



## Faculty Development Program



**VIT**<sup>®</sup>  
Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

### Discussion Points

**Title :** GREEN TECHNOLOGY  
ADVANCEMENT FOR SUSTAINABLE  
DEVELOPMENT

**Date :** 2024-04-01 - 2024-04-05

**Time :** 10:00 - 17:30

**Venue :** MB210

- Wind energy: opportunities and challenges
- Assessment of human and meteorological influences on PM10 concentrations: Insights from machine learning algorithms
- Progress towards achieving Sustainable Development Goals 2030 through Machining
- Importance of Data for Manufacturing
- Processing of Green Composites
- Energy harvesting using rattleback
- Piezoelectric energy harvesting in cantilever beam
- Hydrogen applications towards non-conventional energy devices
- Solar Energy and Concentrating Solar Power Technologies
- Phase change Material
- Thermal management of batteries
- Recent Advancements and Future Outlook in Small Hydropower Plants for Sustainable Development

	<p><b>Resource Person 1 - Details</b>  <b>Name :</b> Dr Anant Kumar Rai  <b>Designation :</b> Assistant Professor , Mechanical Engineering  <b>University/ Company :</b> NIT Warangal , Warangal  <b>Address :</b> India, 506004.</p>
	<p><b>Resource Person 2 - Details</b>  <b>Name :</b> Dr Kishor Kumar Gajrani  <b>Designation :</b> Assistant Professor , Mechanical Engineering  <b>University/ Company :</b> IITDM Kancheepuram, Chennai  <b>Address :</b> India, 600127.</p>
	<p><b>Resource Person 3 - Details</b>  <b>Name :</b> Dr Vinod Kumar Sharma  <b>Designation :</b> Assistant Professor , Mechanical Engineering  <b>University/ Company :</b> NIT Calicut , Kozhikode  <b>Address :</b> India, 673601.</p>
	<p><b>Resource Person 4 - Details</b>  <b>Name :</b> Dr Balaji Subramanian  <b>Designation :</b> Assistant Professor , Mechanical Engineering  <b>University/ Company :</b> IIT Tirupati , Tirupati  <b>Address :</b> India, 517619.</p>
	<p><b>Resource Person 5 - Details</b>  <b>Name :</b> Dr JOY PRAKASH MISRA  <b>Designation :</b> Assistant Professor , Mechanical Engineering  <b>University/ Company :</b> IIT BHU , Varanasi  <b>Address :</b> India, 221005.</p>
	<p><b>Resource Person 6 - Details</b>  <b>Name :</b> Dr Sendhil Kumar Natarajan  <b>Designation :</b> Associate Professor, Mechanical Engineering  <b>University/ Company :</b> NIT Puducherry, Karaikal  <b>Address :</b> India, 609609.</p>
	<p><b>Resource Person 7 - Details</b>  <b>Name :</b> Dr Puneet Verma  <b>Designation :</b> Senior Environmental Officer and Adjunct Lectuer, Water and Environmental Regulation  <b>University/ Company :</b> University of Western Australia, Curtin  <b>Address :</b> Australia, 6907.</p>
	<p><b>Resource Person 8 - Details</b>  <b>Name :</b> Dr Devanuri Jaya Krishna  <b>Designation :</b> Professor, Mechanical Engineering  <b>University/ Company :</b> NIT Warangal , Warangal  <b>Address :</b> India, 506004.</p>

**Resource Person 9 - Details****Name :** Ramesh Kumar Singh**Designation :** Assistant Professor Sr. Grade 1, CO2 Research and Green Technologies Centre**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 10 - Details****Name :** M Velan**Designation :** Adjunct Professor, Mechanical Engineering**University/ Company :** IITDM Kancheepuram , Chennai**Address :** India, 600127.**Resource Person 11 - Details****Name :** Thundil Karuppa Raj R**Designation :** Professor Higher Academic Grade, School of Mechanical Engineering**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 12 - Details****Name :** Jayakrishna K**Designation :** Professor Grade 1, School of Mechanical Engineering**University/ Company :** VIT, Vellore**Address :** India, 632014.

## **Resource Person's Profile :**

### **1. Profile of Dr Anant Kumar Rai**

Dr. Anant Kumar Rai is a Mechanical Engineer from IEST Shibpur. He completed his MTech from IIT Roorkee. He received Gold Medal for securing highest grades in the department during his MTech study. During PhD research from Hydro and Renewable Energy department of IIT Roorkee, he studied hydro-abrasive erosion extensively in Indian Himalayas. He did post-doctoral research from Tsinghua University ranked 14th in the World. Currently, he is working as an Assistant Professor in Mechanical Engineer

### **2. Profile of Dr Kishor Kumar Gajrani**

Dr Kishor Kumar Gajrani is an Assistant Professor in the Department of Mechanical Engineering at the IITDM, Kancheepuram, Chennai, India. He has authored and co-authored 50 international journals and book chapters of repute. He was listed in the World's Top 2percent Scientists list for the years 2022 and 2023 released by Stanford University and published by Elsevier.

