THE HINDU TIRUPATI
SATURDAY, AUGUST 24, 2019

'Renewable energy need of the hour'

VIT Chancellor asks Central and State governments to minimise use of fossil fuel

STAFF REPORTER
VELLORE

The Central and State Governments should encourage the production and consumption of renewable energy so that the use of fossil fuel can be minimised, said G. Viswanathan, Chancellor of Vellore Institute of Technology (VIT).

Delivering his presidential address at the International Conference on Advances in Renewable Energy and Green Technology organised by CO2 Research and Green Technologies Centre, Mr. Viswanathan said that the country's development depends on the energy it consumes.

Listing out the per capita power production of various countries, he said that the world average per capita consumption of energy was 2,600 kilo watt hours. In the US it was 12,000 kilo watt hours, in Canada–14,000 kilo watt hours and in China it was 4,400 kilo watt hours and the Indian average was 1,100 kilo watt hours, which means it must generate and use power efficiently so that the economy can grow.

Panelists releasing a brochure at the conference.
• SPECIAL ARRANGEMENT

Mr. Viswanathan said that 27% of power generated in the plants gets lost while transmitting and distributing it, so researchers should come up with a solution to minimise them.

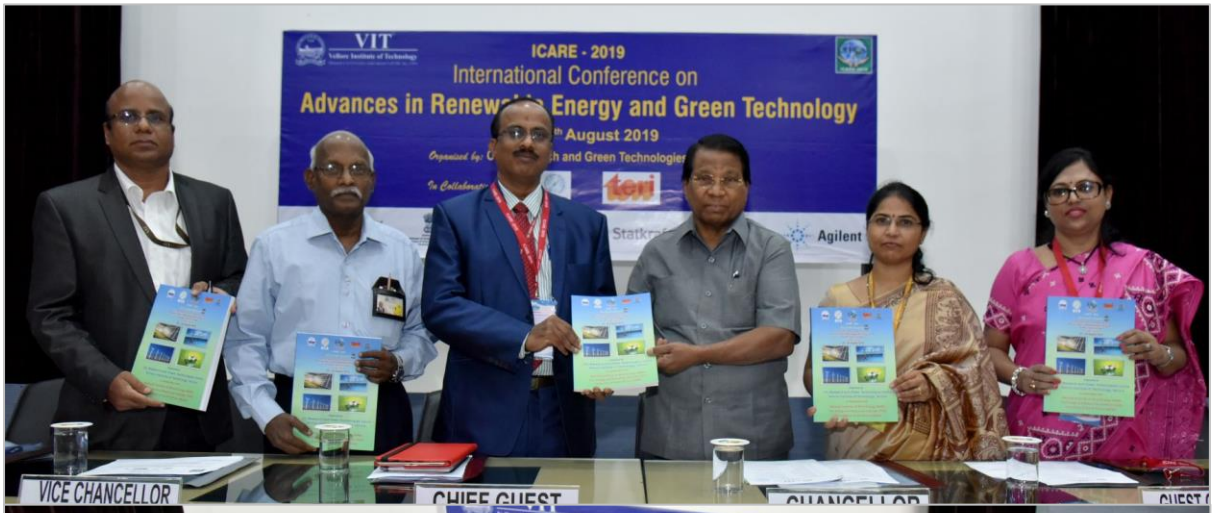
"We also need to have standalone power systems to provide electricity for hamlets," he added.

Inaugurating the conference, Director General, National Institute of Wind Energy, Chennai, K. Balaraman said that green technology was the need of the hour and lot of talks were held on green technology besides scaling up of renewable energy.

"Our ministry has already set up a target of 175 Giga Hertz of renewable energy by 2022 and moving forward, 500 Giga Herts by 2030," he said.

He added that a lot of research had been taking place in the sector across the world.

Scientist 'E', Department of Biotechnology, Sangita Kasture said that the Government of India had rolled out various schemes to promote renewable and clean energy.



