

Editorial

Preface: 4th International Conference on Advances in Mechanical Engineering (ICAME-24) [†]

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1. Introduction

The fourth International Conference on Advances in Mechanical Engineering 2024 (ICAME-24) was organized on 8 August 2024 by the Department of Mechanical Engineering, Capital University of Science and Technology (CUST). In ICAME-24, twenty-nine (29) national presenters physically presented their research papers at CUST, while eleven (11) international presenters, along with four (4) keynote speakers, participated online. ICAME is held annually and welcomes high-quality theoretical and empirical original research papers, case studies, and review papers from researchers, academicians, professionals, practitioners, and students from all over the world. All the articles undergo a double-blind review process.

2. Conference Topics

ICAME-24 accepts research papers in the disciplines of:

- Experimental and computational Fluid Dynamics;
- Thermodynamics and heat transfer analysis;
- Machine and Mechanisms;
- Design and Solid Mechanics;
- Manufacturing, Production and Industrial Engineering;
- Engineering and Technology Management;
- Renewable Energy & environmental Engineering;
- Bioengineering;
- Materials and Failure Analysis;
- Other Related Fields.

The ICAME-24 conference provided a platform for the national and international speakers and participants to present their state-of-the-art research work to a diverse audience from academia and industry. International speakers were also given an opportunity to participate virtually. For the complete details of the keynote speakers and the conference program, please visit the official webpage of the conference: <https://icame.cust.edu.pk>.

The conference proceedings are published in the *Engineering Proceedings* Journal of MDPI (Multidisciplinary Digital Publishing Institute), Switzerland. All articles are individually indexed and are citable via Digital Object Identification (DOI). An electronic book of the conference proceedings with ISBN is also digitally available.

3. Committee Members

3.1. ICAME-24 Advisory Committee

Mr. Mian Amer Mahmood, Patron (Chancellor);



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Dr. Muhammad Mansoor Ahmed, Co-Patron (Vice Chancellor);
Dr. Imtiaz Ahmed Taj, General Advisor (Dean Faculty of Engineering);
Dr. Muhammad Mahabat Khan, Principal Advisor (Head, Department of Mechanical Engineering);
Dr. Muhammad Irfan, Chair/Conference Secretary/Editor In-Chief (Associate Professor, Department of Mechanical Engineering).

3.2. ICAME-24 Organizing Committee

Dr. Mohammad Javed Hyder;
Dr. Salman Sagheer Warsi;
Dr. Ghulam Asghar;
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Mr. Saif Ullah;
Mr. Syed Hassan Shah;
Mr. Tauseef Ahmed;
Mr. Manzar Masud;
Mr. Muhammad Rizwan Siddiqui;
Mr. Muhammad Zulfiqar;
Mr. Muhammad Haroon;
Mr. Muhammad Ahmed;
Mr. Sarmad Ali.

3.3. Technical Committee/Reviewers

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Dr. Mohammad Akmal, UET Peshawar, Pakistan;
Dr. Anwaar Nazeer, National Textile University, Faisalabad;
Dr. Jabir Mumtaz, Wenzhou University, China;
Dr. Usama Waleed Qazi, Institute of Space Technology, Islamabad.

4. Keynote Speakers

Four keynote speakers enlightened the participants and presenters of ICAME-24.

Keynote Speaker 1: Prof. Timothy G. Wentz delivered the talk titled “**The Future of Resiliency and AI—A Winning Partnership**”.

Biography: Prof. Wentz is an Emeritus Professor of Construction Management at the University of Nebraska–Lincoln, Lincoln, Nebraska, USA. Prof. Wentz graduated from the University of Nebraska with a Bachelor of Science degree in Mechanical Engineering and a Master’s degree in business administration. He is a registered professional engineer in Nebraska. Additionally, he holds both Master Heating Contractor and Master Plumbing Contractor licenses, is a LEED®-Accredited Professional (AP-BD&C), and holds an ASHRAE certification as a High-performance Building Design Professional (HBDP). Prof. Wentz served on the Construction Management faculty in the College of Engineering for 25 years until being named an Emeritus Professor in 2018. He is also a very active volunteer within ASHRAE, where he has served as the Nebraska Chapter President from 1997 to 1998. He also served as Director and Regional Chair for Region IX of ASHRAE and was inducted into the Region IX Hall of Honor in 2005. ASHRAE also elected Prof. Wentz as a Fellow of the Society in 2005. Prof. Wentz served as Society President in 2016–2017 and launched the Society theme for that year, ‘Adapt Today to Shape Tomorrow’.

Keynote Speaker 2: Dr. Darvaish Khan presented the talk titled “**Hydrogen storage in nanomaterials for energy applications and fuel cells**”.

Biography: Dr. Darvaish Khan is a lecturer at the Center of Excellence for NaNo Energy, School of Energy and Chemical Engineering, Xiamen University Malaysia. He obtained his master’s degree from the University of Liverpool, UK, and his PhD in Hydrogen Sciences from the School of Materials Science and Engineering, Shanghai Jiao Tong University, China. He is an expert in hydrogen and graphene production from natural gas through atmospheric microwave plasma, hydrogen storage in nanomaterials for energy applications, and hydrogen fuel cells. He has won several international awards for his innovative work in hydrogen science and fuel cells. His work has been published in the International Journal of Hydrogen Energy, Chemical Engineering Journal, Journal of Materials Chemistry A, ACS Applied Materials and Interfaces, etc. He is a member of the American Chemical Society, the International Society of Hydrogen Energy, and the International Association of Advance Materials. He is also a reviewer at the American Journal of Nano Research and Applications.

Keynote Speaker 3: Dr. Azfar Khalid delivered the talk titled “**Driving Industry 4.0 and Industry 5.0 together: Challenges and opportunities**”.

Biography: Dr. Azfar Khalid holds a BS in Mechanical Engineering from the GIK Institute of Engineering, Pakistan, and a PhD in Precision Engineering from the University of Manchester (2009). Dr. Khalid is a Senior Lecturer of Mechanical Engineering at the Department of Engineering in the School of Science and Technology at Nottingham Trent University, UK. Dr. Khalid has a teaching role across the disciplines of mechanical and

electronics engineering where he has taught control systems, robotics, cybernetics, and biomechanics. He is actively pursuing research on smart factories, human–robot collaboration, cyber-physical production systems, digital twins, and Industry 4.0. Moreover, he is the research coordinator of the Department of Engineering and leading the Digital Innovation Research Group in the smart technologies theme as part of the Imaging, Materials, and Engineering Center for research.

Keynote Speaker 4: Dr. Syed Zulfiqar Hussain Shah delivered the talk titled “**Multiscale modelling of fibre reinforced composites**”.

Biography: Dr. Syed Zulfiqar Hussain Shah is a lecturer in the Department of Mechanical Engineering at Universiti Teknologi Petronas (UTP), Malaysia. He received his PhD degree in Mechanical Engineering from UTP. He is known for his expertise in the field of fiber-reinforced composites. With his industrial and academic career spanning over 16 years, he has established himself as a prominent figure in composite manufacturing, testing, and computational mechanics. His current research interests include the multiscale modeling of composites, impact resistance and damage tolerance of composites, fatigue life enhancement of composites, and sandwich composite structures. He has published his work in leading international journals such as *Composite Part B*, *Composite Part A*, *Composite Structures*, *Composite Communications*, etc.

Conflicts of Interest: The authors declare no conflicts of interest.

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