, (13)Sri Lanka, (14)Toronto, (15&16)Online, (17)Ningbo and (18)Malaysia for 18 years.

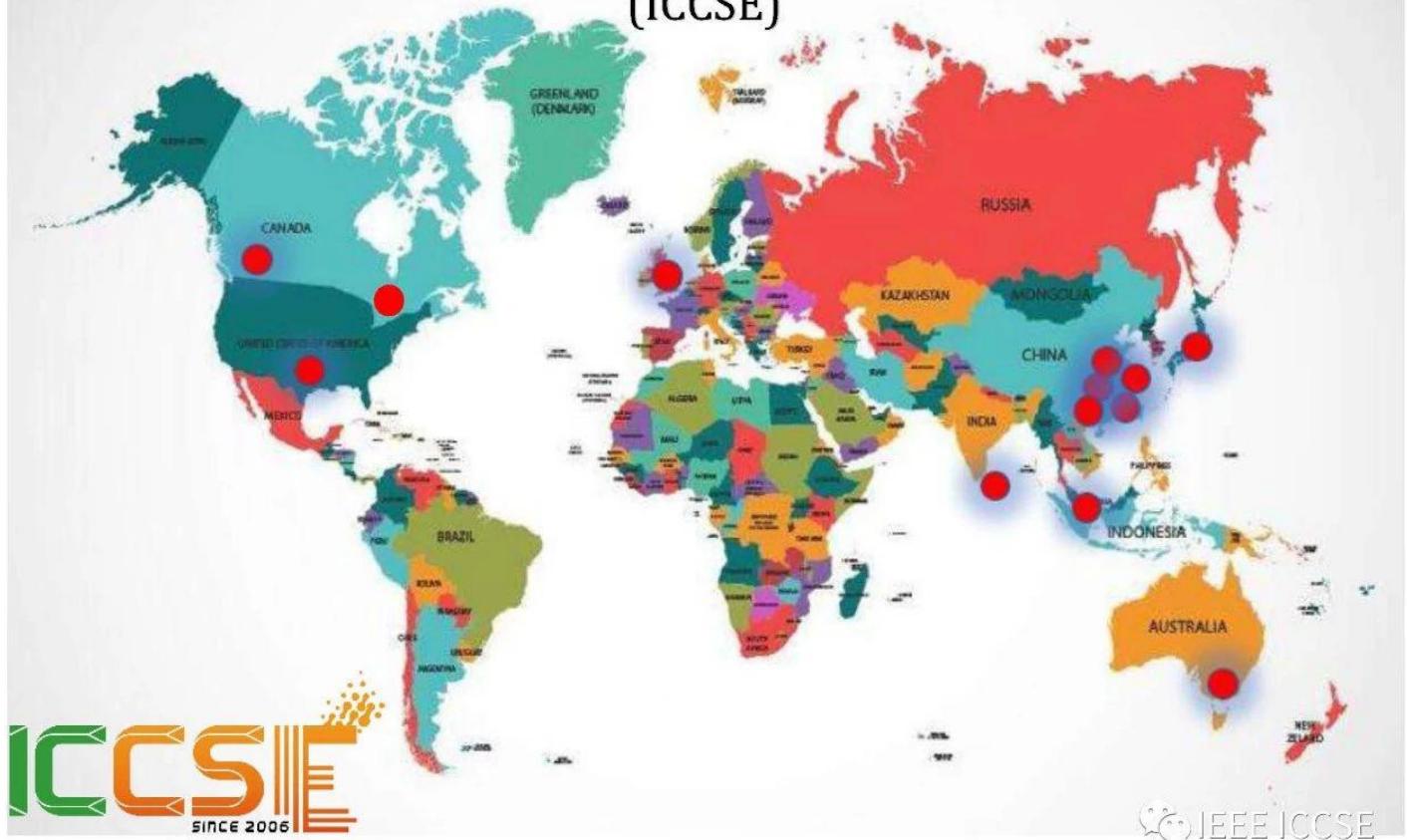
会议吸引了来自100多个国家和地区的知名院校和科研院所的专家学者、科学家、技术人员、工程师、相关企业技术专家和其他专业人士参会，72名计算机科学、教育技术、科学和工程领域的国际知名专家、IEEE Fellow和院士参加会议，并发表了高屋建瓴的演讲。参会嘉宾中，既有富有学养的资深专家，也有勇于探索的学术新锐，大家积极贡献了富有深度的研究。各位学者热情阐述研究成果，积极参与互动，场面热烈、收获颇丰，从计算机科学、数据科学、教育技术和电子化社会/智能社会等各个方面交流了计算机科学与教育的研究现状，并从多个角度，对科研难题提出各自的解决方法，挖掘了众多的创新思路，开辟了研究的崭新视角。

会议出版论文集18部，收录论文4727篇。

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, Ningbo and Malaysia. Throughout its 18-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.

International Conference on Computer Science and Education (ICCSE)



Our History



3. Review of Past ICCSEs

◆ The 1st ICCSE 2006

The 1st International Conference on Computer Science & Education
July 24-26, 2006. Xiamen, China



◆ The 2nd ICCSE 2007

The 2nd International Conference on Computer Science & Education

July 25-28, 2007. Wuhan, China





◆The 3rd ICCSE 2008

The 3rd International Conference on Computer Science & Education
July 25-28, 2008. Kaifeng, China





◆ The 4th ICCSE 2009

The 4th International Conference on Computer Science & Education
July 25-28, 2009. Nanning, China



◆ The 5th ICCSE 2010

The 5th International Conference on Computer Science & Education
August 24-27, 2010. Hefei, China





◆The 6th ICCSE 2011

The 6th International Conference on Computer Science & Education
August 3-5, 2011. Singapore





◆ The 7th ICCSE 2012

The 7th International Conference on Computer Science & Education
July 14-17, 2012. Melbourne, Australia



◆ The 8th ICCSE 2013

The 8th International Conference on Computer Science & Education
April 26-28, 2013. Colombo, Sri Lanka



◆ The 9th ICCSE 2014

The 9th International Conference on Computer Science & Education
August 22-24, 2014. Vancouver, Canada

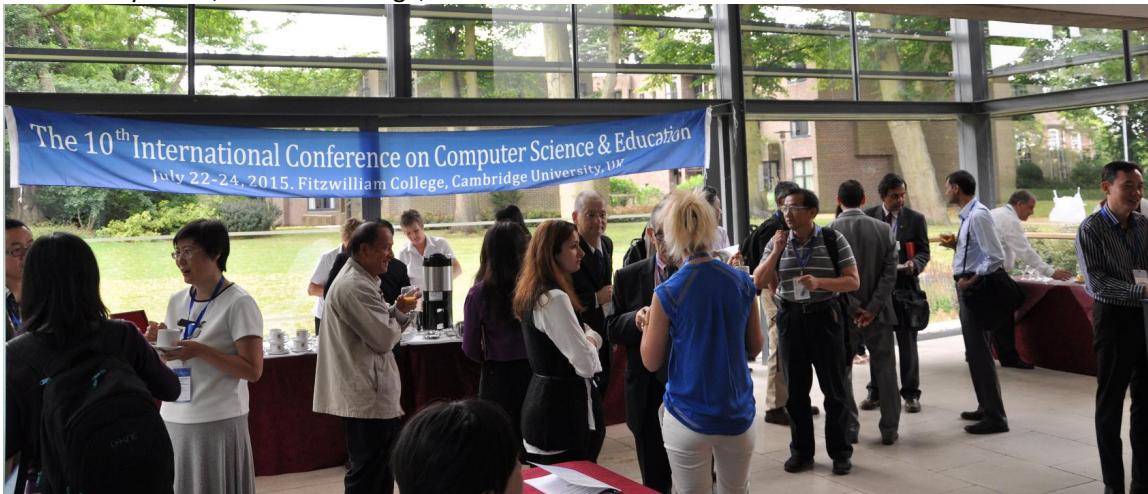




◆The 10th ICCSE 2015

The 10th International Conference on Computer Science & Education

July 22-24, 2015. Cambridge, UK



◆The 11th ICCSE 2016

The 11th International Conference on Computer Science & Education

August 23-25, 2016. Nagoya, Japan





◆The 12th ICCSE 2017

The 12th International Conference on Computer Science & Education
August 22-25, 2017. Houston, USA





◆ The 13th ICCSE 2018

The 13th International Conference on Computer Science & Education
August 9-11, 2018. Colombo, Sri Lanka.



The 13th International Conference on Computer Science & Education



A large group photo of approximately 100 conference attendees standing in several rows on a grassy area in front of a modern building with large windows and a brick facade.

August 9 - 11 Colombo - Sri Lanka

◆ The 14th ICCSE 2019

The 14th International Conference on Computer Science & Education
August 19-21, 2019. Toronto, Canada.