International conference on Advances in Renewable Energy and Green Technology

ICARE – 2019

22nd - 24th August, 2019

ICARE-2019

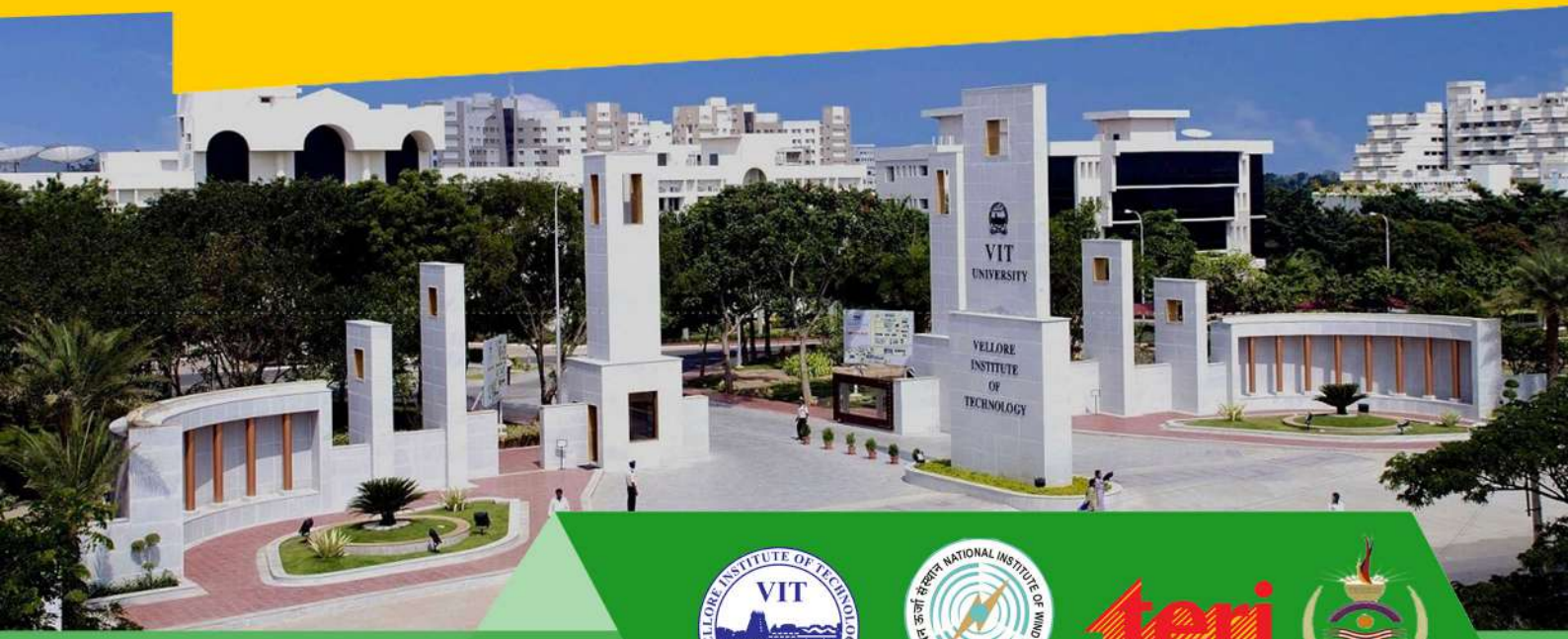
CO_2 Research and Green Technology Center
Vellore Institute of Technology (VIT)

In Collaboration with

National Institute of Wind Energy (NIWE)

The Energy and Resources Institute (TERI) &

University of South Africa (UNISA)



VELLORE INSTITUTE OF TECHNOLOGY VIT

NATIONAL INSTITUTE OF WIND ENERGY

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(ISO 9001:2008)

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UNISA

About VIT

VIT was founded in 1984 as Vellore Engineering College by the Chancellor Dr. G. Viswanathan. From its humble beginning, the institution has grown exponentially to that of having more than 33,000 students. Students from all the states of India and from more than 50 countries are studying at VIT. Deemed University status was conferred in 2001 by MHRD Govt. of India in recognition of its excellence in academics, research and extracurricular initiatives. Currently, VIT has 4 campuses – in Vellore, Chennai, Amaravati (AP) and Bhopal (MP).

About CO_2 Research and Green Technology Center

CO_2 Research and Green Technology Center (CO_2 RGTC) focuses its cutting - edge research on energy and environmental related challenges leading to development of sustainable technologies. It is a unique centre which carries out research exclusively on various aspects of CO_2 related research like CO_2 sequestration, conversion of CO_2 in to useful fuels, development of transcritical CO_2 refrigerator and supercritical CO_2 based extraction technology. CO_2 RGTC also focuses on development of various sustainable technologies for the effective use of solar, wind, and bioenergy. Advance research is also carried out to develop materials for energy storage, fuel cells, and hydrogen energy.

About NIWE

National Institute of Wind Energy (NIWE) established in 1998, is an autonomous R&D institution under the Ministry of New and Renewable Energy (MNRE), Government of India. It is a knowledge-based institution of high quality and dedication, offering services and finding complete solutions for the kinds of difficulties and improvements in the entire spectrum of the wind energy sector by carrying out cutting edge research. It has a Wind Turbine Test Station (WTTS) at Kayathar with the technical & partial financial support by DANIDA, Govt. of Denmark.

