

2023 International Conference on Complex Systems Design and Management (CSD&M2023) Successfully Held in Beijing

The 2023 International Conference on Complex Systems Design and Management (CSD&M2023) was held in Beijing during October 30-31, 2023. It is co-organized by Chinese Society of Aeronautics and Astronautics (CSAA) and the French non-profit organization CESAMES, being hosted jointly by CSAA, Department of Engineering of Tsinghua University and AVIC Digital. It's co-operated by the AVIC Xi'an Flight Automatic Control Research Institute and a few national societies in related fields, including the Chinese Mechanical Engineering Society, China Electrotechnical Society, Chinese Society of Naval Architects and Marine Engineers, Chinese Institute of Electronics, China Instrument and Control Society, China Ordnance Society and Chinese Society of Astronautics. The China Aeronautical Radio Electronics Research Institute is engaged as a supporter. Being held in China for the second time, it witnesses over 260 registered delegates.



On the morning of October 30th, the conference officially kicked off. ZHANG Xinguo, Co-Chair of CSD&M2023, Distinguished Professor at Tsinghua University, Director of the Complex Systems Engineering Research Center, Chief Scientist of Chinese Aeronautical Establishment (CAE), President of International Council on Systems Engineering (INCOSE) Beijing Chapter, INCOSE ESEP, AIAA Fellow, RAeS Fellow, delivered the opening address.



Daniel KROB, Co-Chair of CSD&M2023, President of CESAMES, Institute Professor, Ecole Polytechnique France, Distinguished Visiting Professor, Tsinghua University, INCOSE Fellow, delivered the opening address.



YAO Junchen, Chair of Organizing Committee and VP & Secretary General of CSAA, delivered the welcome address. After the opening ceremony, Prof. ZHANG Xinguo chaired the keynote lectures.



Prof. Daniel KROB gave a presentation entitled “Systemic Digital Twins: the Example of the Transformation of Dunkirk’s Port”.



QIAN Zhongyan, Director of COMAC Beijing Aircraft Technology Research Institute (BATRI), delivered a lecture on “Application of MBSE in Commercial Aircraft Development”.



Guy André BOY, Fellow of INCOSE and the International Academy of Astronautics (IAA), Professor of Paris Saclay University and Bordeaux University, lectured on “Human Systems Integration (HSI)”.

In addition, the co-host AVIC Digital, the gold sponsors of Dassault Systèmes and pure-systems shared their successful stories. Dassault Systèmes held a workshop in the afternoon of October 30th with more than 100 delegates.



This conference received nearly 60 paper submissions, out of which 36 were accepted after peer review. The papers were presented orally in two tracks on the afternoon of October 30th and the morning of October 31st. The topics covered systems, fundamental principles of systems, system architect and engineering, MBSE, industrial applications of big data, manufacturing systems,

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system modeling and simulation, system optimization, project management, system security, service systems, system technology and policies, system verification and validation as well as their applications in aerospace, automotive, rail transportation, logistics and supply chain management.

The keynote lectures continued on the afternoon of October 31st, being chaired by Dr. Prof. Daniel KROB.



WANG Feiyue, IEEE Fellow, researcher of Institute of Automation, CAS, gave a presentation entitled “Foundation/Infrastructure Systems and Foundation/Infrastructure Intelligence: A New Frontier for Systems Engineering and Systems Intelligence”.



Antoine RAUZY, Professor of Norwegian University of Science and Technology, gave an online presentation entitled “Towards Simulated System Architecture with Sigma”.



ZENG Wen, President of AVIC Digital gave a presentation on “Research and Practice on System Virtual Integration Framework for Aircraft Overall Design”.



ZHANG Wenfeng, Deputy Chief Engineer, Aerospace System Engineering Institute gave a presentation entitled “MBSE Exploration in Launch Vehicles”.

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Pierre VIALETES, CIO, Airbus China, gave a presentation entitled “Airbus China Digital Manufacturing Optimization: Achievements and Challenge”.



Finally, Prof. Daniel KROB promoted CSD&M2024 which will be held in Paris during December 12-13, 2024. Please stay tuned to www.csdmconference.com for call for papers and other information.



There were several exhibitors as well, including CSAA, CESAMES, Industrial Engineering Department at Tsinghua University, AVIC Digital, AVIC Xi'an Flight Automatic Control Research Institute, China Aeronautical Radio Electronics Research Institute, and gold sponsors of Dassault Systèmes and pure-systems, silver sponsor of Shanghai PGM Technology Co., Ltd.



On the afternoon of October 30th, CSAA, CESAMES, and Industrial Engineering Department at Tsinghua University held a working meeting. A comprehensive review of the academic content, paper submission and publication, and conference organization were presented. Then thorough discussions on how to improve it in the future were carried out.

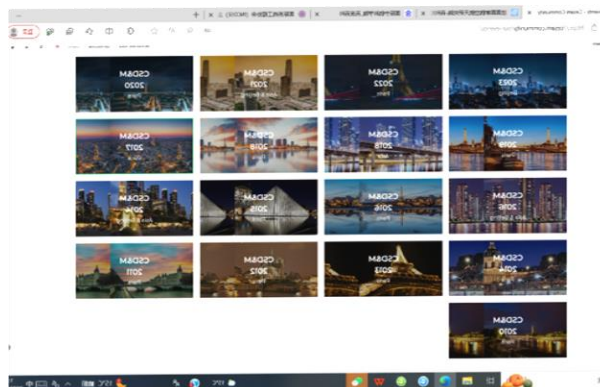
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The conference proceedings have been published with Springer on its LNEE (EI-indexed).

One may purchase online: <https://link.springer.com/book/10.1007/978-981-99-6511-3>



The CSD&M conference, founded by CESAMES in 2010, is held annually in Paris. From 2014 to 2018, it was expanded to Asia, with three consecutive editions in Singapore. In 2020, the conference was introduced to China by Prof. Zhang Xinguo, who was then Vice President of CSAA, President of the INCOSE Beijing Chapter, and Distinguished Professor at Tsinghua University. In 2021, CSAA hosted the fourth edition of the CSD&M Asia in Beijing in hybrid. During the CSD&M Europe 2022 in Paris, CSAA and CESAMES decided to merge CSD&M Europe and Asia into one, taking turns to host it in China and France. CSD&M aims to become a hub for experts, scholars, and industry leaders in the field of systems engineering to exchange insights and build up social networks.



To better stay tuned, a uniform website of the conference was launched: www.csdmconference.com All the past events and the link of the ongoing one can be found there.