◆ The 15th ICCSE 2020

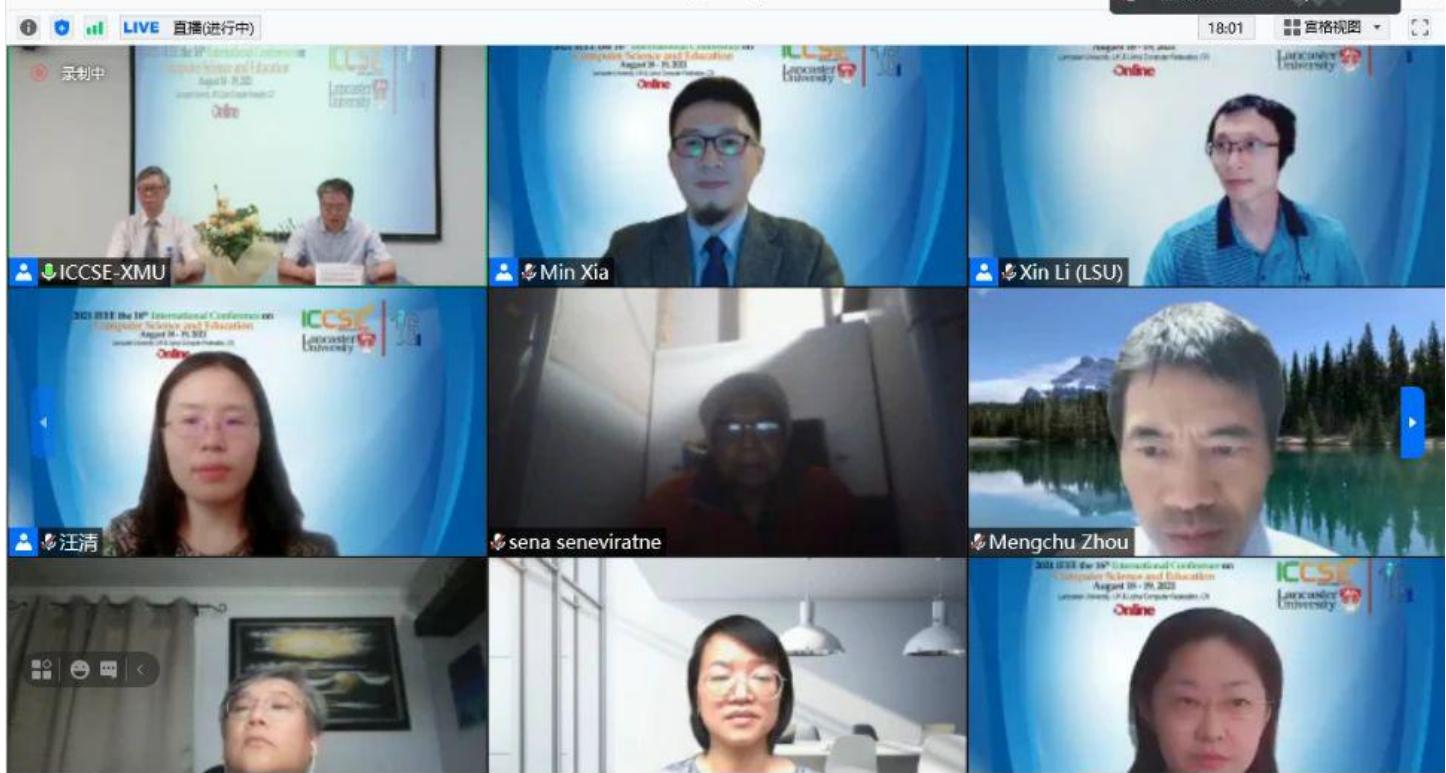
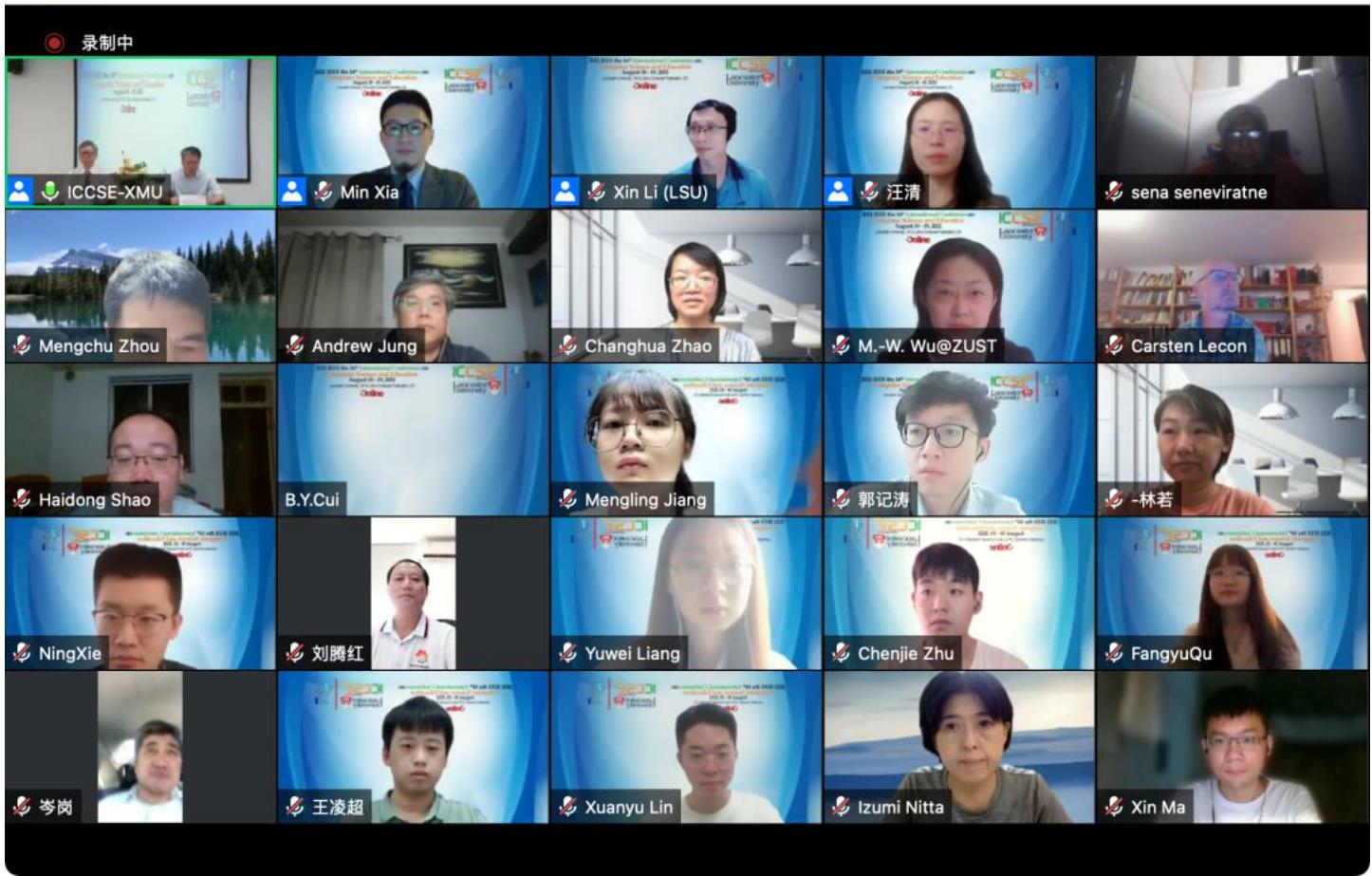
The 15th International Conference on Computer Science & Education

August 18-22, 2020. Online.

