



## **Interdisciplinary Conference on MECHANICS, COMPUTERS and ELECTRICS (Online)**

*Special Session on*

**“Sustainable Power, Energy and Robotics”**

*Organized by*

**Venkatesh Boddapati (venkateshb.eee@bmsce.ac.in)  
B.M.S College of Engineering, Bangalore, Karnataka, India.**

**Rakesh Kumar (rakesh.a@ieee.org)  
National Institute of Technology Tiruchirappalli, Tamilnadu, India.**

**Ravi Kumar Mandava (ravikumar1013@manit.ac.in)  
Maulana Azad National Institute of Technology, Bhopal (M.P), India.**

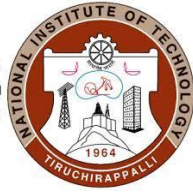
**C.Lakshminarayan(lngp.eee@bmsce.ac.in)  
B.M.S College of Engineering, Bangalore, Karnataka, India.**

**Sanjeevikumar Padmanaban (sanjeev@btech.au.dk)  
CTiF Global Capsule, Department of Business Development and Technology,  
Aarhus University, Birk Centerpark, Herning, Denmark**

## **Call for Papers**

The rapid increase in the installation of renewable energy sources in electric power systems has given rise to a wide range of problems related to the planning and operation of power systems to maintain quality, stability, reliability, and efficiency. Additionally, there is a growing global environmental concern regarding increasing emissions from the electric power generation required to meet rising energy needs and support sustainable development. Moreover, modern power, energy, and electronics systems have gained immense popularity in dealing with several sustainable renewable energy disciplines worldwide.

Another objective of this conference is to bring the importance of robotics for different applications. The field of Robotics has now gained immense popularity in respect of dealing with several problems in different disciplines all over the world. Human-robot collaboration is one of the important trend in robotics. With the ability to work in tandem with humans, modern robotic systems are able to adapt to a rapidly changing environment. The range of collaborative applications offered by robot manufacturers continues to expand. The another challenging technology in robotics is motion planning. Motion planning module responsible for generating trajectory from the start position to goal position. The problem is approached as a hierarchical optimisation problem where each layer has the correct level of abstraction to perform motion planning in real-time.



AARHUS  
UNIVERSITY

## Topics on sustainable power, energy, and electronics system

- **Methods of optimizing a sustainable and intelligent Microgrid**
- **Economic benefit and technical challenges of forming localized Microgrids**
- **Reliability assessment of a power grid with the sustainable power transportation system**
- **Sustainable energy growth and their potential solutions**
- **Power electronics interfaces for renewable energy applications**
- **Off-grid systems**
- **Protection issues in Microgrids**
- **Electric vehicle charging stations**

## Topics on Robotics and its applications

- **Industrial Robots, Path planning and its Control**
- **Biped robots and its control**
- **Motion planning, Localization and its control**
- **Agricultural Robots, design and analysis**
- **Control techniques in robotics**
- **Soft computing algorithms in Robotics**
- **Soft Robots**
- **Under Water Robots**
- **Biologically-Inspired Robots**

**Submissions Procedure:** All the instructions for paper submission are included in the conference website: <http://icmece.org/>

### Deadlines

**Virtual Conference Days: 27-28 November 2021**

**Manuscript Submission Deadline: 1st September 2021**

**Peer-Review starts upon the arrival of papers.**

**Acceptance Delivery Starts: 7th November 2021.**

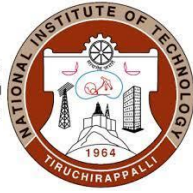
**Registration of participants starts from 7th November 2021 till 20th November 2021.**

**Online ISBN numbered Conference Proceedings is published on 10th December 2021.**

**Call for the selected papers for the cooperating journals : 20th December 2021.**

### PUBLICATIONS

All accepted/presented papers will appear in ICMECE Conference Proceedings. Extended versions of the selected papers will be submitted to SCOPUS and SCI-indexed journals. List of SCOPUS and SCI-indexed journals updated in the conference website.



## Organizers



**Venkatesh Boddapati** received his B. Tech (Electrical and Electronics Engineering) from Acharya Nagarjuna University, Guntur, Andhra Pradesh, and M. Tech (Power Electronics) from B.M.S College of Engineering, Bangalore, Karnataka, India in the year 2009 and 2011, respectively. He is pursuing his Ph.D. degree in department of EEE at NIT, Tiruchirappalli, Tamil Nadu, India under AICTE-QIP scheme, sponsored by Govt. Of India and B.M.S College of Engineering, Bangalore. Currently he is an Assistant Professor in the Department of Electrical and Electronics Engineering, B.M.S College of Engineering, Bangalore. His areas of interest include Renewable Energy, Micro-grids and designing of hybrid energy based Electric vehicle charging stations. He has published about 25 technical papers in various National, International Journals, Book Chapters and Conferences. He is an active reviewer of various International Journals.



**A Rakesh Kumar** (M'14–SM'21, IEEE) completed his bachelor's in engineering with a honors in "Electrical and Electronics Engineering" from Anna University, Chennai, India in 2011 and Masters in Engineering in "Power Electronics and Drives" from Anna University, Chennai, India in 2013. He worked as Assistant Professor with the Department of EEE, Rajalakshmi Engineering College, Chennai, India from 2013 to 2015. He then went on to join for a full time PhD with the School of Electrical Engineering (SELECT), Vellore Institute of Technology (VIT) from 2015 to 2019. He was also serving as Teaching cum Research Assistant from 2015 to 2019 with the same. Currently, he is a Post-Doctoral Fellow with the Nano and Micro grid lab, Department of EEE, National Institute of Technology, Tiruchirappalli, India.



