# **DEPARTMENT'S HIGHLIGHTS**

The Department of Mechanical Engineering at KIET was established in 1999 with the objective to impart quality education in the core field of Mechanical Engineering. The Department aims to disseminate knowledge and create bright professionals ready to serve the society. ME Department has been consistently providing world class education and research exposure to all its students. The faculty members in the Mechanical Engineering Department are highly qualified, experienced and dedicated. The Department was accredited in the year 2005, 2009, 2015 and 2018 by the National Board of Accreditation (NBA) of AICTE.

The Department is running Undergraduate & Postgraduate courses in Mechanical Engineering. With newer opportunities identified, the department has strong industry-academia relationship and established two active Centres of Excellence:

- i) Center of Automotive Mechatronics in collaboration with Mercedes-Benz India Pvt. Ltd.,
- ii) Centre of Advanced Woodworking (CAW) in collaboration with BIESSE Manufacturing Co. Pvt. Ltd.





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Affiliated to Dr. A.P.J. Abdul Kalam Technical Univ., Lucknow Accredited by NAAC with Grade 'A' (5 yrs) | NBA accredited courses Delhi-NCR. Meerut Road (NH-58). Ghaziabad - 201206

Hybrid Mode (online and face-to-face)

# **International Conference**

# **Innovative Technologies in Mechanical Engineering-2021**



### **Organized by**

Department of Mechanical Engineering, KIET Group of Institutions, India &

# **London South Bank University, United Kingdom**



# Sponsored by



Under the GCRF project
Industry-Academia Partnership for Transforming Engineering Education in India

This conference is a joint outcome of the efforts from:

Department of Mechanical Engineering, KIET & School of Engineering, LSBU, UK in collaboration with

SRUC Edinburgh, U.K.

EPSRC Network Plus in Digitalised Surface Manufacturing (zUniversity of Manchester, University of Sheffield, Queen's University Belfast, Cranfield University & LSBU)

### ABOUT KIET GROUP OF INSTITUTIONS

KIET Group of Institutions, A 23 year old educational institute having 6000+ students on its roll empowered with 350+highly qualified full-time faculty to nurture our students along with a rich alumni base of 16000+ students spread in all the nooks and corners of the world.

KIET Group of Institutions has vision: "To achieve excellence in technical education and create competent professionals for industry & Socio-economic development to meet National and International Needs". The effort of the institute in imparting Technical education has been recognized in terms of achieving 176<sup>th</sup> Rank in Engineering & Ranked in the Band of 76-100 in Pharmacy in National Institutional Ranking Framework (NIRF)-India Ranking 2021 and awarded as 'Band A' Institution (among Top 25 Institutions) in the category of 'Private/Self-Financed College/Institutes' in ARIIA 2020 rankings. KIET is also a recipient of the AICTE-Utkrisht Sansthan Viswakarma Award (USVA) 2020 (II position) in the category-3 (Material/Product manufactured/Developed). KIET has been continuously following its vision resulting in the establishment of Technology Business Incubator (TBI) in 2007. TBI-KIET is jointly promoted by NSTEDB, Department of Science & Technology, Govt. of India and KIET Group of Institutions.

### ABOUT SCHOOL OF ENGINEERING, LSBU, UK

London South Bank University (LSBU) is one of London's largest and oldest university with over 125 years of experience providing engineering skills. The university has a good track record of participation in EU-funded programmes, including many in FP6, FP7 and Horizon 2020 and has previously coordinated MANANO (FP7-PEOPLE-2010-ITN Project 264710). LSBU has a healthy track record of managing grants from the UK Research Councils, Government departments and the European Commission, as well as industry and charities, and has internal systems in place to support large, multi-partner projects. LSBU has a long tradition and strong commitment to both fundamental and applied research in the areas of electronics and structural materials, sustainable design and manufacture as well as multistage simulations using finite element and atomic simulations. In Research Excellence Framework (REF 2014), a five-year national review of research carried out in UK, 80% of the research in 'Genetic Engineering' was given the two highest quality ratings (4\* and 3\*) for their research impact. LSBU owns a wide range of manufacturing facilities and equipment including latest Computer numeric control (CNC); 3D printing technologies, laser cutting; plasma spraying as well as high-performance computing with one of the newest standard HPC recently bought and established in its Croydon Campus. The material characterization facilities include SEM, XRD, FTIR, TGA, scanning acoustic microscopy, micro Raman, atomic force microscope, nano indentation etc. The university has an extensive training infrastructure with nearly 1000 employers using LSBU to train approximately 4500 of their staff each year and over 150 subject matter expertise (SME) from various major companies that have formed commercial research partnership. In recent times, LSBU is contributing its efforts to the GCRF funded SUNRISE programme. EPSRC NetworkPlus programme, TFI Networkplus funded feasibility studies.