◆ The 16th ICCSE 2021

The 16th International Conference on Computer Science & Education

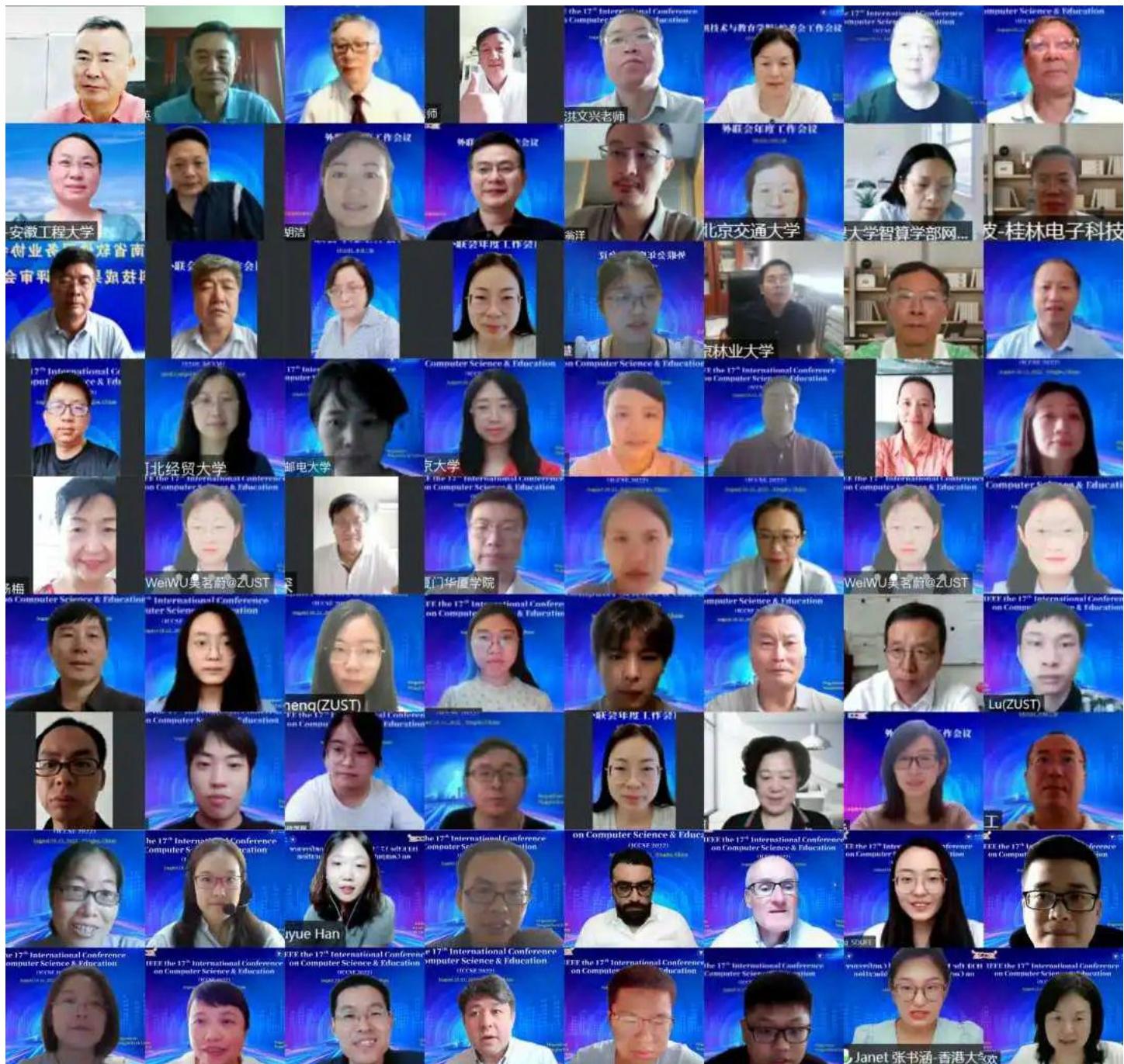
August 18-19, 2021. Online.



◆ The 17th ICCSE 2022

The 17th International Conference on Computer Science & Education
August 18-21, 2022. Ningbo, China.





◆ The 18th ICCSE 2023

The 18th International Conference on Computer Science & Education
December 1-7, 2023, Xiamen University Malaysia, Selangor Darul Ehsan.

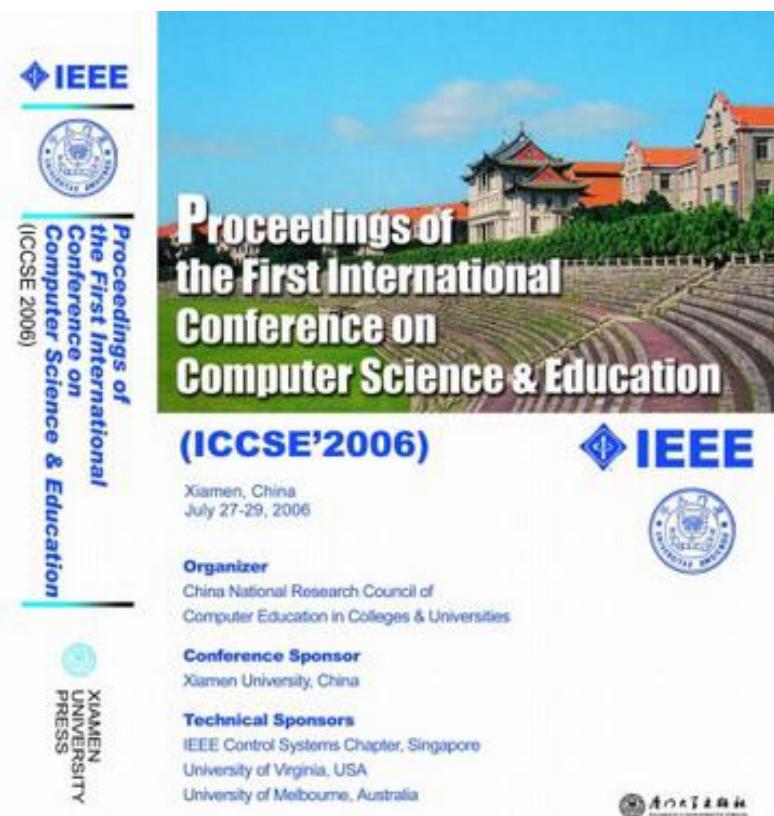




4. Publications

◆ The 1st ICCSE 2006

The 1st International Conference on Computer Science & Education
July 24-26, 2006. Xiamen, China



◆ The 2nd ICCSE 2007

The 2nd International Conference on Computer Science & Education
July 25-28, 2007. Wuhan, China



IEEE

Proceedings of the Second International Conference on Computer Science & Education (ICCSE'2007)

ISBN 7-5615-2542-6/TP-121
定价：200.00元

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Proceedings of the Second International Conference on Computer Science & Education (ICCSE 2007)

XIAMEN UNIVERSITY PRESS



Proceedings of the Second International Conference on Computer Science & Education (ICCSE'2007)

IEEE

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July 25-27, 2007

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◆ The 3rd ICCSE 2008

The 3rd International Conference on Computer Science & Education
July 25-28, 2008. Kaifeng, China



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Proceedings of the Third International Conference on Computer Science & Education (ICCSE'2008)

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July 25-27, 2008

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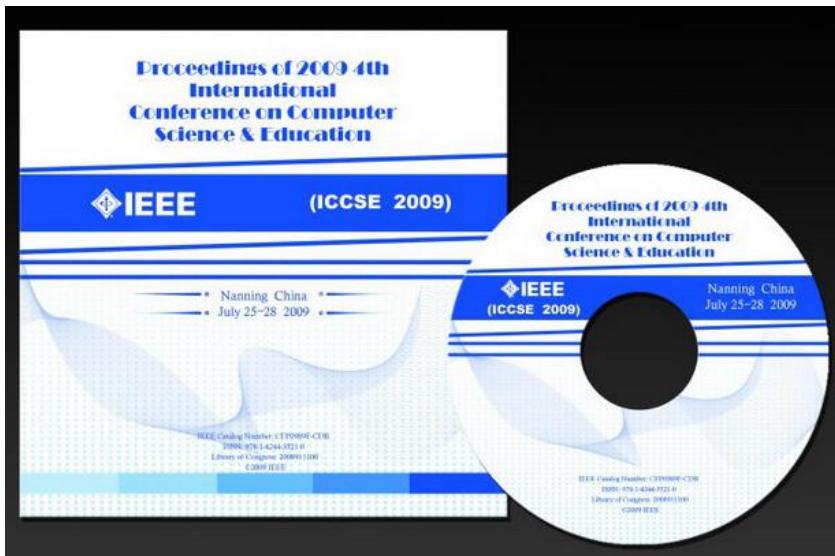
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University of Virginia, the U.S.A.
National University of Singapore, Singapore
Xiamen University, China



◆ The 4th ICCSE 2009

The 4th International Conference on Computer Science & Education
July 25-28, 2009. Nanning, China



❖ The 5th ICCSE 2010
 The 5th International Conference on Computer Science & Education
 August 24-27, 2010. Hefei, China

**Proceedings of the 5th International
Conference on Computer Science & Education**

(ICCSE'10)

Lakeside Jianguo Hotel

August 24-27, 2010. Hefei, Anhui, P. R. China



IEEE Catalog Number: CFP1089F-CDR
ISBN: 978-1-4244-6004-5



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University of British Columbia, Canada

**Proceedings of the
5th International Conference on
Computer Science & Education**

(ICCSE'10)

