



SYNERGIA SUMMITS
...fostering collaborations

Joint Conference

FINAL PROGRAM

World Summit and Expo on
Civil, Architectural & Environmental Engineering
&
World Summit and Expo on
Energy and Power Engineering

August 19 - 20, 2024 | Edinburgh, UK

VENUE

Village Hotel Edinburgh
140 Crewe Rd S, Edinburgh EH4 2NY, UK





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Welcome

It is a great pleasure for us to invite you all to participate as a speaker, delegate, poster presenter, sponsor and/or as an exhibitor at the World Summit and Expo on Civil, Architectural, and Environmental Engineering" (WSECAEE2024) and "World Summit and Expo on Energy and Power Engineering" (WSEEPE2024) scheduled to be held from August 19 to 21, 2024, at the **Village Hotel Edinburgh 140 Crewe Rd S, Edinburgh EH4 2NY, United Kingdom.**

The objective of WSECAEE2024 & WSEEPE2024 is to provide a unique forum for discussion of the latest developments, refresh your knowledge and will offer plenty of networking opportunities, providing you a chance to meet and interact with leading researchers as well as most influential minds in the field of Civil and Energy Engineering.

We believe that worldwide scientists, academicians, government institutions, students, scholars, entrepreneurs in the fields will create huge opportunities by showcasing the growth and breakthrough of energy and power engineering at a time when so many new innovations and challenges are available.

The WSECAEE2024 & WSEEPE2024 is a dedicated conference where you will have the opportunity to learn about new developments and share aspects of your own work in the fields of Civil and Energy Engineering by sharing poster works or oral presentations. With high efficient and tight communication with outstanding experts worldwide, we hope productive discussions would stimulate creative ideas to translate new discoveries into better practice and application.

Finally, we hope and trust that you will find the conference and your visit to the very beautiful and exciting city of Edinburgh, in August 2024 both valuable and enjoyable!

Sincerely,
Organizing Committee
WSECAEE2024 & WSEEPE2024

Organizing Committee

Conference Chair

Taha B. M. J. Ouarda, *National Institute for Scientific Research, Canada*

Conference Co-Chair

Haijun Ruan, *Coventry University, UK*

Committee Members

Pedro Raposeiro da Silva, *ISEL DEC Depart. of Civil Engineering, Portugal*

Thanasis Triantafyllou, *University of Patras, Greece*

Masa Noguchi, *The University of Melbourne, Australia*

Meor Othman Hamzah, *Jurutera Perunding Warisan, Perak, Malaysia*

Pankaj Munjal, *NIT, Kurukshetra, India*

Aso Hajirasouli, *Western Sydney University, Australia*

Hélder Silva Lopes, *University of Minho, Portugal*

Zhang Hong, *Zhejiang University, China*

Haidong Shao, *Hunan University, China*

Žiga Turk, *University of Ljubljana, Slovenia*

Grace Tibério Cardoso, *ATITUS Campus Passo Fundo, Brazil*

Ali Hadigheh, *The University of Sydney, Australia*

Wenjian Pan, *Huazhong Univ. of Science & Technology, China*

Md. Saiful Islam, *Central Queensland University, Australia*

Siu-Lai Chan, *Hong Kong Polytechnic University, Hong Kong*

Naglaa A. Megahed, *Port-Said University, Egypt*

Qian Xudong, *National University of Singapore, Singapore*

Tan Chia Kwang, *University of Malaya, Malaysia*

Alessandro Ruggiero, *University of Salerno, Italy*

Monika Rai, *University of Stuttgart, Germany*

Huachao Yang, *Zhejiang University, China*

Moderator: Hideyuki OKUMURA, Kyoto University, Japan

Day 1

08:45-09:00 Onsite Registrations
09:00-09:15 Opening Remarks and Introduction

Plenary Session

09:15-09:50 Title: Approaches for the integration of climate change and climate variability signals in environmental and civil engineering decision making
Taha B. M. J. Ouarda, National Institute for Scientific Research, Canada
09:55-10:30 Title: Implicit storage: optimally transforming wind and solar into 24/365 firm power resources
Richard Perez, University at Albany, USA
10:30-11:05 Title: Assessing and Managing Legacy and Emerging Contaminants in the Environment
Danny D. Reible, Texas Tech University, USA

11:05-11:25 Coffee Break

11:25-12:00 Title: Planning and design for thermal comfort in open and semi-open urban spaces – sustainability relevance, historical timing, and technological feasibility
Jianlei Niu, The Hong Kong Polytechnic University, Hong Kong
12:00-12:35 Title: Unraveling the puzzle of severe ozone pollution in China
Hai Guo, The Hong Kong Polytechnic University, Hong Kong
12:35-13:10 Title: Building Integrated Photovoltaics in the UK: A pathway to create Net-Zero Society
Tapas Mallick, University of Exeter, UK

