

## Chief Guest

**Prof. Madhoolika Agrawal**

General Secretary

The National Academy of Sciences, (NASI)

Dean, Faculty of Science

Banaras Hindu University, Varanasi.

## Invited Speakers

**Dr Vivek Yoganand,**

Senior Associate, Red Hat, Bangalore.

**Dr. Vasudeva Reddy,**

Principal Design Engineer, Global Foundries, Bangalore.

**Mr. Karthikeyan Subramanian,**

Silicon Engineer, Google, Bangalore.

**Dr. D. Madhan Mohan,**

Scientist ABB Global Industries and Services Ltd,

Chennai

**Mr. Sougata Bhattacharjee,**

ASIC Verification Engineer, Samsung Semiconductor,

Bangalore.

**Mr. Rajkumar Devendran,**

IT Project Manager, Birlasoft, Chennai.

**Dr. Anbarasu,**

Associate Professor,

Government College of Engineering, Salem.

## Organizing Committee Members

Prof. Uma Mahendra Kumar K, SAS

Prof. Gothandam K M, SBST

Prof. Balaji Balakrishnan, SBST

Prof. Rahul Vashishth, SBST

Prof. Visuvasam J, SCE

Prof. Manikandan K, SCOPE

Prof. Sonam Shrivastava, SELECT

Prof. Washima Tasnin, SELECT

Prof. Debashish Dash, SENSE

Prof. Jayalakshmi P, SITE

Prof. Renold Elsen S, SMEC

## About VIT

Vellore Institute of Technology (VIT) was founded in 1984 as Vellore Engineering College by the Chancellor Dr. G.Viswanathan. The Union Ministry of Human Resources Development conferred University status on Vellore Engineering College in 2001. VIT attracts students from all the states of India and more than 60 different countries because of its academic excellence.



Currently, VIT has 4 campuses – in Vellore, Chennai, Amaravati (AP) and Bhopal (MP). The global standards set at VIT in the field of teaching and research spurs us on in our relentless pursuit of excellence. In fact, it has become a way of life for us. The highly motivated youngsters on the campus are a constant source of pride. Our Memoranda of Understanding with various international universities are our major strength. They provide for an exchange of students and faculty and encourage joint research projects for the mutual benefit of these universities. Many of our students, who pursue their research projects in foreign universities, bring high quality to their work and esteem to India and have done us proud.

## About SBST

School of Bio Sciences & Technology (SBST) was established in 2001, consists of four departments namely Biotechnology, Integrative Biology, Bio-Sciences, and Bio-Medical Sciences, headed by well-trained professors. SBST has 40 research laboratories and 16 teaching labs which includes animal house and histopathology lab. The School offers one undergraduate (B.Tech Biotechnology), seven Postgraduate (M.Sc. and M. Tech.) programme and Ph.D. programme. In addition, SBST consists of three major centers, Centre for Bio Separation Technology (CBST), Center for Biomedical Research (CBMR) Centre for Nanobiotechnology (CNBT) with dedicated faculty members to ignite young minds. The School houses excellent infrastructure and well trained faculty members which makes it to be one among the largest populations of trained biologists in our country. The competencies of the faculties in research are endorsed by the quality research papers and obtaining research projects (more than 50 projects currently funded by National & International agencies and 90 projects completed). These competencies makes SBST listed amongst the top School of Modern Biology in India.



VIT<sup>®</sup>

Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

## 22<sup>nd</sup> Science, Engineering and Technology (SET) Conference 23<sup>rd</sup> & 24<sup>th</sup> Jan, 2023

Organized by  
School of Bio Sciences and Technology



## Organizing Committee

### Chief Patron

Dr. G. Viswanathan,

Chancellor, Vellore Institute of Technology

### Patrons

Mr. Sankar Viswanathan, Vice President, VIT

Dr. Sekar Viswanathan, Vice President, VIT

Mr. G.V. Selvam, Vice President, VIT

Dr. Rambabu Kodali, Vice Chancellor, VIT

Dr. Partha Sharathi Mallick, Pro-Vice Chancellor, VIT

Dr. T. Jayabarathi, Registrar, VIT

### Advisory Committee

Deans and Directors, VIT, Vellore

### Organizing Chair

Dr. R. Siva, Dean, SBST

Dr. M. Anthony Xavier, Dean - Academics

Dr. P. Arulmozhivarman, Dean, Academic Research

### Conference Chair

Dr. K. Ramanathan, SBST

## About the Conference

The main objective of this conference is to promote interdisciplinary research and developmental activities in all the domains and to facilitate information exchange between researchers and engineers working across the domain. Indeed, this conference is platform for the students and research scholars to present their innovative works carried out at VIT. It is certain that presentations, discussion and interventions of this conference, generates innovative ideas to tackle real world problems on Science, Engineering and Technology more efficiently.

