

第二届土木工程与智能建筑

国际会议

The 2nd International Conference on Civil Engineering and Intelligent Construction (ICCEIC 2024)

会议手册 Conference Program

主办单位

Organizer

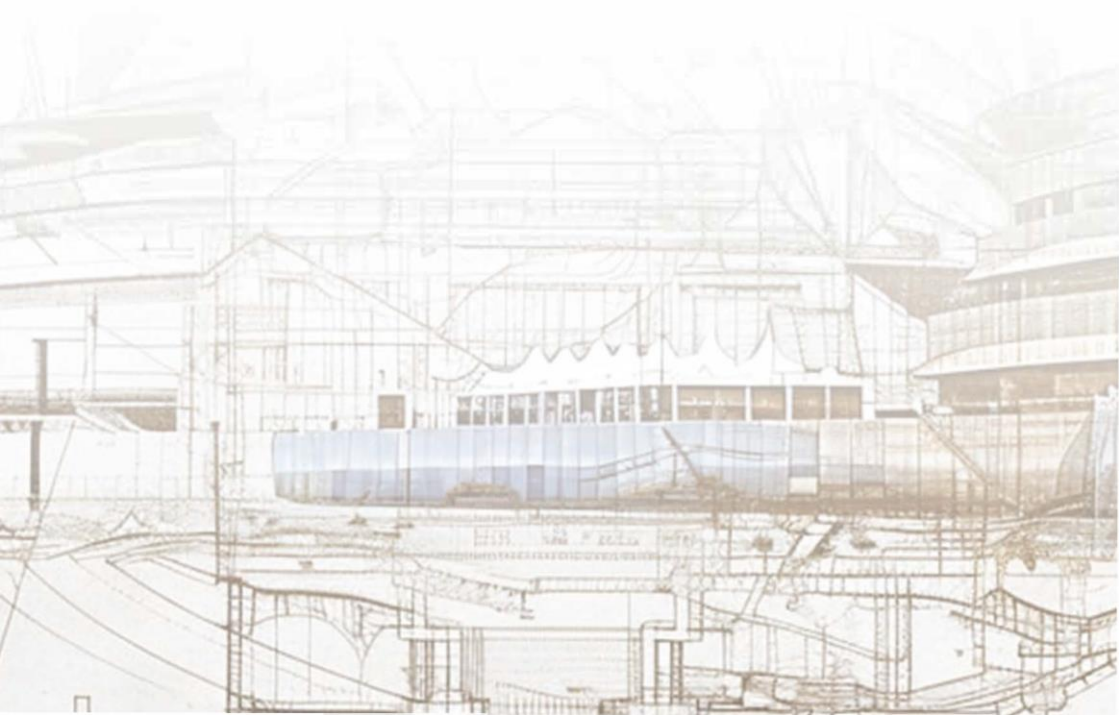
国际管理科学与工程协会 (IAMSET)

International Association of Management Science
and Engineering Technology



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I.会议内容

I. CONTENTS OF CONFERENCE

会议背景

BACKGROUND

随着科技的迅猛发展和城市化进程的不断加快，土木工程与智能建筑领域正面临着前所未有的机遇与挑战。在过去几十年里，土木工程作为基础设施建设的核心领域，为社会的发展和进步奠定了坚实的基础。从高楼大厦到桥梁隧道，从水利工程到交通设施，土木工程的成就无处不在。然而，传统的土木工程在设计、施工和运维过程中，往往存在着效率低下、资源浪费、环境污染等问题。与此同时，科技的飞速进步为土木工程的创新发展注入了强大动力。信息技术、人工智能、大数据、物联网等新兴技术的崛起，使得智能建筑的概念逐渐从理论走向实践，土木工程与智能建筑的融合发展成为必然趋势。

在此背景下，第二届土木工程与智能建筑国际会议聚焦于结构与土木工程、建筑工程、土木工程与计算机等主题，旨在为全球的专家学者、工程师和企业界人士提供一个交流与合作的平台，通过分享最新的研究成果和实践经验，共同探讨和解决行业面临的现实问题，进而推动土木工程与智能建筑领域的理论创新和技术突破，为人类创造更加美好的生活和工作环境。