13:10-13:15 Group Photo

13:15-14:00 Lunch Break

Keynote Session

14:00-14:25 Title: Shared Urban Ecologies: Positioning and Regenerating Informal Dwelling Systems in Transforming Era
Wenjian Pan, Huazhong University of Science and Technology, China
14:25-14:50 Title: Environmental Risk Framework to Advance New Plastics and the Circular Economy
Margaret M. MacDonell, Argonne National Laboratory, USA
14:50-15:15 Title: Earthquake Risk in Changing Climate
Zorana Mijic, Pennsylvania State University, USA

- 15:15-15:40 Title: The Benefits Of Microgrid-Based Smart Grid: Resilience/Self-Healing
Hashem Nehrir, Montana State University, USA
- 15:40-16:05 Title: Intelligent Asset Management Platform for Hydropower (iAMP-Hydro)
Israel Enema Ohiemi, Trinity College Dublin, Ireland

16:05-16:25 Coffee Break

- 16:25-16:50 Title: Floor impact sound performance of fiber reinforced concrete slabs
Geonho Hong, Hoseo University, South Korea
- 16:50-17:15 Title: Integrating Massive amounts of Wind and Solar in Power Grids
Benjamin Kroposki, National Renewable Energy Laboratory, USA
- 17:15-17:40 Title: Circular economy and life cycle assessment to support innovation in energy engineering
Anna Mazzi, University of Padova, Italy
- 17:40-18:05 Title: Japan's Energy Situation and Future Trends with Solar-GES Hybrid Systems
Hideyuki OKUMURA, Kyoto University, Japan

End of Day-1

Moderator: Nadhir Al-Ansari, Lulea University of Technology, Sweden

Day 2

Keynote Session

09:00-09:25 Title: Using scour detection systems to inform inspection prioritization ranking of bridge populations subject to extreme climate events
Myra Lydon, University Of Galway, Ireland

Invited Session

09:25-09:45 Title: Pathways To Decarbonise An Oil Exporting Country
Pericles Pilidis, Cranfield University, UK

09:45-10:05 Title: Collapse of composite members in coiled tubing: material failure or buckling?
Oleksandr Menshykov, University of Aberdeen, UK

10:05-10:25 Title: A Framework to Evaluate the Energy Efficiency Measures (EEMs) For Residential Sector in the Hot Arid Climate Countries and Iraq: An Intensive Review
Dunya Abdulazeez Gheni Aldhaher, Gazi University, Turkey

10:05-10:25 Title: Damage Identification for Orthotropic Steel Bridge Girder Based on Wavelet Packet Permutation Entrop
Yutao Zhou, University of Manchester, UK

10:25-10:45 Title: Climate-Change-Driven Migration: What this means for long-term planning
Gordon Stanger, Flinders University, Australia

10:45-11:05 Title: Artificial intelligence-empowered signal processing and structural diagnosis for metallic pipelines and other civil structures
Shang Li, North Dakota State University, USA

Coffee Break

11:05-11:25

11:25-11:45 Title: A Research on the Characterization of the Ancient City Models of the Burmese Kingdom
Koji Yamada, Nippon Koei Co., Ltd, Japan

11:45-12:05 Title: Possible Solutions for Water Resources Scarcity and Climate Change in Iraq
Nadhir Al-Ansari, Lulea University of Technology, Sweden

12:05-12:25 Title: Parallel laser line scanning system for quantification of structural defects
SU Kai Leung, The University of Hong Kong, China

12:25-12:40 Title: Recent Technologies of Recycling for Waste Electric Vehicle Battery by Thermal and Pyrometallurgical Processes
Jei Pil WANG, Pukyong National University, Republic of Korea

12:40-13:00 Title: Complex models and simple results in airborne disease transmission
James Bennett, National Institute for Occupational Safety and Health, USA

13:00-14:00 Lunch Break

14:00-14:20 Title: The economics of green hydrogen: cost analysis and future prospects
Aleksandra Komorowska, Polish Academy of Sciences, Poland

14:20-14:40 Title: How immersion liquid cooling technology empowers electrochemical energy storage
Xiaohong Han, Zhejiang University, China

14:40-15:00 Title: Will be updated soon
Jeffrey Johnson, JAJ Inc, USA

15:00-15:20 Title: AI driven advanced diagnostics for extending battery lifetime
Haijun Ruan, Coventry University, UK

15:20-15:40 Title: Design of Sustainable Electrical System for Rural Development of Small Islands
Carina Llagas, University of the Philippines Diliman, Philippines

15:20-15:40 Title: Taiwan Hydrogen and Fuel Cell Industry Outlook and International Cooperation
Meg Jo-Chen Lin, Taiwan Institute of Economic Research, Taiwan

15:40-16:40 Poster Presentations

P01 Title: One-part silico-manganese slag cement activated with olive pomace fly ash
Dolores Eliche-Quesada, University of Jaén, Spain

