



## KIT-TEQIP-III Sponsored

### 1<sup>st</sup> International Conference on Recent Trends in Developments of Thermo-fluids and Renewable Energy (TFRE-2020)

28<sup>th</sup> -30<sup>th</sup> September 2020(REVISED)



Organized by  
**National Institute of Technology  
Arunachal Pradesh**



In Collaboration with  
**Indian Institute of Technology  
Guwahati**

Co-organizers



NIT Mizoram



NT Manipur



NIT Nagaland



NIT Meghalaya

#### About the Event

This conference intends to have deliberations on Thermo-fluids and Renewable Energy, also focusing on the applications of heat and work to engineering problems, fluid behaviour under the influence of thermal/ pressure gradients and energy systems. The conference also intends to discuss the role of engineers in the field of medical healthcare such as effect of blood flow on external heating during radiation therapy etc. The exhaustive work being done by various achievers in the field of thermo-fluids and Energy systems is intended to draw established as well as young researchers, providing them an exposure to the recent developments in thermo-fluids and Renewable Energy. The theoretical topics together with real time examples from various thermo-fluids' problems and generation and storage of Renewable Energy are planned for presentations and discussions. Speakers from premier institutions in India and abroad with a vast knowledge and experience in the field of thermo-fluids and Renewable Energy, who have been quite active in the field for a long time, will be delivering the keynote address and invited talks. The conference thus provides a platform for mutual dissemination of ideas on thermo-fluids and Renewable Energy between researchers and industrialist.

#### Objectives

The objectives of the conference

- To exchange experiences and research on all aspects of Thermo-fluids, generation and storage of Renewable Energy, transmission systems etc.
- To disseminate knowledge of the most recent innovations, concerns as well as practical challenges encountered and solutions adopted in the fields of Thermo-fluids and Renewable Energy.
- To appreciate recent advances in the field of alternate sources of Energy, Bio Heat Transfer, Hydro Power System, Electrical power Generation, Hybrid system etc.
- Platform to discuss the innovation and challenges encountered in the field of Renewable Energy specifically in the North East region of India.

#### Scope of the Conference

Papers are invited in the following themes (but not limited to)

- Aerodynamics
- Alternate Energy
- Bio Fuel
- Bio Heat Transfer
- Combustion
- Computational Fluid Dynamics
- Control Mechanism for Constant Power Generation
- Distributed Generation
- Electric Vehicle
- Hybrid Power System
- Energy Storage
- Hydro Power System
- Refrigeration and Air Conditioning
- Solar and Renewable Energy
- Stability and Transient Analysis using soft computing techniques

The TFRE-2020 program also will include invited talks by prominent researchers, technical sessions and group discussions in the above mentioned areas.

#### Registration Fee

The detail of the registration fee is available in the conference website:

<https://www.iitg.ac.in/ceer/tfre2020>

#### Important Dates

Last date of submission of abstract	13 <sup>st</sup> Mar, 2020
Notification of acceptance	31 <sup>st</sup> Mar, 2020
Revised date of submission of full paper	10 <sup>th</sup> June 2020
Revised date of submission of revised Manuscript	15 <sup>th</sup> July 2020
Revised last date of early bird registration	15 <sup>th</sup> July 2020

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### About NIT Arunachal Pradesh

The National Institute of Technology, Arunachal Pradesh was established in the year 2010 established by MHRD, Govt. of India. It is one of the 31 National Institutes of Technology in India and is recognized as an Institute of National Importance. Presently the institute is running in project phase with yearly intake of 190 undergraduate students in five major Engineering

departments such as Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering and Mechanical Engineering. Each department is equipped with well-established state of the arts laboratories to cater holistic development of the students. The faculty and student of the institute are also engaged in various R&D projects sponsored by various Government agencies and the current value of such running project is around 5 Crore for 25 projects.

### How to reach NIT Arunachal Pradesh

**By Air:** The nearest Airport is Lilabari (North Lakhimpur) in Assam, which is around 50 km from the campus. The airport is well connected with Guwahati and Kolkata airport. Pre-paid taxi is easily available from the airport to reach the Institute. Daily helicopter services are available between Guwahati and Naharlagun except on Sundays.

**By Train:** The nearest railway station is Naharlagun, which is around 3 km from Yupia. The journey from Guwahati to Yupia takes about 10 hours. Taxi for Yupia and share Auto service are also available at Naharlagun City or Naharlagun Railway Station.

**By Road:** Guwahati to Naharlagun: Naharlagun is at a distance of 370 km from Guwahati. Car/bus services are available from Guwahati to Naharlagun. Day and Night bus services are available from Guwahati to Naharlagun from where taxi can be availed to reach Yupia.

### About Centre for Energy, IIT Guwahati

Centre for Energy at IIT Guwahati was established in May, 2004 to promote multidisciplinary activities focused to various facets of energy technology and systems in the form of research, teaching and consultancy. The research activities in the centre are in the form of research based projects funded by various national and international funding agencies. Looking into the potential and application of different energy resources from the north eastern region of India, it is emphasized that the centre gives priority to activities in the field of bio-energy, small hydro-

-power, alternative fuels, clean coal technology, combustion and energy efficiency of systems etc. Faculty members from various departments of the institute such as Biosciences and Bioengineering, Chemical Engineering, Civil Engineering, Design, Electronics and Electrical Engineering, Mechanical Engineering, and Physics are associated with the centre for the promotion of interdisciplinary research for sustainable energy. At present, 17 (seventeen) faculty members from different departments are involved in energy research through sponsored and consultancy projects from various sponsoring agencies. To support the research work in the projects, the centre has two academic programmes - Doctor of Philosophy (PhD) and Master of Science by Research (MS-R). The facilities available at the centre have been a great support for the students working in different areas at IITG as well for the students of various academic and research institutions of the north east.

### Accommodation and Travel Allowance

Accommodation and travel allowance will not be provided to participants. Participants are expected to arrange their own accommodation and travels as per their convenience. For details of Hotels and accommodation in Naharlagun, participants may visit the conference website.

### Publication

All accepted and registered papers will be considered for publication in Scopus/Web of Science indexed conference proceedings.

### Contact Details

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For more details please visit the conference website:  
<https://www.iitg.ac.in/ceer/tfre2020>