With the rapid development of science and technology and the accelerating process of urbanization, the field of civil engineering and intelligent construction is facing unprecedented opportunities and challenges. In the past few decades, civil

engineering, as the core field of infrastructure construction, has laid a solid foundation for the development and progress of society. From tall buildings to Bridges and tunnels, from water conservancy projects to transportation facilities, civil engineering achievements are everywhere. However, in the process of design, construction and operation and maintenance of traditional civil engineering, there are often problems such as low efficiency, waste of resources and environmental pollution. At the same time, the rapid progress of science and technology has injected a strong impetus into the innovative development of civil engineering. With the rise of emerging technologies such as information technology, artificial intelligence, big data and the Internet of Things, the concept of intelligent buildings has gradually moved from theory to practice, and the integration of civil engineering and intelligent buildings has become an inevitable trend.

In this context, the 2nd International Conference on Civil Engineering and Intelligent Construction (ICCEIC) focuses on the topics of Structural and civil engineering, construction engineering, Civil engineering and computers and so on, aiming to provide a platform for exchanges and cooperation between experts, scholars, engineers and business people from all over the world, through sharing the latest research results and practical experience, to jointly explore and solve the practical problems facing the industry. Further promote the theoretical innovation and technological breakthroughs in the field of civil engineering and intelligent buildings, and create a better living and working environment for human beings.

会议目的

OBJECTIVES

ICCEIC 2024 旨在汇集领先的学术科学家，研究人员和研究学者，交流和分享他们在土木工程与智能建筑领域各个方面的经验和研究成果。它还为研究人员、从业者和教育工作者提供了一个重要的跨学科平台，以展示和讨论土木工程与智能建筑领域的最新创新、趋势、关注以及遇到的实际挑战和采用的解决方案，凭借其高质量，它为学生、学者和研究人员提供了非凡的价值。

ICCEIC 2024 aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of civil engineering and intelligent construction. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of civil engineering and intelligent construction. With its high quality, it provides an exceptional value for students, academics and researchers.

会议主题

TOPICS

会议主题 Topics

主题一/Topic 1:	Structural and Civil Engineering
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主题二/Topic 2:	Construction Engineering
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主题三/Topic 3:	Civil Engineering and Computers
主题四/Topic 4:	Municipal and Road Engineering
主题五/Topic 5:	Civil Engineering and Environment
主题六/Topic 6:	Geotechnical Engineering and Earthquake Engineering

II. 日程安排

II. OVERALL SCHEDULE

August 21 14:30-18:00	会议测试 Conference Rehearsal (14:30-18:00)		
August 22 9:00-17:00	开幕式 Opening Ceremony (9:00-9:05)		
	嘉宾演讲 Keynote Speech (9:05-12:00)		
	时间 Time	报告题目 Title	报告人 Speaker
	9:05-9:30	A one-time training machine learning method for topology optimization	Prof. Zilong Zhao (赵子龙)
	9:30-9:55		Prof. Ping Xiang (向平)
	9:55-10:20	Guided wave dispersion curve extraction and sensor placement optimization using multitask complex hierarchical sparse bayesian learning	Prof. Yong Huang (黄永)
	10:20-10:45	Particle-scale analysis of asphalt mixture responses under tire loads based on a coupled 3D FEM-DEM simulation	Dr. Haitao Ge (葛海涛)
	10:45-11:10	An innovative metallic damper for the seismic protection of structures	Prof. Mohammadreza Vafaei
	11:10-12:00	Fortifying slab resilience against touch-off explosions: integration of innovative stud reinforcements and computational analysis	Dr. S M Anas
午餐时间 Lunch Break (12:00-14:30)			