P02 Title: Experimental Research For Obtaining Green Concretes By Recovery Glass Waste And Power Plant Ash
O. Corbu, A. G. Popa, L. Anastasiu, Technical University of Cluj-Napoca, Romania

P03 Title: Horizontal Seismic Effect on the Growth of Compartment Fires
Kuang-Chung Tsai, National Kaohsiung University of Science and Technology, Taiwan

P04 Title: Improvement of GPT's Performance for BIM Related Queries using RAG-based Information Retrieval
Bonsang Koo, Seoul National University of Science and Technology, South Korea

P05 Title: Solar thermal heating for a feed plant
Wei-Min Lin, National Cheng Kung University, Taiwan

P06 Title: Solar thermal heating for a feed plant
Kung-Ming Chung, National Cheng Kung University, Taiwan

P07 Title: Activated waste clay brick dust with alternative waste-based activators: rice husk ash, spent diatomaceous earth and waste glass
Dolores Eliche-Quesada, University of Jaén, Spain

End of Conference

Next Edition

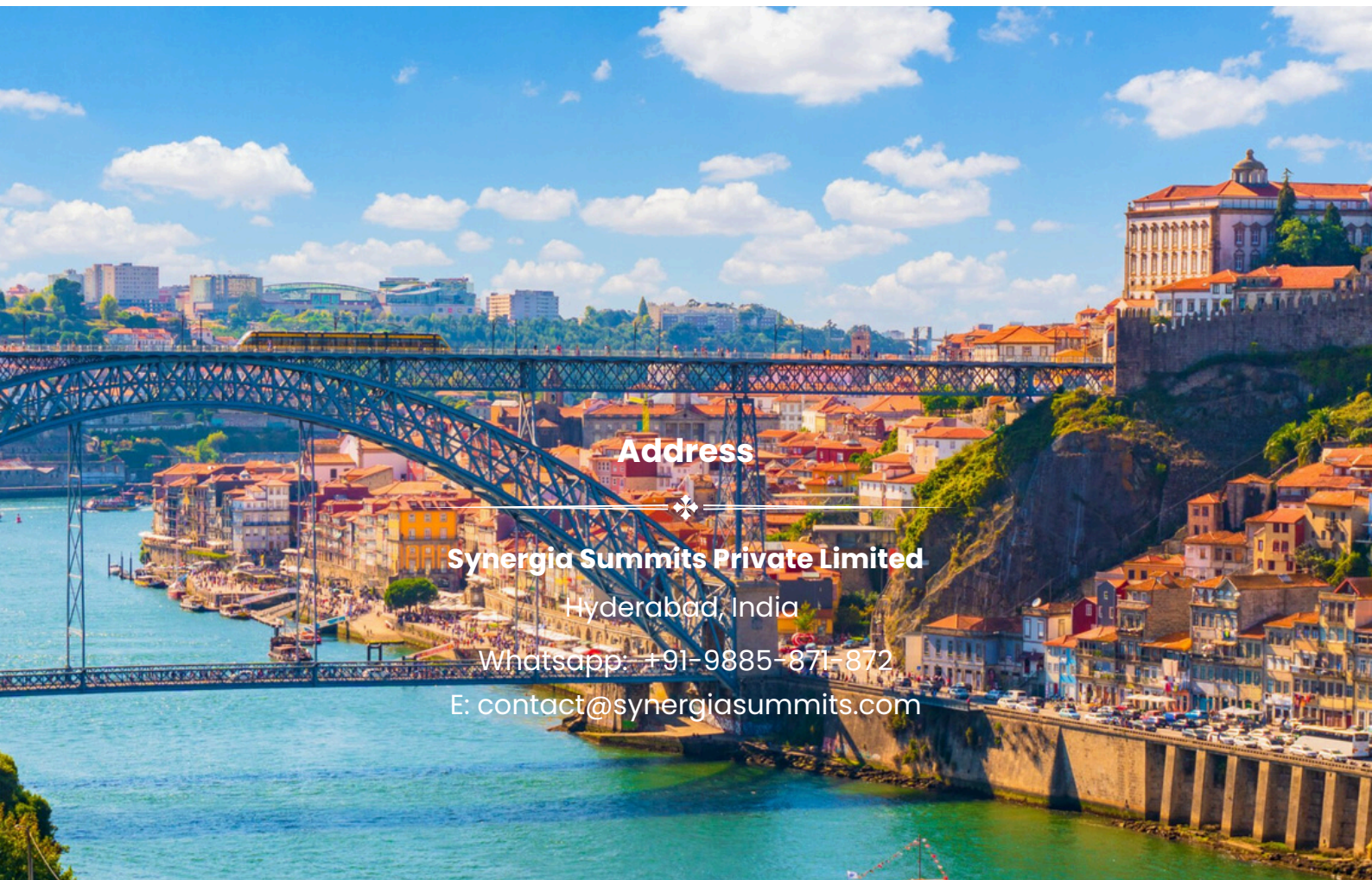
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