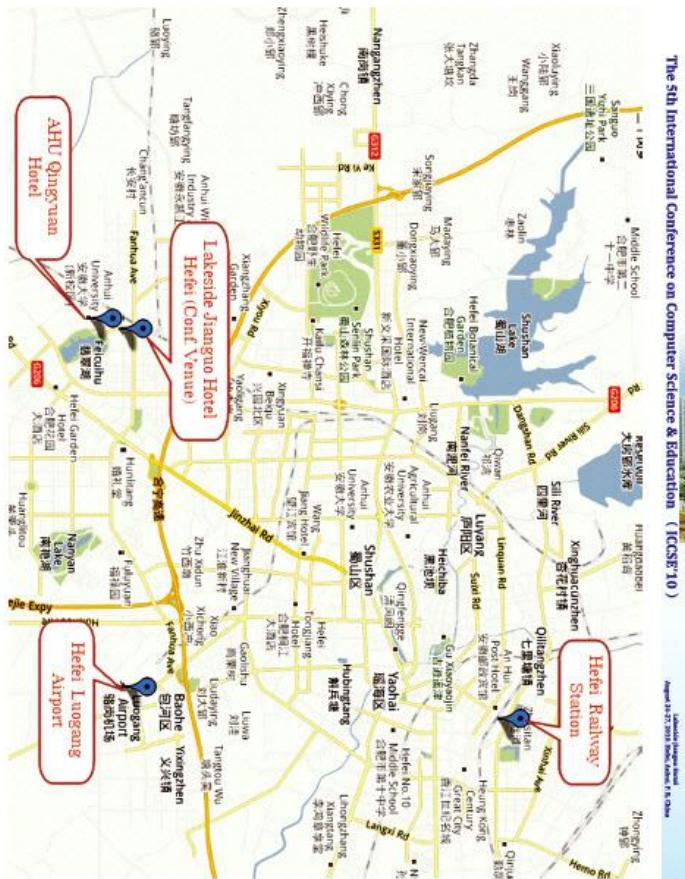
Lakeside Jianguo Hotel

August 24-27, 2010. Hefei, Anhui, P. R. China



IEEE Catalog Number: CFP1089F-CDR
ISBN: 978-1-4244-6004-5

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The 5th International Conference on Computer Science & Education (ICCSE'10)

Lakeside Jianguo Hotel
August 24-27, 2010. Hefei, Anhui, P. R. China



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IEEE Control Systems Chapter, Singapore
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❖ The 6th ICCSE 2011
The 6th International Conference on Computer Science & Education
August 3-5, 2011. Singapore

The 6th International Conference on Computer Science & Education (ICCSE 2011)

August 3-5, 2011. SuperStar Virgo, Singapore

IEEE Conference Record #: 18325
IEEE Catalog Number: CFP1189F
ISBN: 978-1-4244-9716-4

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The 6th International Conference on Computer Science & Education



IEEE Conference Record #: 18325
IEEE Catalog Number: CFP1189F
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The 6th International Conference on Computer Science & Education



The 6th International Conference on Computer Science & Education
(ICCSE 2011)

The 6th International Conference on Computer Science & Education (ICCSE 2011)



August 3-5, 2011. SuperStar Virgo, Singapore

IEEE Conference Record #: 18325
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ISBN: 978-1-4244-9716-4

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◆ The 7th ICCSE 2012
The 7th International Conference on Computer Science & Education
July 14-17, 2012. Melbourne, Australia



Proceedings of the 7th International Conference on Computer Science & Education

Proceedings of the 7th International Conference on
Computer Science & Education
(ICCSE 2012)



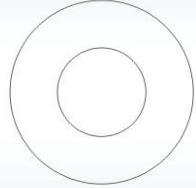
The Sebel Albert Park, Melbourne
July 14-17, 2012. Melbourne, Australia

IEEE Conference Record: #20062
IEEE Catalog Number: CFP1289F- CDR
ISBN: 978-1-4673-0240-1



Any technical inquiries please contact with Mr. Cai Bingyan through
+86-592-2083858 (tel/fax) or iccse2012@xmu.edu.cn.

Proceedings of the 7th International Conference on
Computer Science & Education
(ICCSE 2012)

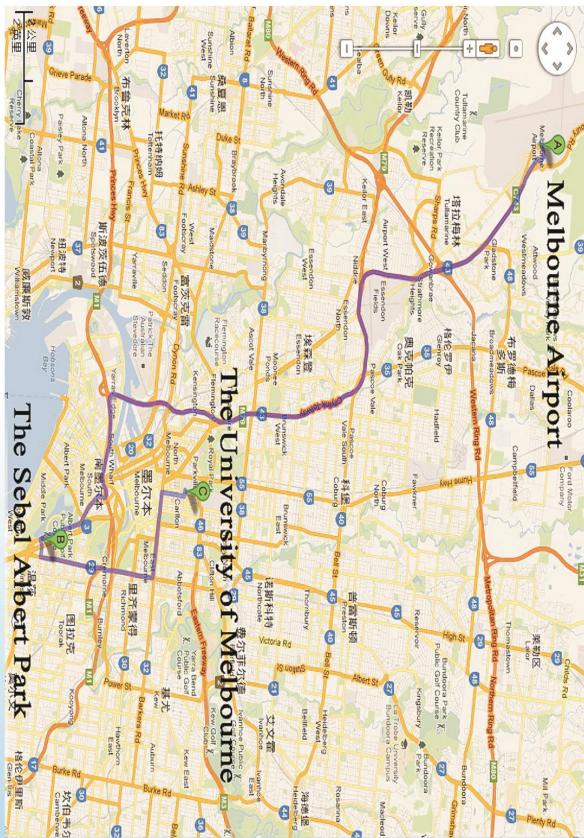


ISBN: 978-1-4673-0240-1

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The Sebel Albert Park, Melbourne
July 14-17, 2012. Melbourne, Australia

IEEE Conference Record: #20062
IEEE Catalog Number: CFP1289F- CDR
ISBN: 978-1-4673-0240-1



The 7th International Conference on Computer Science & Education (ICCSE 2012)

The Sebel Albert Park, Melbourne
July 14-17, 2012. Melbourne, Australia



Final Program

Conference Organizer
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Conference Sponsor
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Technical Co-Sponsors
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IEEE Computer Society Queensland Chapter
IEEE Control Systems Chapter, Singapore
University of Technology, Sydney, Australia

❖ The 8th ICCSE 2013

The 8th International Conference on Computer Science & Education
April 26-28, 2013. Colombo, Sri Lanka



Proceedings of the 8th International Conference on
Computer Science & Education
(ICCSE 2013)

Proceedings of the 8th International Conference on
Computer Science & Education
(ICCSE 2013)



The Galadari Hotel, Sri Lanka

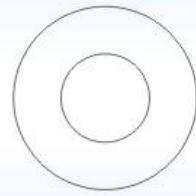
April 26-28 2013. Colombo, Sri Lanka

IEEE Conference Record: #30408
IEEE Catalog Number: CFP1389F- CDR
ISBN: 978-1-4673-4462-3



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Proceedings of The 8th
International Conference on
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(ICCSE 2013)



ISBN: 978-1-4673-4462-3

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The Galadari Hotel, Sri Lanka
April 26-28, 2013. Colombo, Sri Lanka.

IEEE Conference Record: #30408
IEEE Catalog Number: CFP1389F-CDR
ISBN: 978-1-4673-4462-3

The 8th International Conference on
Computer Science & Education
(ICCSE 2013)

The Caladari Hotel, Sri Lanka
April 26-28 2013. Colombo, Sri Lanka



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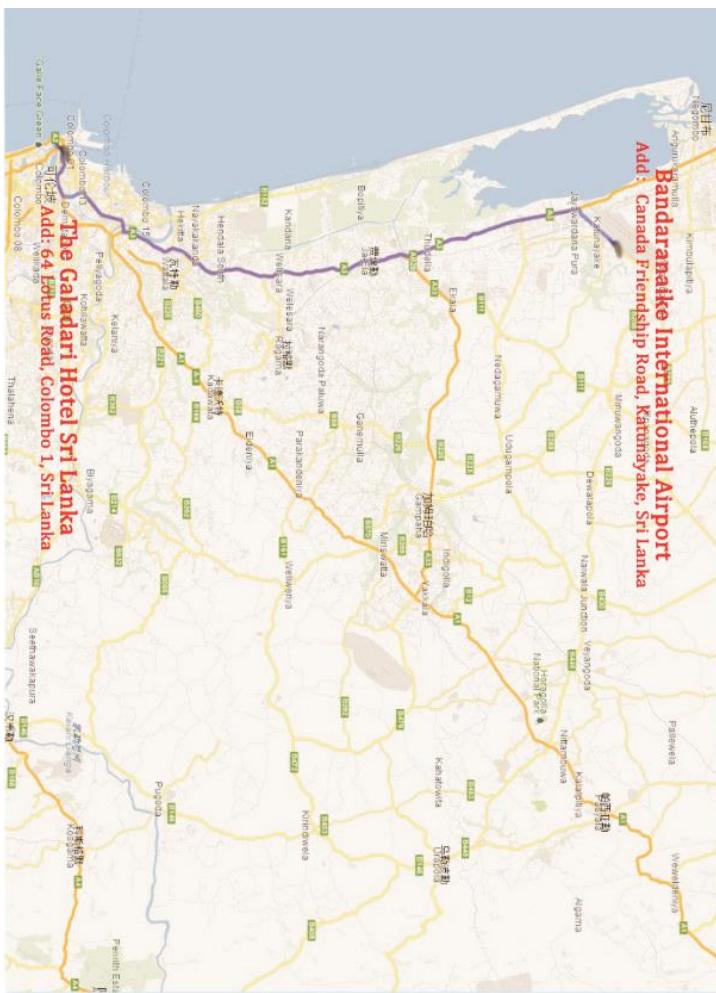
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Sri Lanka Institute of Information Technology
(SLIIT), Sri Lanka



