

**VIRTUAL INTERNATIONAL CONFERENCE
ON
SUSTAINABLE ENERGY SOLUTIONS
FOR A BETTER TOMORROW
(SESBT 2020)**

July 23, 2020



**SCHOOL OF MECHANICAL ENGINEERING
VIT CHENNAI, TAMILNADU, INDIA**

<http://chennai.vit.ac.in>

VIT – A place to learn; A chance to grow

ABOUT VIT



Founded in 1984, VIT has made a mark in the field of higher education in India imparting quality education in a multi-cultural ambience, intertwined with extensive application-oriented research. VIT was established with the aim to provide quality higher education on par with International Standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. VIT was established by well-known educationalist and former parliamentarian, Dr. G. Viswanathan, Founder and Chancellor, a visionary who transformed VIT into a center of excellence in higher technical education. Govt. of India recognized VIT as an Institution of Eminence (IoE). ARIIA, Govt. of India recognized VIT as an No. 1 Private University for Innovation. MHRD, Govt of India ranked VIT as No.18 among the Engineering Institutions (NIRF-2019 ranking). VIT Chennai is ably spearheaded by Dr. Sekar Viswanathan, Vice President, Dr. Sandhya Pentareddy, Executive Director, Dr. Anand A. Samuel, Vice Chancellor and Dr. V. S. Kanchana Bhaaskaran, Pro-Vice Chancellor. They share in the mission to make VIT a global center towards academic and research excellence.

The focus is to:

- To maximize the Industrial connectivity
- To create Centers of Excellence in contemporary areas of research.
- To enrich technological and managerial human capital nurtured in a multicultural ambience.
- To provide a common platform for the agglomeration of ideas of personnel from various walks of life for learning enrichment.
- To create opportunities and exploit the available resources to benefit industry/society.
- To encourage participation in the national agenda of knowledge building.
- To foster international collaborations for mutual benefit in areas of research.



ABOUT SCHOOL



The School of Mechanical Engineering (SMEC) at VIT Chennai was established to impart state-of-the-art education, training and research in the field of Mechanical Engineering. SMEC provides undergraduate program (B.Tech) in Mechanical Engineering and postgraduate program (M.Tech) in CAD/CAM and Mechatronics Engineering and Ph.D. / M.S. (Research). The School has highly qualified faculty members with good theoretical background and valuable industrial experience in diverse fields like Thermal and Automotive Engineering, Design and Manufacturing, Mechatronics and Material sciences. The school is headed by Dr. Sivakumar R, Professor and Dean. The school has over 90% of teaching faculty with doctorates giving high emphasis for research along with innovative teaching methods which helps to involve students in research and project based learning in the school. The research outcomes in the form of publications and patents are the testament to the world class, global standard infrastructure and research laboratory facilities available in the school. The outreach programs of the school include organizing Value Added Programs and workshops for teachers, industry personnel and students for various organizations in relevant areas periodically.

ABOUT CONFERENCE

The main objective of this International Conference on Sustainable Energy Solutions for a Better Tomorrow (**SESBT 2020**) is to provide a virtual platform to researchers and practitioners from both academic institutions and industries to meet and share cutting-edge developments in the areas of sustainable energy and associated disciplines. This virtual conference also provides an opportunity to exchange research evidence and innovative ideas and also the issues related to sustainable energy. SESBT 2020 will include presentations on the latest research on Carbon Neutrality, Energy Storage, Green Buildings and Renewable Energy. This conference will gather an excellent group of plenary speakers from around the globe on different topics such as Biofuels and Bio-energy, Solar and Wind Energy, Hydro Power Generation, Marine Energy, Smart Grid Systems, Geothermal Energy and many more. We invite you to join SESBT 2020, where you are sure to have a meaningful participation with scholars and academicians from around the world.

Sustainable energy has become a buzz word in recent years. India being third among the world's largest emitter of Greenhouse Gases (GHG's), after China and US is striving very hard in achieving net zero carbon by 2050. Global warming and the resulting climate conditions have emerged as a serious threat to human life, well-

being and progress. This is mainly due to the increased extraction and burning of fossil fuels along with deforestation. The pledge made by over 190 countries including India in the Paris Agreement, 2015 with regard to reducing the emission due to GHG's, is still not a reality. This is evident from the fact that the carbon dioxide emissions are constantly increasing at a rate of 2 ppm every year and have presently reached a level of 416 PPM. In order to achieve the targeted carbon sink (33-35% reduction in emission intensity compared to 2005), 40% of the installed electrical capacity from renewable / nuclear by 2030, India will have to expand its forest cover to a larger extent and intensify the research towards green energy.

With electricity generation and transportation sectors being the largest contributors to carbon emission in India, there exists larger scope of research in the areas of renewable energy like hydro, solar, wind, biomass, energy storage and electric vehicles. With major industrial sectors like steel, cement and petro-chemical industries posing technological challenges along with cost and competitiveness in moving toward zero carbon emission, Indian industries are becoming more energy efficient nowadays. Our VIT Chennai Campus had been bestowed with Indian Green Building Council (IGBC) Gold Rated Green Campus Award in 2016 and our Vellore Campus had received Green Award for the year 2017 from Tamil Nadu Government in recognition of its immense contribution towards increasing green cover and conserving natural resources. Our CO₂ RGTC and TIFAC centers at Vellore campus focus its cutting-edge research on development of various sustainable technologies.