### **Ravi Kumar Mandava**

Dr. Ravi Kumar Mandava received his B.Tech in Mechanical Engineering from Acharya Nagarjuna University, Guntur in 2008. Further, he received his Master of Engineering (M.E) in CAD/CAM from Andhra University, Visakhapatnam in 2010. Later, he obtained his Ph.D degree (Robotics) in School of Mechanical Sciences from Indian Institute of Technology Bhubaneswar in 2019. He worked as Assistant Professor in Vignana's Foundation for Science, Technology and Research (Deemed to be University) from June 2018 to May 2020. At present, he is working as Assistant Professor in the Department of Mechanical Engineering of Maulana Azad National Institute of Technology Bhopal. His research area includes legged robotics, motion planning, agricultural robots, manufacturing, and soft computing. He has published about 30 technical papers in various National, International Journals, Book Chapters and Conferences. He is an active reviewer of various International Journals.



**C. LAKSHMINARAYANA** is Professor in the Department of Electrical and Electronics Engineering with over 18 years of experience in B.M.S. College of Engineering and Equity Action Plan Nodal officer (TEQIP), BMS College of Engineering. He has headed the department during 2016-2019. He has been involved with research in Power System Engineering. He has produced 4 Ph.D. Scholars and guiding 6 Ph.D. students and directed 22 Master's students and many undergraduate students. He has more than 35 research publications to his credit and has received BEST PAPER AWARD: "VLC FOR UNDERWATER OPERATIONS" Third International Conference on Electrical, Electronics, Communication, Computer Technologies and Optimization Techniques (ICEECCOT-2018) & has Filed PATENTS for "APPARATUS OF ETCHED COPPER CLAD COOKTOP" on January 31, 2019. He has successfully completed the DRDO Funded R/D project on "Design and Implementation of a Wireless Energy Harvesting Sensor System that can be installed on Gas Turbine Engine" as a Principal Investigator. He has also executed TEQIP Sponsored Projects on "Design and Implementation of Wind Turbine based Intelligent and Efficient Energy Harvesting Control System" and "Solar PV Wind Hybrid with DC Micro Grid". He has played a key role in setting up of Center of Excellence in Solar Photovoltaic Systems in BMSCE. He has also served as an evaluator/advisor in several evaluation committees constituted by UPSC, AICTE, KPSC, VTU. He is an IEEE Member and a Life Member of ISTE. He has fetched grants from AICTE for Organizing the First National Conference on Energy Systems and Energy Issues. He is the Technical Program Co-Chairs of REV 2019, 16th International Conference on Remote Engineering and Virtual Instrumentation. Working individually and in team, handling multiple tasks and efficient time management are few of his strengths. He has received Award of Excellence in Higher Education from Centre for Leadership Development, Venus International Foundation, Chennai on 2nd Nov 2019. Working individually and in team, handling multiple tasks and efficient time management are few of my strengths.



**P. Sanjeevikumar (M'12–SM'15, IEEE)** received a Ph.D. degree in electrical engineering from the University of Bologna, Bologna, Italy 2012. He was an Associate Professor at VIT University from 2012 to 2013. In 2013, he joined the National Institute of Technology, India, as a Faculty Member. In 2014, he was invited as a Visiting Researcher at the Department of Electrical Engineering, Qatar University, Doha, Qatar, funded by the Qatar National Research Foundation (Government of Qatar). He continued his research activities with the Dublin Institute of Technology, Dublin, Ireland, in 2014.

Further, he served as an Associate Professor with the Department of Electrical and Electronics Engineering, University of Johannesburg, Johannesburg, South Africa, from 2016 to 2018. From March 2018 to February 2021, he has been a Faculty Member with the Department of Energy Technology, Aalborg University, Esbjerg, Denmark. Since March 2021, he has been working as Professor with the CTIF Global Capsule (CGC) Laboratory, Department of Business Development and Technology, Aarhus University, Herning, Denmark.

S. Padmanaban has authored over 300 scientific papers and was the recipient of the Best Paper cum Most Excellence Research Paper Award from IET-SEISCON'13, IET-CEAT'16, IEEE-EECSI'19, IEEE-CENCON'19 and five best paper awards from ETAEERE'16 sponsored Lecture Notes in Electrical Engineering, Springer book. He is a Fellow of the Institution of Engineers, India, the Institution of Electronics and Telecommunication Engineers, India, and the Institution of Engineering and Technology, U.K. He is an Editor/Associate Editor/Editorial Board for refereed journals, in particular the IEEE SYSTEMS JOURNAL, IEEE Transaction on Industry Applications, IEEE ACCESS, IET Power Electronics, IET Electronics Letters, and Wiley-International Transactions on Electrical Energy Systems, Subject Editorial Board Member—Energy Sources—Energies Journal, MDPI, and the Subject Editor for the IET Renewable Power Generation, IET Generation, Transmission and Distribution, and FACTS journal (Canada).