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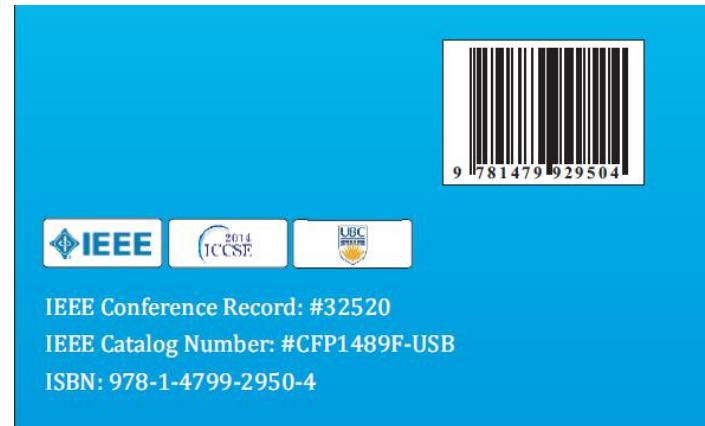


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❖ The 9th ICCSE 2014

The 9th International Conference on Computer Science & Education
August 22-24, 2014. Vancouver, Canada



Proceedings of the 9th International Conference on Computer Science & Education (ICCSE 2014)

August 22-24, 2014. Vancouver, Canada.



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IEEE Conference Record: #32520
IEEE Catalog Number: #CFP1489F-PRT
ISBN: 978-1-4799-2949-8

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◆ The 10th ICCSE 2015

The 10th International Conference on Computer Science & Education
July 22-24, 2015. Cambridge, UK



<http://www.ieee-iccse.org/>

ISBN: 978-1-4799-6599-1



Any technical inquiries please contact with Mr. Wang Weiwei through iccse.2015@gmail.com.

IEEE Conference Record: 35092

IEEE Catalog Number: CFP1589F-USB

ISBN: 978-1-4799-6599-1



The 10th International Conference on
Computer Science & Education
(ICCSE2015)

July 22-24 2015. Fitzwilliam College,
Cambridge University, UK



Final Program

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National Research Council of Computer Education in Colleges & Universities, China (CRC-CE)

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Brunel University, UK

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ISBN: 978-1-4799-6600-4
IEEE Conference Record: #35092
IEEE Catalog Number: #CFP1589F
ISBN: 978-1-4799-6600-4

Any technical inquiries please contact with Cai Bingyan through
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◊ The 11th ICCSE 2016

The 11th International Conference on Computer Science & Education
August 23-25, 2016. Nagoya, Japan

ICCSE 2016

The 11th International Conference on Computer Science & Education

Nagoya University, Japan (23 - 25 August, 2016)
 Satellite Event in Fukui (22 August, 2016), Satellite Event in Kyoto (26 August, 2016)

Final Program & Book of Abstracts



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 National Research Council of Computer Education in Colleges & Universities, China

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 Executive Committee of ICCSE 2016 in Nagoya

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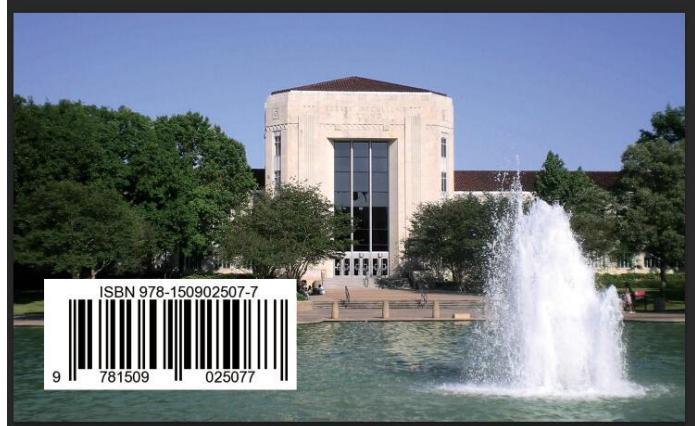


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 Research Center in School of Engineering, University of Fukui

❖ The 12th ICCSE 2017
 The 12th International Conference on Computer Science & Education
 August 22-25, 2017. Houston, USA

ICCSE 2017

The 12th International Conference on Computer Science & Education
 August 22-25, 2017. Hilton Americas-Houston, USA.





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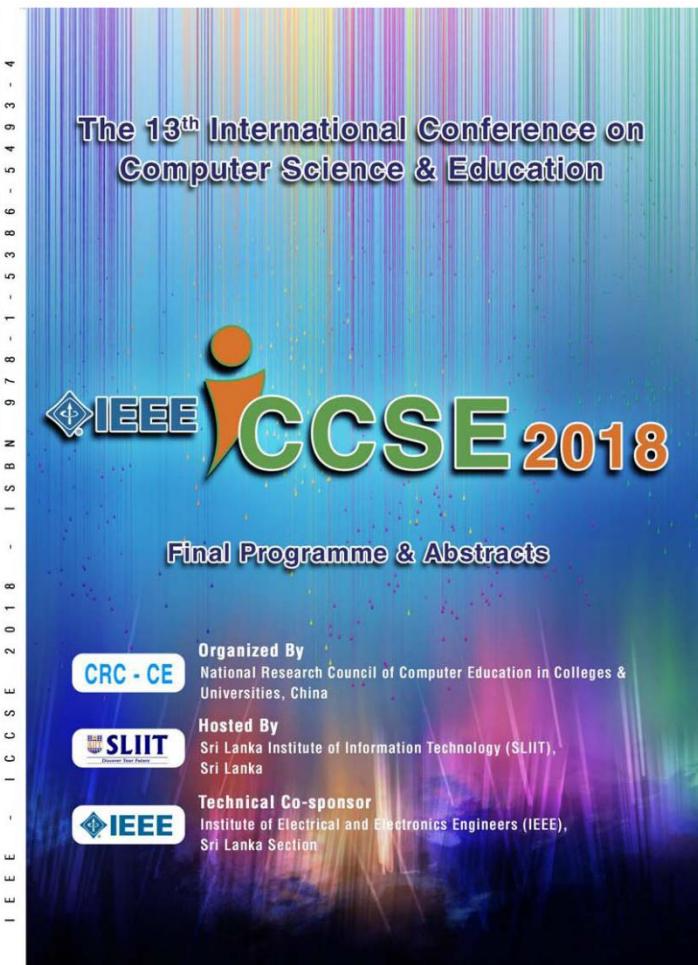


ISBN 978-150902506-0



♦The 13th ICCSE 2018

The 13th International Conference on Computer Science & Education
Colombo, Sri Lanka. August 9-11, 2018



◆ The 14th ICCSE 2019

The 14th International Conference on Computer Science & Education
August 19-21, 2019. Toronto, Canada.



The 14th International Conference on Computer
Science and Education
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August 19 – 21, Toronto, Canada.



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◆ The 15th ICCSE 2020

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August 18-22, 2020. Online.



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◆ The 16th ICCSE 2021

The 16th International Conference on Computer Science & Education
August 18-19, 2021. Online.



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Lancaster University, Lancaster, UK

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Lishui University

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The 16th International Conference on
Computer Science and Education

August 17-21, 2021



Lancaster,
United Kingdom

◆ The 17th ICCSE 2022

The 17th International Conference on Computer Science & Education

August 18-21, 2022. Ningbo, China.



IEEE the 17th International Conference
on Computer Science & Education
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PROGRAM BOOK

August 18-21, 2022
Ningbo, China

◆The 18th ICCSE 2023

The 18th International Conference on Computer Science & Education
December 1-7, 2023, Xiamen University Malaysia, Selangor Darul Ehsan.

Wenxing Hong
Geetha Kanaparan (Eds.)