嘉宾演讲 Keynote Speech (14:30-16:35)		
时间 Time	报告题目 Title	报告人 Speaker
14:30-14:50	Enhancement of beam shear capacity using inverted-U shaped reinforcement	Dr. Milad Khatib
14:50-15:15	Sustainable materials in building construction	Dr. Abbasali Sadeghi
15:15-15:40	Application of smart technologies in underground construction	Hanan Samadi
15:40-16:05	Exploring the influence of the UK construction industry players in embracing modern methods of construction	Dr. Olubisi Ige
16:05-16:35	Online system identification and damage detection using buildings' subspace extracted during seismic events	Dr. Shieh-Kung Huang (黄谢恭)
论文推荐 Paper Recommend (16:35-16:50)		
Recommend Citation Papers 推荐引用论文		
闭幕式 Closing Ceremony (16:50-17:00)		

Note: All time above is for GMT+8:00 (Beijing Time)

会议报告安排

SPEECHES ARRANGEMENT

时间: 2024年8月22日 9:00-18:00

Time: August 22, 2024 9:00-18:00 (Beijing Time)

地点: 线上会议

Location: Online Conference

大会主席: 刘振灵教授

Chairman: Prof. Zhenling Liu

线上参会链接:

<https://meeting.tencent.com/dm/ROQMLXMzI0aW>

#腾讯会议: 977-225-925

会议密码: 2024

Online Attendance Link:

<https://meeting.tencent.com/dm/ROQMLXMzI0aW>

Conference ID: 977-225-925

Password: 2024

III.嘉宾介绍

III. PRESENTER INTRODUCTION

主讲嘉宾

KEYNOTE SPEAKERS



Zilong Zhao (赵子龙), Professor

Beihang University, China

Zilong Zhao obtained his doctoral degree from Tsinghua University (China). Since 2021, he has been working as a Professor at the Institute of Solid Mechanics in Beihang University (China). He is elected as an overseas high-level young talent of China, an Australian Research Council (ARC) Discovery Early Career Researcher Award (DECRA) fellow, and a young top talent of Beihang University. He is an expert of the Chinese Ministry of Education, the National Natural Science Foundation of China, and the ARC. He is an editorial advisory board member of Engineering Fracture Mechanics, and an invited reviewer of more than 30 internationally renowned esteemed journals such as Proceedings of the National Academy of Sciences. His research interests

include solid mechanics, biomechanics, and structural topology optimization. He has published nearly 50 papers in high impact SCI journals such as Journal of the Mechanics and Physics of Solids, Biophysical Journal, and Computer Methods in Applied Mechanics and Engineering. Many of his papers are selected as cover stories, journal highlights, featured papers, and editors' suggestion. His publications have attracted more than 1300 citations. His research outcomes are reported and publicized by mainstream academic organizations such as the American Physical Society and the American Biophysical Society.



Ping Xiang (向平), Professor

Central South University, China

Ping Xiang is a professor and doctoral supervisor of the School of Civil Engineering, Central South University. He has presided over the National Natural Science Foundation project and published more than 100 SCI papers, including ESI highly cited and many top SCI papers in the first region, and obtained 3 patents and 3 software Copyrights. His research interests include dynamics of coupling system of high-speed railway rail-rail bridge, traffic safety of high-speed railway bridge under earthquake action, finite element method of computational mechanics,

meshless method of computational mechanics, steel-bone concrete composite structure, computational nanomechanics and biomechanics, etc. He has been invited to visit many international universities, such as Swansea University in the UK, Kunsan National University, Dartmouth College, etc.



**S M Anas, Assistant Professor
(Contractual) and Researcher**

**Department of Building Engineering and
Management, School of Planning and
Architecture, New Delhi 110002, INDIA**

Dr. S. M. Anas is a distinguished researcher and Assistant Professor (Contractual) at the Department of Building Engineering and Technology, School of Planning and Architecture, New Delhi, and a Researcher at Jamia Millia Islamia. He holds a Ph.D. in Structural Engineering from Jamia Millia Islamia, with a focus on the blast performance of walls. His Master's degree is in Earthquake Engineering from the same institution. Dr. Anas has made significant contributions to the field with 44 international journal publications and 28 conference papers. His research encompasses blast mitigation, structural strengthening, and predictive modeling of dynamic loads. In 2024, he was appointed Chairperson for sessions at major international conferences and recognized in the Top 2% of Scientists Worldwide by Elsevier. He has delivered keynote speeches