About TERI

TERI - The Energy and Resources Institute is an independent, multi-dimensional organization, with capabilities in research, policy, consultancy and implementation. They are innovators and agents of change in the energy, environment, climate change and sustainability space. TERI believes that resource efficiency and waste management are the keys to smart, sustainable and inclusive development. TERI has fostered international collaboration on sustainability action by creating a number of platforms and forums. Headquartered in New Delhi, it has regional centres and campuses in Gurugram, Bengaluru, Guwahati, Mumbai, Panaji and Nainital.

About University of South Africa (UNISA)

University of South Africa (UNISA) is founded in 1873 as the University of the Cape of Good Hope and has a long standing of 145 Years as on 2018. The institution became the first public university in the world to teach exclusively by means of distance education in 1946. Throughout the years, UNISA was perhaps the only university in South Africa to have provided all people with access to education, irrespective of race, colour or creed. This vibrant past is mirrored in our rich history, more particularly our massive and impressive database of alumni, some of whom are to be found in the most senior levels of society across the world. UNISA offers an unparalleled range of study choices, ranging from short courses and certificate programmes to three-and four-year degrees and diplomas, to over 4,00,000 current students. As one of the leading research institutions on the continent, UNISA research efforts have won numerous awards, recognitions and honours including in Science, Engineering and Technology.

The department of Mechanical and Industrial Engineering, of University of South Africa has 34 well qualified faculty members actively engaged in teaching and conducting advanced research. The thrust areas of research include Energy, Advanced Manufacturing and Industrial Engineering. The department has invested heavily on establishing advanced research facilities to support research projects of staff, masters and doctoral students. The department is actively pursuing national and international collaborations on research and capacity building. As South Africa is one of the BRICS countries, UNISA positioned itself to collaborate with Indian Institutions.

Objective of the Conference

The conference aims to bring together academia, manufacturers, engineers, and customers from all over the world to deliberate upon the challenges and opportunities faced by Energy sector in the wake of dwindling natural sources and increasing concern over climate change. It provides a premier multidisciplinary platform for the stakeholders to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted towards the development of green and sustainable technology. The conference is envisaged in the backdrop of India's vision - "Energy Independence and Power for all by 2022" and "Achieving 227 GW renewable energy capacity by 2022".

ICARE – 2019

THEMATIC AREAS

Solar Energy

- Upcoming high efficient technologies and materials
- Cost efficient designs, best operation & maintenance techniques, case studies
- Degradation monitoring techniques and mitigation methodology, retrofit of obsolete components
- Ensuring life & yield and leveraging land area for other uses, case studies
- Recycling defective modules, other equipment-cost & methodology
- Energy forecasting-effective methodologies, impediments to power evacuation and mitigation methods- case studies-solar project performance
- Challenges and opportunities for solar thermal in India
- Solar radiation resources assessment, Advanced solar PV technologies
- Testing standards & quality assurance
- Addressing issues related to variability of power generation through hybridization, battery storage etc.

Wind Energy

- Wind assessment and forecasting models
- Emerging high efficient technologies and materials
- Offshore design and challenges
- Degradation monitoring techniques and mitigation methodology
- Retrofit & refurbishment of old Wind Turine Generator sites/components, possible standardisation of Balance of Plants (BoP)
- Operation & maintenance techniques, case studies
- Leveraging land area for other uses like solar and biomass with case studies

Hydel Power

- Hydro as a Decentralised Distributed Generation (DDG) solution including case studies, Operation & Maintenance practices
- Pumped storage units – Renewable resources combo, to strengthen the grid, reduce fossil fuel plants
- Ocean-based forms of distributed generation, tidal power

Bioenergy, Biofuels & Biochemicals

- Biomass resource sustainability, policies
- Biomass conversion technologies for heating, cooling and electricity
- Bioenergy integration in energy systems
- Waste to energy, Biogas, Bio CNG
- Advanced biofuels, bioethanol, biodiesel, pyrolytic oil, biojetfuel
- Algal biofuels, Biorefinery, Biobased chemicals and Biocommodities

Green Technology

- Fuel cells / H_2 Energy
- Electrochemical / Chemical reduction of CO_2
- Supercapacitors
- Green route / Electrochemical route for synthesis of value added products
- CO_2 Sequestration techniques
- Design and development of sCO_2 Brayton cycle power plants, transcritical CO_2 refrigerators
- sCO_2 based Extraction
- CO_2 to Value added products
- Biobased products for CO_2 adsorption
- Any other related topics

Information to Authors

All papers will undergo a double-blind peer review process. Selected papers will be published in Scopus indexed reputed journals as per journal publication policy.
Abstracts not exceeding one page are to be submitted.