Communications in Computer and Information Science 2023

Computer Science and Education

Computer Science and Technology

18th International Conference, ICCSE 2023
Sepang, Malaysia, December 1–7, 2023
Proceedings, Part I



Part 1



5. Keynote Speech

#		Name	Brief Bio.	Title	
2006-1	 A portrait photograph of John Baillieul, a man with glasses and a brown suit.	John Baillieul	President of IEEE Control Systems Society Fellow of IEEE Chairman of Aerospace and Mechanical Engineering Department Boston University, USA	Rethinking Control Engineering in a Networked World	Keynote Speech
2006-2	 A portrait photograph of LI Wei, a man with glasses and a dark suit.	LI Wei	Member of the Chinese Academy of Sciences, President of Beihang University, China	Coordinativity and Survivability of E.mission Systems	Keynote Speech
2006-3	 A portrait photograph of Prof. Yacov Shamash, a man with glasses and a dark suit.	Prof.Yacov Shamash	Nearing Professor of Electrical and Computer Engineering Center for Advanced Study Professor Coordinated Science Laboratory University of Illinois at Urbana-Champaign Urbana, Illinois, USA Fellow of IEEE & Member of USA National Academy of Engineering	Networks and Games: A Fast-Growing Interaction in Research and Education	Keynote Speech

2007 -1		Shing-Tung Yau, Stephen S.-T. Yau	Department of Mathematics, Harvard University, Cambridge.	Real Time Solution of The Nonlinear Filtering Problem Without Memory II	Keynote Speech
2007 -2		Hong Qin	Full professor of Computer Science in Department of Computer Science at State University of New York at Stony Brook (Stony Brook University), USA.	Physics-based Modeling, Dynamic Simulation, and Applications	Keynote Speech
2007 -3		Lei Xu	A chair professor of Chinese Univ Hong Kong, China. IEEE Fellow and Fellow of International Association for Pattern Recognition, and a member of European Academy of Sciences.	Statistical Learning on Knowledge Discovery and Problem Solving: Fundamentals, Challenges, and A Unified Theory , as well as Applications in Financial Market	Keynote Speech
2008 -1		Clarence W. de Silva	Professor of University of British Columbia, Vancouver, Canada. Fellow ASME, Fellow IEEE, and Fellow Canadian Academy of Engineering, is Professor of Mechanical Engineering at the University of British Columbia, Vancouver, Canada, and has occupied the NSERC Research Chair in Industrial Automation since 1988.	Integrated Modeling and Design in Mechatronics—A Justification	Keynote Speech
2008 -2		F. L. Lewis	Professor of University of Texas, Arlington, USA. Fellow IEEE, Fellow U.K. Institute of Measurement & Control, PE Texas, U.K. Chartered Engineer, is Distinguished Scholar Professor and Moncrief-O'Donnell Chair at University of Texas at Arlington's Automation & Robotics Research Institute.	Decision and Control in Supervisory Discrete Event Systems: Applications to Manufacturing and Wireless Sensor Networks	Keynote Speech
2008 -3		Hugo de Garis	Professor of Utah State University, USA. He was a scientific fellow of the "Davos World Economic Forum" (of 2000 in the world) He created a new research area of the evolution hardware in the world. He was known as the father of the Artificial Brain. He have been listed in America's "Whos Who in Science and Engineering", 2008.	The "CHINA BRAIN Project": A 3,000,000 RMB, 20 Person, 4 Year (2008-2011), 200 sq.m. Research Project to Build China's (World's?) First Artificial Brain at Xiamen University	Keynote Speech
2009 -1		Stephen David Beck	Interim Director, Center for Computation & Technology, Professor of Composition and Computer Music, School of Music, Louisiana State University, USA	The Arts as a Driver for Computer Science Education	Keynote Speech
2009 -2		Roger Cavallo	State University of New York Institute of Technology, USA	Computer Science and Systems Science	Keynote Speech

2009 -3		Iven Mareels	Dean of the School of Engineering at the University of Melbourne, Australia. Fellow of the Academy of Technological Sciences and Engineering, Australia, Fellow of the Institute of Electrical and Electronics Engineers (USA), a member of the Society for Industrial and Applied Mathematics, a Fellow of the Institute of Engineers Australia, a founding member of the Asian Control Association	The Melbourne Model – Engineering	Keynote Speech
2010 -1		Clarence W. de Silva	Canada Research Chair Professor of Mechatronics and Industrial Automation University of British Columbia, Vancouver, Canada	Human Rescue in Disaster Situations Using Multi-Robot Cooperation	Keynote Speech
2010 -2		S.S. Iyengar	Chairman, Department of Computer Science Director, Robotics Research Laboratory (AAAS Fellow, IEEE Fellow, ACM Fellow) Roy Paul Daniels Professor, Louisiana State University, USA	Algorithmic and Graph Problems in Wireless Sensor Networks	Keynote Speech
2010 -3		Mitsunori Ogihara	ACM Distinguished Scientist Director of Data Mining in the Center for Computational Sciences Department of Computer Science, University of Miami, USA	Computational Analysis of Digital Music Data	Keynote Speech
2010 -4		Prof. Alexander Tuzhilin	Professor of Information Systems NEC Faculty Fellow Stern School of Business, New York University, USA	The Next Generation of Recommender Systems	Keynote Speech
2010 -5		Professor Chris H.Q. Ding	Professor of Computer Science and Engineering in University of Texas at Arlington	Matrix Factorization for Recommendation Systems	Workshop
2010 -6		Dr. Tao Li	Associate professor in the School of Computer Science, Florida International University	Recommender System	Workshop

2011 -1		Xi-Ren Cao	Prof, Phd, Fellow of IEEE, Fellow of IFAC Shanghai Jiaotong University Hong Kong University of Science and Technology	Impulse Stochastic Control and Composite Markov Processes	Keynote Speech
2011 -2		Prof. Dr. Jie Huang	Prof, Phd, Fellow of IEEE, Fellow of IFAC, Fellow of CAA Department of Mechanical and Automation Engineering The Chinese University of Hong Kong	A framework for the control of multi-agent systems	Keynote Speech
2012 -1		Prof. Pedro Alberto	Instituto Universitario de Automática e Informática Industrial Universidad Politécnica de Valencia, Spain past President of IFAC (the International Federation of Automatic Control) in 1999-2002, and Senior Member of IEEE, is a world recognized expert in real-time control, leading several projects in the field.	Interaction between computer control design and its implementation	Keynote Speech
2012 -2		Prof.r Xiangjian (Sean) He	Computer Science Director of Computer Vision and Pattern Recognition Laboratory University of Technology, Sydney, Australia	Super-resolution through Sub-pixel Motion Prediction and Bilateral Filtering	Keynote Speech
2012 -3		Prof. Iven Mareels	Dean, Melbourne School of Engineering The University of Melbourne, Victoria	The Melbourne Engineering & IT Education: Why 3+2?	Keynote Speech
2013 -1		Prof. Clarence W. de Silva	Canada Research Chair Professor of Mechatronics & Industrial Automation Department of Mechanical Engineering University of British Columbia, Canada	Automated Monitoring of Human Health as a Universal Concept	Keynote Speech
2013 -2		Prof. Asok Ray	Distinguished Professor of Mechanical Engineering Graduate Faculty of Electrical Engineering The Pennsylvania State University, USA	Autonomous Perception and Decision-Making in Cyber-Physical Systems	Keynote Speech
2013 -3		Dr. Wen-De Zhong	School of Electrical and Electronic Engineering Nanyang Technological University, Singapore	Towards Broadband Optical Access Networks	Keynote Speech

2014 -1		Prof. Saman Halgamuge	Department of Mechanical Engineering University of Melbourne	Near Unsupervised Learning in the era of Big Data: When does "Knowing a Little" can be useful?	Keynote Speech
2014 -2		Prof. Tong-Heng Lee	Department of Electrical & Computer Engineering National University of Singapore	Recent Developments in Discrete-Event Systems applicable to Intelligent Automated Engineering Systems, and their implications in Education	Keynote Speech
2014 -3		Prof. Sushanta Mitra	Department of Mechanical Engineering University of Alberta	Biosensors: Convergence with ICT platform	Keynote Speech
2015 -1		Prof. Clarence W. de Silva	The University of British Columbia, Canada Fellow of: ASME, IEEE, Canadian Academy of Engineering, and the Royal Society of Canada	Sensing Issues in the Automated Monitoring of the Quality of Drinking Water	Keynote Speech
2015 -2		Prof. Ben M. Chen	UAV Research Group National University of Singapore IEEE Fellow.	Unmanned Systems Research and Education at National University of Singapore	Keynote Speech
2015 -3		Prof. Houman Owhadi	Applied & Computational Mathematics and Control & Dynamical Systems California Institute of Technology, USA	Can discovery be computed?	Keynote Speech
2015 -4		Prof. Frank Wang	Chair, IEEE Computer Society, UKRI Chapter University of Kent, UK	How will computers evolve over the next 10 years?	Keynote Speech
2016 -1		Prof. Jonathan Li, PhD	Xiamen University, China University of Waterloo, Canada	The development of innovative algorithms/methods and software tools --- Object-based image analysis for multi-scale thematic mapping of physical and built environments (Tentative title)	Keynote Speech