and served on technical committees for global conferences, demonstrating his expertise and leadership. He is also active in academic editorial roles, including Academic Editor for the "Journal of Engineering - Civil Engineering" and Guest Editor for several prestigious journals including Computer Modeling in Engineering and Sciences (CMES), Discover Materials, and Computers, Materials & Continua (CMC). Dr. Anas's work advances the understanding of structural behavior under extreme conditions, contributing to the development of safer and more resilient infrastructure worldwide.



Mohammadreza Vafaei,
Associate Professor
Universiti Teknologi Malaysia

Dr. Mohammadreza Vafaei (P.Eng., M. ASCE, M. EERI) is currently an associate professor in the Faculty of Engineering, School of Civil Engineering, Universiti Teknologi Malaysia. As a Professional Engineer previously serving a consultant company in Iran, he has been involved in several forensic investigations and seismic retrofit works following earthquake events in Iran since 2003. His expertise includes seismic design of special structures like tower and bridges, seismic rehabilitation, damage identification, nonlinear structural analysis.



Yong Huang (黄永), Professor
Harbin Institute of Technology, China

Yong Huang is the full professor of the Division of Intelligent Civil Infrastructure at the Harbin Institute of Technology, China and is a National Young Talent. He has a Ph.D. in Engineering Mechanics from Harbin Institute of Technology. He also was a Postdoctoral Scholar in department of Computing & Mathematical Sciences and department of Mechanical & Civil Engineering at the California Institute of Technology during the periods of February 2012 until February 2013 and December 2014 until February 2017, respectively. Yong Huang has published over 90 technical papers, covering topics in Bayesian inference, structural health monitoring of bridge and High-speed rail track structures, structural system identification, guided-wave testing, machine learning, etc. In most of his researches, he uses a Bayesian machine learning treatment for complex engineering inverse problems. He serves as an Associate Editor in Structural Sensing, Control and Asset Management (specialty section of Frontiers in Built Environment). He is the member of the Board of the Structure and Bridge Branch of China Highway and Transportation Society and one of the main drafters of Technical

Specifications for Structural Monitoring of Highway Bridges in transportation industry of China.



Olubisi Ige, Senior Lecturer**London South Bank University, UK**

Olubisi Ige holds doctoral degree in civil engineering and currently works as a senior lecturer at School of the Built Environment and Architecture, London South Bank University, UK. He has over 23 years' experience in construction industry and in the Higher Education sector. His research interests include construction materials, steel fibre-reinforced concrete with an emphasis on the effects of distribution and orientation of fibres on the performance of fibre-reinforced concrete and the application of image analysis tools to analyse the positioning of fibres within the composite material, and the use of recycled aggregate in concrete. He has published many journals, conferences, Technical Report and a book chapter in the field of Construction Materials, Recycled Aggregates, and Construction management, and involved in research project funding. Dr. Olubisi Ige serves as guest editor for Journal of Visualized Experiments (JoVE), the editorial board member of Journal of Civil, Construction and Environmental Engineering, and is the reviewer for 6 journals. He is also

the member of Professional Standards Committee (Qualifications and Education Policy) CIOB (Chartered Institute of Building), UK.



Abbasali Sadeghi, Research Assistant

Islamic Azad University, Iran

Dr. Abbasali Sadeghi is currently a lecturer in Department of Civil Engineering at Islamic Azad University of Birjand Branch, Iran. He has obtained his BSc in Civil Engineering from Islamic Azad University of Birjand Branch and MSc and PhD degrees in Structural Engineering from Islamic Azad University of Mashhad Branch, Iran. Later he has worked as a research assistant in Concrete Technology Research Center of Islamic Azad University, Birjand Branch, Iran. Also, he has been working in construction industry for several years. His current research interests are concrete construction, progressive collapse, reliability analysis, and application of smart materials in buildings. He has published technical papers in the most referred international journals like Elsevier and Springer. He also serves as a reviewer of many international journals supported by Elsevier, John Wiley, Springer, SAGE, Hindawi, MDPI, Emerald, and ASCE.