Important Dates

Last date for submission of abstract	15/04/2019
Last date for submission of manuscript	02/05/2019
Last date for submission of revised manuscript	16/05/2019
Notification of acceptance	25/05/2019
Camera ready submission	15/06/2019
Registration closing date	19/07/2019
Conference dates	22 – 24 August 2019

Registration Fee

It is mandatory that at least one author of all accepted papers have to register for the conference to ensure that the paper is included in the proceeding. Accommodation on payment basis will be arranged on request in VIT hostel. Please refer to ICARE-2019 VIT Website for tariff.

International

Delegates from Academia / Industry / R & D Institutions	US $ 350
Research Scholars / Students	US $ 250
Accompanying person /co-author	US $ 110

National

Faculty and Industrial Participants	Rs. 8000/-
Research Scholars / students	Rs. 4000/-
Accompanying person/co-author	Rs. 3000/-

List of Journals:

Applied Solar Energy

International Journal of Environment and Sustainable Development

Research Journal of Biotechnology

Research Journal of Chemistry and Environment

Research Journal of Chemistry and Environment

Research Journal of Biotechnology

ICARE – 2019

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*

Some more eminent speakers from International / National Institutes and Industries will also be delivering lectures.

REGISTRATION FORM

Please send the registration details along with DD (in favour of VIT Vellore, payable at VELLORE) in the following format

Name : _____

Designation : _____

Organisation : _____

Mailing Address : _____

_____

_____

Phone No. : _____

E-mail : _____

Details of Registration fee : Rs. _____

Accommodation details :

- Guest House
- VIT Hostels
- Not Required

Date : _____

* Registration fee includes kit, working lunch and dinner.

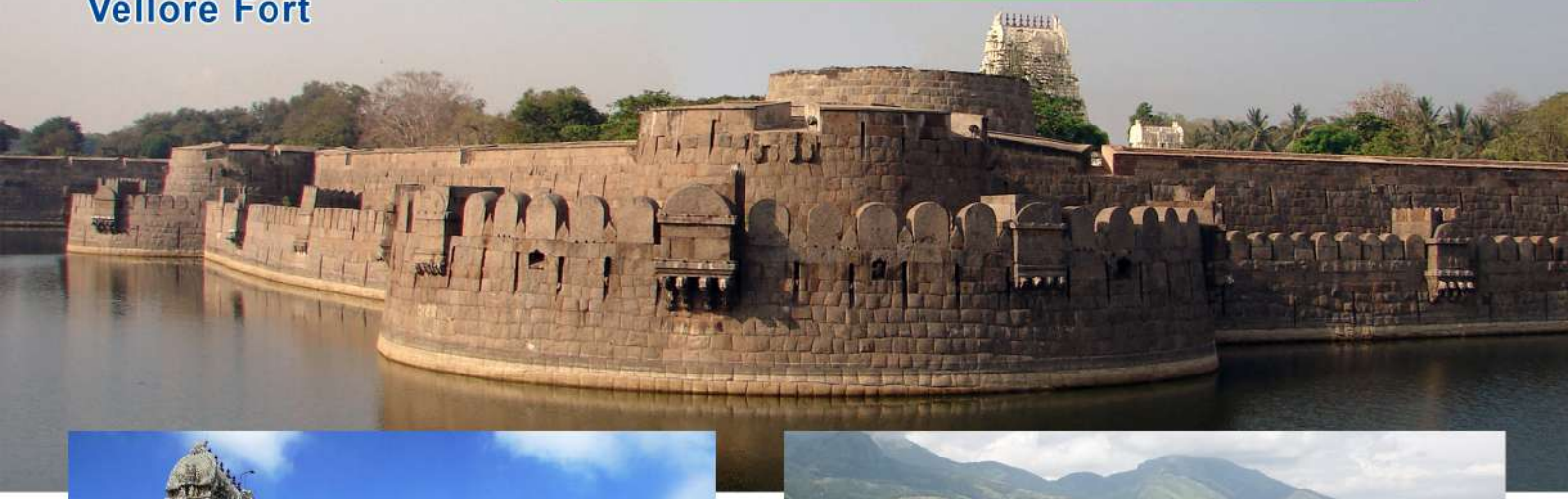
For online registration please visit our conference website.