### EPSRC NETWORKPLUS ON DIGITALISED SURFACE MANUFACTURING

The EPSRC sponsored DSM Network Plus is a £1million investment by the EPSRC to bring together the diverse expertise and capabilities in UK academia to enhance digitalization in surface manufacturing and to move the sector forward to meet the Industry 4.0 challenges. Led by the University of Manchester, the Network started with 4 academic partners initially and has quickly engulfed more than 800 registered members within a year of its existence. While for industries, it is a go to place, to seek advice on how digitalization can facilitate their businesses, for early stage researchers and other academics, it is a network to be associated with to receive right mentoring and be abreast of the latest in the field of digitalized coatings.

(https://digitalisedsurfacemanufacturing.com)

### ABOUT THE CONFERENCE

The international Conference, ITME-2021 is jointly organized by KIET and London South Bank University (LSBU) in collaboration with SRUC Edinburgh, and EPSRC DSMN. This conference is sponsored by Royal Academy of Engineering UK. The aim of the conference is to provide a forum to researchers around the globe to explore and discuss on various aspects of Mechanical Engineering. The conference consists of various sessions and includes keynote and parallel sessions. Each session will be addressed by outstanding experts (National and International) who will highlight the recent advances in various facets of Mechanical Engineering. It will also offer the budding researchers an opportunity to present their work in front of eminent experts of their research areas. Discussion on the latest innovations, trends and practical concerns and challenges faced in these research areas are also encouraged. Innovation will bring added value and widen the employment base. The present conference attempts to establish some robust and mutual interactions and cooperation with scientific educational, governmental and non-governmental organizations, and industries across local, national and international levels.

### PUBLICATION

All accepted, registered, and presented submissions will be processed for publication in Scopus indexed conference proceeding and selected papers will be processed for publication in special issue of International Journal of Precision Technology (Inderscience Publishers), Journal of Advanced Manufacturing System (World Scientific) and Journal of Manufacturing Processes (Elsevier)

#### CONFERENCE THEMES

The conference will highlight the related focused areas based on the following themes

- ✓ Industry 4.0
- ✓ Engineering Design & Mechanism
- ✓ Tribology
- ✓ Nanotechnology
- ✓ Micro-Machining
- ✓ Renewable Energy
- ✓ Ergonomics and Work Study
- ✓ Product Design and Development
- Combustion and Fuels
- ✓ Forming and Casting
- ✓ Noise, Vibration & Harshness Control
- ✓ Welding and its Metallurgy

- ✓ Rapid Prototyping
- ✓ CAD/CAM/FMS/CIMS/FEM/FEA/CFDI
- ✓ IoT & Machine Learning
- ✓ Robotics and Mechatronics
- ✓ Composite & Advanced Materials
- ✓ Hybrid Machining
- ✓ Supply Chain and Logistics
- Heat and Mass Transfer
- ✓ Refrigeration and Air-Conditioning System
- Non-destructive evaluation of Material
- ✓ Automobile Design and Manufacturing
- Optimization, Modeling and Simulation

### **IMPORTANT DATES**

Abstract Submission Deadline	20 <sup>th</sup> October 2021
Acceptance of Abstract	27 <sup>th</sup> October 2021
Full Paper Submission	15 <sup>th</sup> November 2021
Acceptance of Full Paper	30 <sup>th</sup> November 2021
Early Bird Registration Deadline	3 <sup>rd</sup> December 2021
Last date of Registration	10 <sup>th</sup> December 2021
Date of Conference	17 <sup>th</sup> -18 <sup>th</sup> December 2021

### **ADVISORY BOARD**

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# REGISTRATION FEE

Dr. Srikrishna N. Joshi. IIT Guwahati

Category	National Delegates (INR)		International Delegates (USD)	
Category	Early Bird	Last date	Early Bird	Last date
Delegates from Industry	6000	6500	250	300
Delegates from Academic	5000	5500	150	200
Research scholars/Students	3000	3500	125	150
For Attending Only	1000	1500	100	125

**Note:** 50% discount on Registration fee is applicable for papers having female First author and 50% discount on registration fee for Female attendees.

### MODE OF PAYMENT

Payment through NEFT/RTGS/IMPS or DD in favor of KIET Group of Institutions payable at GHAZIABAD

Account Details	For National Delegates	For International Delegates
Name	KIET Group of Institutions	Krishna Institute of Engineering & Technology
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Bank Name	Kotak Mahindra Bank	ICICI Bank Ltd.
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