ONLINE PLATFORM FOR SESBT 2020

MICROSOFT TEAMS / ZOOM

THEMES OF SESBT 2020

- CARBON NEUTRALITY
- ENERGY STORAGE
- GREEN BUILDINGS
- RENEWABLE ENERGY

CALL FOR ORIGINAL RESEARCH WORK IN KEY TOPICS (BUT ARE NOT LIMITED TO) RELATED TO SESBT 2020

• Alternate Fuels	• Energy Storage Technologies	• New innovations in Green Building Technology
• Battery Thermal Management System	• Energy Transformation	• Onshore/Offshore Wind Energy
• Bioenergy – Biomass, Biofuels	• Energy Storage Trends and Opportunities	• Optimization of Energy Components and Systems
• Biohydrogen	• Environmental Impacts on Sustainable Energy	• Phase Change Materials
• Carbon Neutrality	• Environmental Sustainability	• Photovoltaics
• Carbon Regulations	• Geothermal	• Solar Thermal
• CO ₂ Capture and Sequestration	• Green Building Energy Technologies and Simulation	• Solid Waste
• Case Studies for Solar and Storage Installations	• Green Energy and Green Power	• Strategic Analysis of Energy Storage in Countries
• Commercial and Industrial Applications for Energy Storage	• Hydroelectricity	• Sustainable Energy
• Electric Vehicles	• Heat Pipes	• Technologies for Grid Interfacing
• Electrical Energy Storage	• Latent Heat Energy Storage	• Thermoelectric cooling
• Electrostatic Storage	• Microgrids and Smart Grids	• Thermal and Tidal Energy
• Energy Saving and Eco-friendly Buildings	• Mining and Remote Area Power Solutions	• Wastewater management for enhanced sustainability

DATES TO REMEMBER

SESBT 2020 CONFERENCE DATE	:	JULY 23, 2020
ABSTRACT SUBMISSION DEADLINE	:	JULY 3, 2020
FULL LENGTH PAPER SUBMISSION DEADLINE	:	JULY 10, 2020
NOTIFICATION OF ACCEPTANCE	:	JULY 17, 2020
LAST DATE FOR PAYMENT OF REGISTRATION FEE	:	JULY 20, 2020

CLICK THE BELOW LINK TO REGISTER BEFORE SUBMISSION OF ABSTRACT

<https://forms.gle/LhPb6FGepvjPjNFYA>

SUBMISSION OF YOUR ABSTRACT AND FULL LENGTH PAPER

vitsesbt2020@gmail.com

REGISTRATION FEE (AFTER ACCEPTANCE)

PAPER PRESENTATION FOR A SINGLE PAPER

- ❖ Rs.1000/- FOR INDIAN NATIONALS (INCLUSIVE OF GST)
- ❖ USD 100 FOR FOREIGN NATIONALS

PAPER PRESENTATION FOR EVERY EXTRA PAPER

- ❖ Rs.800/- FOR INDIAN NATIONALS (INCLUSIVE OF GST)
- ❖ USD 75 FOR FOREIGN NATIONALS

ONLY PARTICIPATION

- ❖ Rs.500/- FOR INDIAN NATIONALS (INCLUSIVE OF GST)
- ❖ USD 50 FOR FOREIGN NATIONALS

AFTER CONFERENCE PROCEEDINGS CHARGES (SPRINGER)

FREE

JOURNAL PUBLICATION CHARGES (SPRINGER)

FREE

IOP CONFERENCE SERIES: EES

Rs.4300/- (Approximately)

AFTER CONFERENCE PROCEEDINGS

Depending on the authors wish the **presented papers of maximum 5 pages** will be published after peer review in **Springer Advances in Science, Technology and Innovation** (ASTI Series under evaluation for indexation by SCOPUS) in collaboration with IEREK Interdisciplinary Series for Sustainable Development. However, the Evaluation and Peer Review will be managed by the series editors. Proceedings publication is absolutely **FREE OF COST**.

JOURNAL PUBLICATIONS

Among the presented papers the best papers will be selected and authors are invited to submit to **Springer Materials for Renewable and Sustainable Energy** which is an **Open Access SCOPUS Indexed** journal. However, the Evaluation and Peer Review will be managed by the journal's editors. Journal publication is absolutely **FREE OF COST**.

PAID CONFERENCE PROCEEDINGS

Depending on the authors wish the **presented papers** will be published after peer review in **IOP CONFERENCE SERIES: EARTH AND ENVIRONMENTAL SCIENCE** which is **SCOPUS INDEXED**.

E-Certificate

Will be provided **only to all the paid registered participants within 2 weeks** from the date of conference.

ABSTRACT AND FULL LENGTH PAPER SUBMISSION

- After submission of the **Online Registration Form**, the **templates** for your Abstract and Full length paper **will be emailed to you**.
- **Strictly adhere to the provided template** for your Abstract and Full length paper preparations.
- Strictly restrict the **Abstract to 1 page** and **Full length paper to 5 pages**.
- Only **Original Research Work** will be considered for review.
- All submitted papers will be first **checked for Plagiarism** and then only **sent for review**.
- Papers with **more than 15% plagiarism** will be **REJECTED**.

FOR FURTHER INFORMATION PLEASE CONTACT,

Dr. SHYAM KUMAR M B & Dr. HARISH R

CONVENORS – SESBT 2020

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