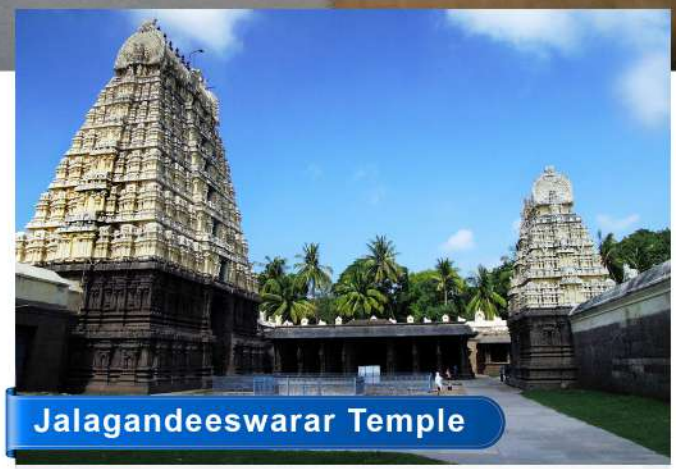
www.vit.ac.in/events/ICARE2019

Email : icare@vit.ac.in

Places to visit

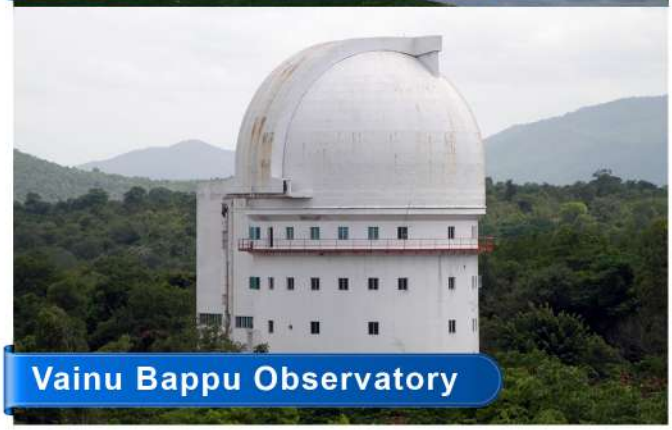
Vellore Fort



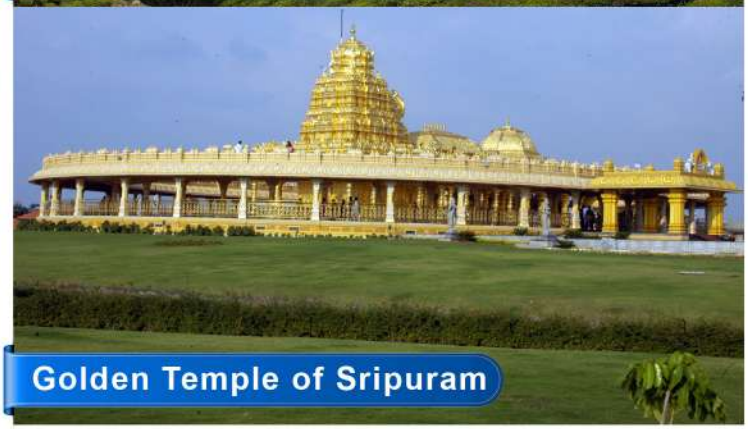


Jalagandeeswarar Temple

Yelagiri Hills



Vainu Bappu Observatory



Golden Temple of Sripuram

Vellore is a popular and one of the oldest cities of South India. It is the administrative headquarters of Vellore district in Tamil Nadu situated on the banks of Palar River. Vellore is popularly known as the Fort City of Tamil Nadu. The name Vellore also means a City of Spears. Vellore has an enriching legacy reflecting the early Dravidian culture. It has been ruled by the Pallavas, Cholas, Vijayanagara Empire, Rashtrakutas, Carnatic kingdom and the British.

Vellore has many historic and religious attractions. The famous Sripuram Srilakshmi Golden Temple is situated near Vellore. The Vellore Fort is prime attraction in the town completely made of granite stone. The Fort might have been built during the rule of Chinna Bommi Nayak (1526 to 1595 AD). The Fort is one of the most perfect specimens of Military architecture in South India. The Jalakandeswarar Temple inside the Fort is a very fine example of Vijayanagar architecture.

The other important attractions of Vellore includes the Clock Tower, the State Government Museum, the French Bungalow, Science Park, Vainu Bappu Observatory, Amirthi Zoological Park, Big Mosque, St. Johns Church and the Pearl Palace.

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