**Shieh-Kung Huang (黄谢恭),
Assistant Professor**

**National Chung Hsing University (NCHU),
Taiwan**

Shieh-Kung Huang got his Ph.D. degree in the Department of Structural Engineering at the National Taiwan University. He is currently an assistant professor at the National Chung Hsing University (NCHU). His research interests are primarily in the areas of smart structure, structural health monitoring, structural control, artificial intelligence, advanced experimental techniques, and earthquake early warning. His recent research topics include automated structural health monitoring, vibration-sensitive equipment, and seismic isolation devices. Dr. Huang has published several journals, conferences, patents and technical reports in the field of Structural Engineering.



Milad Khatib, Assistant professor

Lebanese International University (LIU)

Milad Khatib had a Ph.D. in Structural and Geotechnical Engineering

from Beirut Arab University, BAU. He is not only an assistant professor at the Lebanese International University, but is also employed as Thesis Supervisor at ISSEA Cnam, Beirut. He is a highly experienced Engineer with a proven track record of working in the Civil Engineering business. Numerical Modeling, Primavera P6, Microsoft Office, Leadership, and Project Planning are all areas of his expertise. In addition, he has a specific diploma in Statistical and Security Analysis from the American University of Science and Technology, AUST. He joined as an editorial board member, and peer reviewer for over thirteen international journals (USA, UK, China, and Singapore).



Hanan Samadi, Research Assistant

Nazarbayev University, Astana, Kazakhstan

Hanan Samadi graduated from University of Tehran, Tehran, Iran in 2021. She currently serves as a research assistant at School of Mining and Geoscience, Nazarbayev University, Astana, Kazakhstan and a researcher at Civil Engineering Department, University of Halabja, Kurdistan Region. Her research interests focus on civil engineering, soil mechanics, underground space, smart construction, intelligent building and construction, etc. She has published 15 journal papers and some

conference papers. She also participated in several conferences such as WTC, ARMA, TBMDigs, etc. and made her presentations. She is the member of society committees, such as Australian Tunneling Society (ATS), Australia, Iranian Society of Rock Mechanics (IRSRM), Iranian Society of Mining Engineering (IRMSE), Iran, etc. Hanan Samadi also won some awards and honors. She received “Woman Research Award” from World Top Scientists Award, selected for the "World Top Scientists Awards" under the "Excellence in Research Award" category, and also winner of the "4th INNOMINE Festival" for presenting practical solutions to apply mechanized excavation (TBM) in underground operations, etc. She serves as the reviewer and editorial board member of some journals.



Haitao Ge (葛海涛), Assistant Professor
Chang'an University, China

Haitao Ge obtained his PhD degree from the University of Strasbourg, France, in 2023 and currently works as an assistant professor at Chang'an University, China. His research interests primarily revolve around the computational mechanics of pavement, encompassing multiscale numerical characterization and simulation of road materials, 3D

characterization of aggregate particle morphology, and examination of tire-pavement interaction mechanisms via the coupling of FEM and DEM. In recent years, he has published over ten papers as the first author in leading international journals and conferences and has received four international academic awards, including recognition from top international conferences. Additionally, he serves as a reviewer for more than ten journals and conferences.