2016 -2		Prof. Toshio Fukuda, Ph.D	Nagoya University/Meijo University, Japan/Beijing Institute of Technology, China	ROBOT4.0 ---Integration of Communication and Robotic Technologies over the Cyber-Physical System	Keynote Speech
2016 -3		Dr. Hirofumi Seo	Medical Doctor, also, Science CG Designer The University of Tokyo/President and COE of SCIMENT, Inc, Japan	Does Computer Graphics Really Help Medicine?	Plenary Speech
2016 -4		Dr. Sina Fateh	Founder and CEO of Kali Care, USA	IoT and smart sensor for medication and pharmaceutical applications	Plenary Speech
2016 -5		Associate Professor Tomoki Itamiya, Ph.D	Aichi University of Technology, Japan	The Virtual Tsunami using Head-Mounted Display for Disaster Risk Reduction and Education	Opening Presenta tion
2017 -1		Prof. Clarence W. de Silva, Ph.D	Mechanical Engineering, University of British Columbia, Canada Fellow ASME, Fellow IEEE, and Fellow Canadian Academy of Engineering, Fellow Royal Society of Canada Academic Qualifications		Keynote Speech
2017 -2		Prof. Yongjie Jessica ZHANG, Ph.D	Mechanical Engineering, Courtesy Appointment in Biomedical Engineering, Carnegie Mellon University, USA		Keynote Speech
2017 -3		Prof. Jaspal Subhlok, Ph.D	Computer Science, University of Houston, USA		Keynote Speech
2017 -4		Prof. Jonathan Li, PhD	Xiamen University, China University of Waterloo, Canada	Big Data Collection and Processing in Smart Life	Worksho p

2017 -5		Assoc. Prof. Xin (Shane) Li, Ph. D	Scholl of Electrical Engineering & Computer Science, Center for Computation & Technology, Louisiana State University, USA.	Big Data Collection and Processing in Smart Life	Workshop
2017 -6		Assoc. Prof. Ying WANG, Ph. D	School of Information Science and Engineering, Xiamen University, China.	Big Data Collection and Processing in Smart Life	Workshop
2017 -7		Prof. Clarence W. de Silva, Ph.D	Editor-in-Chief of CIS Mechanical Engineering, University of British Columbia, Canada Fellow ASME, Fellow IEEE, and Fellow Canadian Academy of Engineering, Fellow Royal Society of Canada Academic Qualifications	How to publish a high-quality paper in journals?	Workshop
2017 -8		Assoc. Prof. Qing WANG, PhD	School of Electronic Information Engineering Tianjin University, China	How to publish a high-quality paper in journals?	Workshop
2018 -9		Prof. Zhangxi LIN, Ph. D	The Rawls College of Business Administration Texas Tech University, USA	Education on Data Science	Panel Discussion
2017 -10		Associate Prof. Wenxing HONG, Ph. D	President of Big Data Academy School of Aerospace Engineering, Xiamen University, China	Education on Data Science	Panel Discussion
2018 -1		Prof. Clarence W. de Silva	Fellow of IEEE, University of British Columbia, Canada	New Trends in Machine Health Monitoring	Keynotes Speech
2018 -2		Prof. Saman K. Halgamuge	Fellow of IEEE, The University of Melbourne, Australia	An Inclusive Learning Algorithm Framework towards Achieving "Less Artificial" Intelligence	Keynotes Speech

2018-3		Prof. Qingfu Zhang	Department of Computer Science, City University of Hong Kong	Decomposition Multi-objective Computation Based Evolutionary	Keynotes Speech
2018-4		Prof. ZHENG Li	Tsinghua University	Online Courses: Technology and Methodology	Invited Session
2018-5		A.P. LI Chao	Tsinghua University, China	Online Courses: Technology and Methodology	Invited Session
2018-6		Prof. LI Fengxia	Beijing Institute of Technology	Online Teaching I (Education related)	Invited Session
2018-7		A.P. LI Lin	Beijing Institute of Technology, China	Online Teaching I (Education related)	Invited Session
2018-8		A.P. CHEN Yufeng	Beijing Institute of Technology, China	Online Teaching I (Education related)	Invited Session
2018-9		Prof. ZHAO Huan	Hunan University, China	New engineering talents training	Invited Session
2018-10		A.P. XIAO Degui	Hunan University, China	New engineering talents training	Invited Session
2018-11		Prof. LUO Juan	Hunan University, China	New engineering talents training	Invited Session

2018-12		Prof. LI Fengxia	Beijing Institute of Technology	Online Teaching II (Computer related)	Invited Session
2018-13		A.P. LI Lin	Beijing Institute of Technology, China	Online Teaching II (Computer related)	Invited Session
2018-14		A.P. CHEN Yufeng	Beijing Institute of Technology, China	Online Teaching II (Computer related)	Invited Session
2018-15		Prof. ZHOU Wei	Beijing Jiaotong University, China	Computer Science (Education Related)	Invited Session
2018-16		Prof. TAKADA Hiroki	University of Fukui, Japan	Application of IT/IoT technology to public facilities, society and the education	Invited Session
2018-17		Prof. MATSUURA Yasuyuki	Gifu Women's College, Japan	Application of IT/IoT technology to public facilities, society and the education	Invited Session
2019-1		Prof. MATSUURA Yasuyuki	Gifu Women's College, Japan	Application of IT/IoT technology to public facilities, society and the education	Keynote Speech
2019-2		Professor Clarence W. de Silva, Ph.D	ASME Fellow, IEEE Fellow Fellow of Canadian Academy of Engineering Fellow of Royal Society of Canada The Academy of Science of the Royal Society of Canada Professor of Mechanical Engineering The University of British Columbia, Canada	Instrumentation and Design of a Mechatronic System - Relationship and Procedures	Keynote Speech

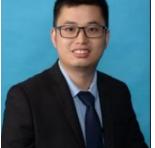
2019-3		Prof. Dinesh Manocha	AAAI Fellow, IEEE Fellow Professor of Computer Science and Engineering The University of Maryland, USA	Autonomous Driving: Simulation and Navigation	Keynote Speech
2019-4		Dr. Sena Seneviratne	Research Associate/ Author School of Electrical & Information Engineering and School of English Sydney University, Australia	English Language Pronunciation and English Speech	Workshop
2019-5		Dr. Judith B everidge	Lecturer/ English Poet/ Author School of English, Sydney University, Australia	English Language Pronunciation and English Speech	Workshop
2019-6		Prof. Liyange C. De Silva	Dean, Faculty of Integrated Technologies, Universiti Brunei Darussalam	English Language Pronunciation and English Speech	Workshop
2019-7		Dr. Udaya Seneviratne	Medical Doctor General Hospital Colombo, Emergency Division, Colombo-7, Sri Lanka	English Language Pronunciation and English Speech	Workshop
2019-8		Mr. Noel Wijesingha	President/ CEO Sciteqsoft Inc., Toronto, Canada	English Language Pronunciation and English Speech	Workshop
2019-9		Mrs. Daisy Herft	Retired Graduate English teacher whose vernacular tongue is English, 9B-89-6, Mattegoda Housing Scheme, Mattegoda, Sri Lanka.	English Language Pronunciation and English Speech	Workshop
2019-10		Dr. Wang Ying	Kennesaw State University, USA	Smart Mechatronics and Robotics Systems	Invited Session
2019-11		Dr. Clarence W. de Silva	Medical Doctor General Hospital Colombo, Emergency Division, Colombo-7, Sri Lanka	Smart Mechatronics and Robotics Systems	Invited Session

2019-12		Prof. Carsten Lecon	Aalen University, Germany	VR, AR, and MR technologies in Higher Education	Invited Session
2019-13		Prof. Zheng Li	Tsinghua University, Beijing, China	Technology-Inspired Smart Learning	Invited Session
2019-14		A. P. Li Chao	Tsinghua University, Beijing, China	Technology-Inspired Smart Learning	Invited Session
2019-15		Prof. Zhao Huan	Hunan University, Hunan, China	Innovative talent cultivation under the college-enterprise collaborative model	Invited Session
2019-16		Prof. Luo Juan	Hunan University, Hunan, China	Innovative talent cultivation under the college-enterprise collaborative model	Invited Session
2019-17		A.P. Li Xiaoying	Hunan University, Hunan, China	Innovative talent cultivation under the college-enterprise collaborative model	Invited Session
2020-1		Prof. Dimitris Metaxas	Distinguished Professor Department of Computer Science Rutgers The State University of New Jersey IEEE Fellow, AIMBE Fellow, MICCAI Fellow	Scalable and Explainable Analytics for Computer Vision and Medical Applications	Keynote Speech
2020-2		Prof. Qingfu Zhang	Chair Professor of Computational Intelligence, IEEE Fellow Department of Computer Science City University of Hong Kong	Decomposition Multiobjective Optimization and Pareto Multitask Learning	Keynote Speech
2020-3		Prof. Ming C. Lin	University of Maryland at College Park Elizabeth Stevenson Iribe Chair of Computer Science Distinguished University Professor ACM Fellow, IEEE Fellow, Eurographics Fellow	Reconstructing Reality: From Physical World to Virtual Environments	Keynote Speech