### **3. Profile of Dr Vinod Kumar Sharma**

Vinod Kumar Sharma is working as an Assistant Professor in the Department of Mechanical Engineering at National Institute of Technology Calicut, India. His areas of research are Hydrogen Energy, CO<sub>2</sub> Capture and Sequestration, Renewable Energy, Heat Transfer, Refrigeration and Air-Conditioning, and Computational Fluid Dynamics. He has completed his PhD from the Indian Institute of Technology Indore, India and MTech from Visvesaraya National Institute of Technology Nagpur, India.

### **4. Profile of Dr Balaji Subramanian**

BALAJI SUBRAMANIAN is working as an Assistant Professor in the Department of Mechanical Engineering at IIT Tirupati, India. He has completed his PhD from the Swiss federal Institute of Technology (ETH) Zurich, Switzerland. His areas of research are Wind Energy, Experimental and computational fluid mechanics or aerodynamics.

### **5. Profile of Dr JOY PRAKASH MISRA**

Dr Joy Prakash Misra (born on 15th April 1986) is presently working as an Assistant Professor (Grade-I) in the Department of Mechanical Engineering, Indian Institute of Technology (BHU) Varanasi. Before joining IIT (BHU) Varanasi, he was working as an Assistant Professor (Grade-II) in the Department of Mechanical Engineering, National Institute of Technology Kurukshetra. He has obtained his Bachelor of Technology in Mechanical Engineering from Kalyani Govt. Engineering College in 2007.

### **6. Profile of Dr Sendhil Kumar Natarajan**

Dr. Sendhil Kumar Natarajan, is working as an Associate Professor in the Department of Mechanical Engineering, and Dean (Student Welfare), NIT Puducherry. He obtained his Ph.D in area of solar energy in the year of 2008 from IIT Madras. After his Ph.D., he joined as Senior R and D Engineer, at CSEM-UAE, Ras Al Khaimah, UAE. Later, he joined as a Post Doctoral Research Fellowship at Heriot-Watt University, Edinburgh, Scotland, United Kingdom under European Union Project.

### **7. Profile of Dr Puneet Verma**

Dr. Puneet Verma is working as an Senior Environmental Officer for Department of Water and Environmental Regulation. I also work as an Adjunct Lectuer at The University of Western Australia. I completed my doctorate degree in vehicle fuels and emission characteristics at Queensland University of Technology, Brisbane in 2019. His research interests are emission research, environmental management, air quality monitoring and characterisation and project management.

### **8. Profile of Dr Devanuri Jaya Krishna**

Dr DEVANURI JAYA KRISHNA is working as Professor in the Department of Mechanical Engineering at National Institute of Technology Warangal, India. He has supervised 5 phd thesis and 28 MTech Dissertation and published more than 50 journals along with 3 patents. His research interests are Phase Change Materials, Thermal management of batteries or electronic components, Heat transfer in porous media etc.

### **9. Profile of Ramesh Kumar Singh**

Dr. Ramesh Kumar Singh is currently working as an Assistant Professor in the CO2 Research and Green Technologies Centre at VIT, Vellore. Dr. Singh completed his bachelor s degree in chemistry Hons from BHU Varanasi, India, and received his integrated M.Sc. Ph.D. degree from the IIT Bombay, India. Dr Singh has published 29 research articles and 3 book chapters to his credit with a total citation of 1202 and an h-index of 18

### **10. Profile of M Velan**

Dr M Velan is adjunct Professor in the department of mechanical engineering at IITDM Kancheepuram. He has more than four decades of Industrial and Research experience in various fields of mining, Power plant and Chemical industries. His research interests are Green Product Design, Waste Management, Pollution Control, Carbon Capture Utilization and Storage, Green Supply Chain Management, Residual Life Cycle Assessment

### **11. Profile of Thundil Karuppa Raj R**

Dr. R. Thundil Karuppa Raj has started his professional career as a lecturer in the Department of Mechanical Engineering at Shri Angalamman College of Engineering and Technology, Trichy, India. Later he joined as Technical Leader (CFD) in the Mechanical Engineering Services of Robert Bosch Engineering and Business Solutions Limited, Coimbatore after completing his Ph.D. In Mechanical Engineering from Indian Institute of Technology, Madras (IIT Madras) during 2007.

### **12. Profile of Jayakrishna K**

Dr. Jayakrishna is a Professor in the School of Mechanical Engineering at the Vellore Institute of Technology University, India. His research is focused on the design and management of manufacturing systems and supply chains to enhance efficiency, productivity, and sustainability performance. More recent research is in the area of developing tools and techniques to enable value creation through sustainable manufacturing

In the face of pressing environmental challenges, the need for sustainable development has become paramount. Moreover, mechanical engineering makes a significant impact on the growth of environmental technologies that include green manufacturing, green composites, and reduction of GHG emissions, generation and storage of renewable energy. This faculty development program equips educators with the knowledge effectively integrate green technology advancements into their curriculum. Through interactive sessions, participants will explore core concepts, and emerging research trends. This program is ideal for faculty members from diverse disciplines who are passionate about sustainability.

Not required

**Coordinator's: Prof. ANUJ KUMAR 15957 - Assistant Professor Sr. Grade 2 - SMEC  
Prof. ARUNA KUMAR BEHURA 15764 - Associate Professor Grade 1 - SMEC**