IV.组织机构

IV. ORGANIZATION



ICCEIC 2024 国际会议承办单位国际管理科学与工程技术协会（IAMSET）于 2010 年在香港注册成立，为合法运营的专业机构，在郑州设立有办事处。业务范畴包括理学、自然科学、社会科学、工程科学、信息学、医学等，涵盖了国际 STEM 的全部学科：科学（Science），技术（Technology），工程（Engineering），数学（Mathematics）等，并通过组织国际学术会议、论坛、研讨会等多种学术交流活动，为来自世界各地的专家学者建立了学术交流的优质平台。

协会通过组织并承办技术研讨会与来自全球的学术机构或个人建立良好的合作关系，为各国学者提供互相学习、自由交流的平台，为年轻学者提供机会，使其能够在实践中撰写优秀学术成果、了解学术成果出版的操作流程，从而提升自身以及团队的学术水平。同时为推进和传播管理科学、工程技术等前沿研究提供强有力的支持。

国际管理科学与工程技术协会与多家世界知名出版集团和多位期刊主编建立了良好的合作关系，如学术出版社（Academic Press），施普林格出版社（Springer），美国机械工程师协会（ASME），美国科学出版社（American Scientific Publishing）等出版社。

协会承接国际学术会议举办, 国际人才引进, 高分学术论文指导, 优秀论文推荐发表, 论文推广等学术活动。国际管理科学与工程技术协会努力践行以上使命, 以加强与各国学术机构之间的合作, 促进国际学术交流。

V.会议主席

V. Conference Chairman



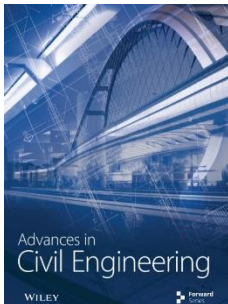
Dr. Zhenling Liu

Henan University of Technology, China

Prof. Zhenling Liu is the associate professor at the School of Management, Henan University of Technology and is charge of teaching the courses, including “Quantitative Analysis”, “Comprehensive Experiment on Application of Statistical Analysis Software”, “Econometrics”, “Marketing Research and Decision Making”, and “Frontier of Management”, etc. His research interests focus on energy-economy-environment system and sustainable development. Prof. Liu presided or participated in several projects and has published more than 90 papers in national and international journals and 13 books. He also severs as the associate editor of Journal of Sustainable Science and Management, and the editor of Advances in Industrial Engineering and Management. Prof. Liu has won several awards, including 3 provincial and ministerial science and technology progress awards.

VI.期刊支持

VI. RELATED RENOWNED JOURNALS



VII.会议信息

VII. CONFERENCE INFORMATION

会议时间和方式

Conference Time and Way

- 北京时间 2024 年 8 月 21 日, 14:30-18:00 会议测试
August 21, 2024, 14:30-18:00 (Beijing Time): Conference Rehearsal
- 北京时间 2024 年 8 月 22 日, 9:00-18:00 线上会议
August 22, 2024, 9:00-18:00 (Beijing Time): Online Conference

- 请下载腾讯会议并提前注册账号

Please install VooV Meeting Software on your PC (The official website of VooV Meeting Software: <https://voovmeeting.com/>) and create an account in advance.

- 请各位嘉宾于会议当天提前进入会议室，谢谢！

Please participants join the VooV Meeting in advance on August 22, 2024. Thanks.

会议入口

Conference Entrance

- **会议测试入口/Conference Rehearsal Entrance**

链接: <https://meeting.tencent.com/dm/7b2iuNOIdyT0>

#腾讯会议: 835-960-031

会议密码: 2024

Link: <https://meeting.tencent.com/dm/7b2iuNOIdyT0>

Conference ID: 835-960-031

Password: 2024

- **正式会议入口/Online Conference Entrance**

链接: <https://meeting.tencent.com/dm/ROQMLXMzl0aW>

#腾讯会议: 977-225-925

会议密码: 2024

Link: <https://meeting.tencent.com/dm/ROQMLXMzl0aW>

Conference ID: 977-225-925

Password: 2024

- **其他参会入口**

微信视频号直播—WeChat Channels Live

抖音直播—Tiktok (Chinese version) Live

Note: We will upload the Conference Video to Twitter, YouTube after the conference.

联系方式

Contact Us

会务组

CONFERENCE AFFAIRS GROUP

联系电话 (Contact):

王老师 (Miss Wang): +86 19137184507

会务邮箱 (Email):

icceicinfo@163.com