## Conference Themes:

### **1. School of Advanced Sciences (SAS)**

Materials / Inorganic Chemistry, Organic Chemistry, Pharmaceutical Chemistry, Environmental & Analytical Chemistry, Photonics, Medical Physics, Material Physics, Crystal Growth, Nuclear Physics, Algebra, Graph Theory, Pure Mathematics, Applied Mathematics, Fluid Dynamics, Operations Research, Quantum Information Computation and Communication, Applied Statistics, Probability & Statistics, Data Science - Machine learning, Artificial intelligence & Business Analytics.

### **2. School of Bio Sciences & Technology (SBST)**

Nanobiotechnology, Medical Biotechnology, Pharmacology & Toxicology, Bioremediation, Marine Diversity and Resources, Immunology, Biophysics, Nutraceuticals, Probiotics, Cancer Biology, Gene Therapy, Stem Cell Biology, Plant Biotechnology, Plant Metabolites and Pigments, Down Stream Processing, Food Technology, Agricultural Biotechnology, Pharmaceutical Biotechnology, Bioinformatics, Drug Designing .

### **3. School of Civil Engineering (SCE)**

Structures and Sustainable Materials, Geotechnical & Earthquake Engineering, Green buildings, Structural Health Monitoring, Management of Infrastructure construction, Aspects of Surveying & Advances in Transportation Engineering, Environmental monitoring and assessment

### **4. School of Chemical Engineering (SCHEME)**

Sustainable and Clean Technologies, Process design and Optimization, Modern Separation techniques, Process Instrumentation and control, Process Integration and Intensification.

### **5. School of Computer Science and Engineering (SCOPE)**

IoT and its related applications, Big data analytics and Big data frameworks, Cyber security, Artificial intelligence, Machine learning, Deep learning, Cloud application development and management, Network security, Security and privacy for Big data, Security and privacy in Crowd sourcing, Applied cryptography, Cryptanalysis, Biometrics security and privacy, Authentication and Non-repudiation, Blockchain technologies and Business Systems.

### **6. School of Electrical Engineering (SELECT)**

Power Electronic Converters and Control, Energy Efficient Electric Drives, Renewable energy and Microgrid, Industrial Automation and Home Automation, Robotics and Control, Black chain in Automation, Machine Learning and Artificial Intelligence, Soft computing and Optimization, Electrical Machine Design, Intelligent sensing techniques and control, Hybrid solar PV, wind, fuel-cell, Thermoelectric generation systems.

### **7. School of Electronics Engineering (SENSE)**

Advanced wireless communication and Networking, Advanced Embedded computing and automation, Smart Sensors and Applications, Digital and Analog IC design, Nanotechnology.

### **8. School of Information Technology & Engineering (SITE)**

Machine Learning and Block chain Technology, Cyber Physical Systems, Next Generation 5G Networks, Digital Forensics, Computer Vision, Big data Analytics, Soft Computing Cloud Computing, Software Engineering, Communication Networks, Semantic Web Digital Image Processing.

### **9. School of Mechanical Engineering (SMEC)**

Challenges in Electric/Hybrid vehicle – Indian Context, Emerging Technologies in Factories of the Future, Advanced Quality Systems Tools and Quality Management, The Relevant Technology Applications of Mechatronics, Bio-mechatronics, Sustainable and Digital Manufacturing in Global Era of Cloud Manufacturing, 3D Printing - Challenges/Applications/ Future.

### **10. School of Social Science & Languages (SSL)**

Role of e-banking in rural India, Challenges of women Entrepreneurs, Recent trends in Indian finance system,

Use of technology in Language Teaching & Learning, Social media as a communication tool, Gender biases in literature

### **11. VIT Business School (VITBS)**

Marketing – Finance and Economics – Information Systems and Operations – Organizational Behavior & Human Resources Management – Strategy & International Business.

### **12. VIT School of Design (V-SIGN)**

Smart products for healthcare - Observational study of medical problems for design intervention - Study of users of medical products - Design of diagnostics tools/devices - Biomedical devices - Design to solve real-life clinical problems.

### **13. VIT School of Architecture (V-SPARC)**

Design methodologies, Urban ecology, New Urbanism, Green Architecture and Urban Planning, Climate Change Adaptation, Interior Architecture, Security in building and cities, Disaster Risk Management, Landscape Architecture.

### **14. School of Hotel & Tourism Management (HOT)**

Operations in hospitality sectors, star hotels and restaurant, front and back-office operations, housekeeping, culinary, food and beverage, marketing and sales, conferences, financial management, HR and personnel relations, purchasing and storage, sanitation, tourism marketing and management.

### **15. VIT School of Agricultural Innovations And Advanced Learning. (VAIAL)**

Agronomy, Soil Science, Entomology, Plant Pathology, Agricultural Microbiology, Plant Breeding and Genetics, Plant Biotechnology, Crop Physiology, Agro Processing, Agricultural Engineering, Geoengineering, Horticulture, Water Technology and Agricultural Extension.

## **Eligibility**

P.G Students of VIT, Vellore.