2020 -4		Prof. Zheng Li	Tsinghua University, Beijing, China	Computer courses and standards	Keynote Speech
2020 -5		A. P. Li Chao	Tsinghua University, Beijing, China	Computer courses and standards	Keynote Speech
2021 -1		Prof. Meng Chu Zhou	Distinguished Professor Department of Electrical and Computer Engineering New Jersey Institute of Technology Fellow of IEEE, IFAC, AAAS and CAA	Transforming Manufacturing Industry from Automation to Intelligentization with Industry 4.0 Technologies	Keynote Speech
2021 -2		Prof. Ligang Liu	School of Mathematical Sciences University of Science and Technology of China	Computational Design of 3D Arts	Keynote Speech
2021 -3		Prof. Saman Halgamuge	Department of Mechanical Engineering The University of Melbourne, Australia IEEE Fellow	Digital Twinning with 21st Century AI : The value of incremental learning and Interpretability	Keynote Speech
2021 -4		Prof. Min Xie	Chair Professor of Industrial Engineering City University of Hong Kong, Hong Kong SAR IEEE Fellow	Some Reliability and Safety Issues in industrial IOT and its applications	Keynote Speech
2021 -5		Prof. Ze Ji	Cardiff University, UK	Robot Perception and Learning for enhanced Robot Autonomy	Invited Session
2021 -6		A.P. Jing Wu	Cardiff University, UK	Robot Perception and Learning for enhanced Robot Autonomy	Invited Session
2021 -7		Prof. Carsten Lecon	Aalen University, Germany	VR, AR, and MR Technologies in Education	Invited Session
2021 -8		Prof. Zheng Li	Tsinghua University, Beijing, China	Computer Programming in education: From kindergarten to university	Invited Session

2021-9		A. P. Li Chao	Tsinghua University, Beijing, China	Computer Programming in education: From kindergarten to university	Invited Session
2021-10		A.P. Binyue Cui	Hebei University of Economics & Business, China	Digital Society and Digital Transformation	Invited Session
2021-11		Dr. Wei Zhou	Senior Researcher of Computer and Information Technology, Beijing Jiaotong University, China	Digital Society and Digital Transformation	Invited Session
2021-12		A.P. Yanting Tong	Wuhan University of Technology, China	Digital Society and Digital Transformation	Invited Session
2021-13		Prof. Hiroki TAKADA	University of Fukui, Japan	Biological Information and Artificial Intelligence	Invited Session
2021-14		A.P. Haidong Shao	Hunan University, China	Intelligent maintenance for Industrial automation systems	Invited Session
2021-15		A.P. Haiyang Pan	Anhui University of Technology, China	Intelligent maintenance for Industrial automation systems	Invited Session
2021-16		A.P. Zhiyi He	Guangzhou University, China	Intelligent maintenance for Industrial automation systems	Invited Session
2021-17		Prof. Fengxia Li	School of Computer Science and Technology, Beijing Institute of Technology, China	Virtual Simulation Technology Empowers Online Experiment and Online teaching	Invited Session

2021 -18		Prof. Jingfei Xue	School of Computer Science and Technology, Beijing Institute of Technology, China	Virtual Simulation Technology Empowers Online Experiment and Online teaching	Invited Session
2021 -19		A.P. Yue Yu	School of Computer Science and Technology, Beijing Institute of Technology, China	Virtual Simulation Technology Empowers Online Experiment and Online teaching	Invited Session
2022 -1		Prof. Ben M. Chen	The Chinese University of Hong Kong, China. IEEE Fellow.	AI and UAS Technologies for Infrastructure Inspection and Information Management	Keynote Speech
2022 -2		Prof. Shimin Hu	Tsinghua University, China.	Subdivision-based Mesh Convolution Networks	Keynote Speech
2022 -3		Prof. Shihua Li	Southeast University, China. IEEE Fellow.	Recent advances on intelligent control for mechatronic systems	Keynote Speech
2022 -4		Prof. Tongtao Zheng	Xiamen Institute of Software Technology	"Belt and Road" "International Chinese + Vocational Education" Sub-Forum High quality construction of "Belt and Road" Vocational education System driven by computer technology	Invited Session
2022 -5		Prof. Dr. Carsten Lecon	Aalen University, Germany	XR Technologies in Education	Invited Session
2022 -6		Prof. Jie Hu, Ph.D.	NingboTech University, China	Computer Assisted Language Education	Invited Session
2022 -7		Zheng Ruan	NingboTech University, China	Computer Assisted Language Education	Invited Session

2022-8		Dr. Xianxian Luo	NingboTech University, China	Computer Assisted Language Education	Invited Session
2022-9		Prof. Fengxia Li	Beijing Institute of Technology, China	Virtual Experiment and Online teaching	Invited Session
2022-10		Prof. Jingfeng Xue	Beijing Institute of Technology, China	Virtual Experiment and Online teaching	Invited Session
2022-11		Dr. Yue Yu	Beijing Institute of Technology, China	Virtual Experiment and Online teaching	Invited Session
2022-12		Prof. Hiroki TAKADA	University of Fukui, Japan	Mathematical Model and Artificial Intelligence for Bio-signal	Invited Session
2022-13		Dr. Bin Yue Cui	Hebei University of Economics & Business, China	E-Society and Digital Literacy	Invited Session
2022-14		Dr. Wei Zhou	Beijing Jiaotong University, China	E-Society and Digital Literacy	Invited Session
2022-15		Dr. Yanting Tong	Wuhan University of Technology, China	E-Society and Digital Literacy	Invited Session
2022-15		A. Prof. Jun Zhu	Northwestern Polytechnical University, China	AI-enhanced machinery prognosis and health management	Invited Session

2022-16		Chenggeng Huang	Sun Yat-Sen University, China	AI-enhanced machinery prognosis and health management	Invited Session
2022-17		Dr. Min Xia	Lancaster University, UK	AI-enhanced machinery prognosis and health management	Invited Session
2022-18		Orges Cico	Norwegian University of Science and Technology, Italy	Computer Science Education in the area of Sustainability (CSES)	Invited Session
2022-19		A. Prof. Birgit Rognebakke Krogstie	Norwegian University of Science and Technology, Norge	Computer Science Education in the area of Sustainability (CSES)	Invited Session
2022-20		Prof. Huan Zhao	Hunan University, China	Teaching and evaluation of engineering science in College and University during the period of high quality development	Invited Session
2022-21		Prof. Jiaqiong Jiang	Hunan University, China	Teaching and evaluation of engineering science in College and University during the period of high quality development	Invited Session
2022-22		Prof. Juan Luo	Hunan University, China	Teaching and evaluation of engineering science in College and University during the period of high quality development	Invited Session
2022-23		Prof. Shijian Luo	Zhejiang University, China	Computer Augmented Design and Innovation	Invited Session
2022-24		Dr. Cheng Yao	Zhejiang University, China	Computer Augmented Design and Innovation	Invited Session

2022-25		Dr. Xinkai Wang	NingboTech University, China	Computer Augmented Design and Innovation	Invited Session
2022-26		Prof. Liang Cai	NingboTech University, China	Digital Technologies and Transformation in Education	Invited Session
2022-27		Xin Zhao	University of Sheffield, UK	Digital Technologies and Transformation in Education	Invited Session
2022-28		Prof. Gang Cen	Zhejiang University of Science & Technology, China	Research on Project Practice Teaching and Project Application Development	Invited Session
2022-29		Prof. Mingwei Wu	Zhejiang University of Science & Technology, China	Research on Project Practice Teaching and Project Application Development	Invited Session
2022-30		Yuefeng Cen	Zhejiang University of Science & Technology, China	Research on Project Practice Teaching and Project Application Development	Invited Session
2022-31		Dr. Yang Weng	Sichuan University, China	Data Mining in Social Science	Invited Session
2023-01		Prof. XU Rongsheng	Chinese Academy of Sciences, China	Internet to China and Cybersec	Keynote Speech

2023-02		Prof. Andrew War	University of South Wales, UK	The Impact of Generative AI on Education	Keynote Speech
2023-03		Prof. ZHOU Aoyin	East China Normal University, China	Digital Transformation and Smart Education	Keynote Speech
2025-01		Prof. Motoharu Fujigaki	University of Fukui, JAPAN	System with High-Brightness Fringe Projection and the Whole-Space Tabulation Method	Keynote Speech
2025-02		Prof. Ryohei P. Hasegawa	National Institute of Advanced Industrial Science and Technology (AIST), JAPAN	Neurotraining and Inclusive Gaming Using a Virtual Brain Switch	Keynote Speech
2025-03		Prof. Wenxing Hong	Xiamen University, China	Developing Digital Talent in the Age of AI: Evolving from Digital Literacy and Skills to Digital Leadership	Keynote Speech