

**INTERNATIONAL CONFERENCE**  
**ON**  
**"RECENT ADVANCES ON RENEWABLE ENERGY (RARE-2020)"**

**7-9<sup>th</sup> FEB, 2020**



**Organized by**



**National Institute of Technology Karnataka Surathkal**  
P.O. Srinivasnagar-575025, Karnataka State, India,  
Telephone: 0824-2473315 (Web site: [www.nitk.ac.in](http://www.nitk.ac.in))

**In collaboration with,**  
**Govt. Engg. College, Jhalawar, Rajasthan, India**

### Important Dates

|   |  |
|---|--|
| Full papers submission close                                    | October 31 <sup>st</sup> 2019                  |
| Acceptance notification by                                      | November 30 <sup>th</sup> 2019                 |
| Submission of final paper (Format) with registration (Standard) | December 20 <sup>th</sup> 2019                 |
| Conference  | February 7 <sup>th</sup> -9 <sup>th</sup> 2020 |

### Registration Fees

| Category                                    | Standard   | ON-Spot     |
|---|------------|-------------|
| Delegates from Industries/R&D (INR)         | Rs. 9000/- | Rs. 11000/- |
| Delegates from Academic Institutions. (INR) | Rs. 8000/- | Rs. 10000/- |
| Delegate from abroad (USD)                  | 500\$      | 600\$       |

Research papers, review articles or case studies up to 6 pages can be submitted to the conference only through email ([papers.rare2020@nitk.edu.in](mailto:papers.rare2020@nitk.edu.in))

All papers to be submitted with conference template/guidelines that can be downloaded at <https://rare2020.nitk.ac.in>

Authors are invited to submit the full papers (Max. 6 pages, double column A4) as a PDF using the given template. The papers must be original and not simultaneously submitted to other journal or conference.

Each paper will be reviewed as single blind review by two experts in the area of specialization. All accepted papers will be published as proceedings with ISBN. The extended version of selective papers will be published in the Scopus Indexed SPRINGER book series.

### Organizing Committee

**Chief Patron:**

Prof. K Balaveera Reddy, Chairman, BOG-NITK

**Patrons:**

Prof. K Umamaheshwar Rao, Director, NITK  
Prof. Kartar Singh., Principal, GEC, Jhalawar

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Dr. Ashwini Sharma , GEC, Jhalawar  
Dr. Moti Lal Rinawa, GEC, Jhalawar

For Contact: Dr. Veershetty Gumpature, Mobile: +919591415911, email: [veersq@yahoo.co.in](mailto:veersq@yahoo.co.in)

Check for any update: [rare2020.nitk.ac.in](https://rare2020.nitk.ac.in)

## **THEME**

The growth of the modern economy and living standards of a country strongly depends on the use of accessible energy resources in an environmentally friendly manner. The global primary energy demand is continuing to increase at an average of 1.5% per year to 2035 (BP, 2014). The biggest challenge before us today is to meet this burgeoning energy need of the growing population through affordable environmental friendly sustainable energy sources and technologies. Renewables are expected to continue to be the fastest-growing class of energy, projected to rise at an average annual rate of 3.0 percent till 2035. Recognizing this fact of global energy in crossroads, this conference addresses the path forward in overcoming the various research and development challenges for implementation of renewable energy technologies.

## **TOPICS (not limited to)**

### **A. Renewable energy**

- 1) Solar thermal
- 2) Solar PV
- 3) Biomass and biofuels
- 4) Waste to energy
- 5) Use of renewables for electric mobility
- 6) Distributed energy generation and smart grids
- 7) Hydro and ocean energy
- 8) Application of AI techniques in renewable energy

### **B. Energy storage**

- 1) Thermal
- 2) Thermochemical
- 3) Electrochemical

### **C. Energy, people and environment**

- 1) Energy poverty
- 2) Sustainability analysis
- 3) Impact of clean energy initiatives on society
- 4) Zero energy buildings

### **D. Energy policy and economics**

- 1) Renewable energy financing
- 2) Procurement policy
- 3) Challenges in large scale renewable energy generation

### **E. Optimization techniques for large scale energy generation**

## **REGISTRATION**

Non-refundable registration fees may be paid through NEFT transfer to the bank account: Name: **Director, NITK, Surathkal, Current A/c no: 10175365060**, IFSC code: **SBIN0002273**, State Bank of India, Surathkal, Srinivasanagar, Mangalore, India

**The authors of the accepted paper have to present their papers in oral / poster format in person. The conference will have the following awards, which will be announced and bestowed at the conference closing session; i) best paper, ii) best oral presentation and iii) best poster awards for each technical session.**

## **THE INSTITUTE**

The National Institute of Technology Karnataka (NITK), Surathkal is rated as one of the top technological universities in India. NITK is recognized as an Institute of National Importance by an Act of Parliament. Institute offers **9 UG, 26 PG, and Ph.D. programs**. Established as a Regional College of Engineering in 1960, it has been **imparting** graduate and postgraduate courses in various disciplines of Engineering, Technology, Science and Humanities.

NITK has been consistently identified as one of the top performers in implementing the TEQIP project. Our Institute has been selected to participate in TEQIP-III with a total outlay of Rs. 700 lakhs. TEQIP-III commenced with effect from 01 April 2017. Our Institute has been designated as Mentor institute for Government Engineering College, Jhalawar, Rajasthan. A Memorandum of understanding (MoU) with MHRD and an Agreement with the Mentee Institute, GEC Jhalawar, have been signed on 7th July 2017.

## **INTERDISCIPLINARY CENTRES OF EXCELLENCE**

Materials Research  
Disaster Risk Reduction  
Sustainable Technologies  
Wireless Sensor Networks  
Innovation  
System Design (Virtual Instrumentation)  
Renewable Energy Integrated Smart Grid Technologies

## **RESEARCH & DEVELOPMENT**

Institutional scholarships offered to 600 full-time doctoral students; Ongoing National Projects on Smart Materials (NPMASS), Technology Enhanced Learning (NPTEL), SMDP & VLSI; currently eight FIST Programmes are funded by DST.

29 agencies have funded our research to the tune of Rs. 58 crores for 149 ongoing research projects as on 2018-19. The Institute has received research grant to the tune of 6 crores for four research projects under the prestigious Impacting Research Innovation and Technology (IMPRINT) scheme. The Institute has received grants for five proposals submitted to prestigious Scheme for Promotion of Academic and Research Collaboration (SPARC), an initiative of MHRD, Govt. of India. The Institute also received funding of Rs. 80 Crores in Phase-I to establish world-class “Central Research Facility” under HEFA Scheme.

## **ACCOMMODATION**

Limited accommodation may be arranged for delegates in the Institute Guest house/hostels on specific request on a first come first serve basis for which participants have to pay accommodation charges. The delegates need to book the accommodation in the hotels near by Surathkal and Mangalore on their own.