

## **RESEARCH COUNCIL**

### **ANNUAL REPORT - 2020**

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## 1. Research Council for the Year 2020

Sr. No	Role	Name and Designation
1	Chairperson	Dr. G L Easwara Prasad, Principal
2	Member	Dr. Divakara Shetty S, Dean (Academics)
3		Dr. C R Rajashekar, Vice Principal and Head, Dept. of Mechanical Engg
4		Dr. Venkatramana Bhat P, Professor and Head, Dept. of Computer Science & Engg
5		Dr. Ganesha Mogaveera, Professor and Head, Dept. of Civil Engg
6		Dr. G Purushotham, Professor and Head, Dept. of Aeronautical Engg
7		Dr. V. Joseph Michael Jerard, Professor, Dept. of Information Science & Engg
8		Dr. Asha Crasta, Associate Professor and Head, Dept. of Mathematics
9		Mr. Jayadeva Prasad M, Professor and Head, Dept. of Master of Business Administration
10		Dr. Vishwanath Madhava Shervegar, Associate Professor, Dept. of Electronics & Communication Engg
11		Dr. Vineetha Telma D'souza, Sr. Assistant Professor & Head, Dept. of Chemistry
12		Dr. Pradeep B S, Professor, Dept. of Computer Science & Engg
13		Dr. Lokesha M, Professor and Head, Dept. of Mechatronics Engg
14	Convener	Dr. Raghavendra Sagar, Associate Professor & Head, Dept. of Physics



# Mangalore Institute of Technology and Engineering

*(An ISO 9001:2015 Certified Institution)*

*(A Unit of Rajalaxmi Education Trust)*

Badaga Mijar, Moodabidri-574225

## 2. Overview

Mangalore Institute of Technology & Engineering (MITE) has made remarkable progress during the year 2020 in its all-round research activities. Two Faculties of MITE were newly recognized by VTU, Belagavi to guide PhD Scholars along with existing 14 Research Guides in MITE Research Centers.

Four research scholars registered under MITE research centers submitted their PhD thesis to VTU Belagavi and successfully defended the final viva-voce.

The faculty of MITE published 79 full-length papers in SCI/Scopus and other indexed journals. The faculties also presented their scholarly work at various National/International Conferences and a total of 18 full length papers were published in the conference proceedings.

Global Conference on "Advanced Smart and Sustainable Technologies in Engineering (GCASSTE 2020)" was jointly organized by the Department of Civil Engineering, Electronics & Communication Engineering and Mechanical Engineering from 30<sup>th</sup> to 31<sup>st</sup> January 2020 at MITE campus. Department of Mechanical Engineering organized a technical talk on "Use of Modern Tool in Wire-Arc Additive manufacturing" on 21<sup>st</sup> Feb-2020 and a webinar on "Solar Technology/ BioEnergy/ Solid Waste Management/ Rain Water Harvesting" 23<sup>rd</sup> and 24<sup>th</sup> December 2020.

The midterm review of the K-FIST Level 2 project funded by Govt. of Karnataka was conducted on 27<sup>th</sup> July 2020 by VGST and Dr. Venkatramana Bhat, Coordinator of the project attended the online review meeting.

Department of Physics procured Atomic force microscope (AFMWorkshop) and electrochemical workstation (CH Instrument) under VGST CESEM Project. The utilization certificate for a project sanctioned under Competitive Research Grants was submitted to TEQIP Cell, VTU, Belagavi. Rajalaxmi Education Trust, Mangalore also allotted a research grant of Rs. 2.00 Lakh for Engineering and Rs. 1.00 Lakh for Basic Science departments to upgrade the research infrastructure.

### 3. Research Progress Details

**Table 1:** The details of research centers, researchers and the progress made during the year 2020.

Sr. No	Details of Research activities	
1	No. of VTU, Belagavi recognized research centers in MITE	07
2	No. of Research Guides recognized by VTU, Belagavi in MITE	16
3	No. of Other university recognized guides in MITE	01
4	No. of PhD Scholars registered in MITE research centers	37
5	No. of PhD's awarded	04
6	No. of Faculty pursuing PhD from other research centers/university	19
7	No. of Ongoing Funded Projects in MITE	05

**Table 2:** Current status of PhD scholars registered under MITE research center.

Research Center	Coursework in progress	Course completed	Comprehensive viva completed	Thesis submitted
Civil Engineering	2	1	1	-
Computer Science and Engineering	1	2	3	-
Mechanical Engineering	6	5	5	3
Mathematics	1	1	2	-
Chemistry	-	-	2	-
Physics	-	1	3	-

**Table 3:** The details of Scholars defended their final Viva-voce during the Year-2020.

Sr. No	Name of Scholar	Guide	Research center	Title of Thesis	Date of Viva voce
1	Nagesh SB	Dr.T K Chandrashekar	ME	Studies on combustion and performance characteristics of HCCI engine fuelled with diesel/biodiesel blends	15-12-2020
2	Prem Kumar Naik	Dr. Neelakantha V L	ME	Characterization of Fracture Properties of fiber reinforced polymer composites	03-07-2020
3	Keerthikumar N	Dr.T K Chandrashekar	ME	Studies on combustion and performance characteristics of modified low heat rejection DI diesel engine for bio fuels	19-12-2020
4	Davangere Haleshappa	Dr. A Jayarama	Physics	Growth and Characterization of pi-conjugated novel organic materials for photonic applications	01-06-2020

## 4. Publication Details

**Table 4:** The details of department-wise publication for the Year-2020.

Sl. No	Department	No of publications	Scopus indexed	Other
1	Aeronautical Engg.	3	3	-
2	Civil Engg.	9	8	1
3	Computer Sci. and Engg.	3	3	-
4	Electronics and Comm. Engg	22	16	6
5	Mechanical Engg.	22	19	3
6	Mechatronics	5	5	-
7	Chemistry	4	4	-
8	Physics	7	7	-
9	Mathematics	3	2	1
10	MBA	1	1	-
	<b>Total</b>	<b>79</b>	<b>68</b>	<b>11</b>

**Table 5:** The details of department-wise conference proceedings, books and book chapters published during the Year -2020.

Sl. No	Department	No of Proceedings	No of Book	No of Proceedings Chapters
1	Aeronautical Engg.	9	-	-
2	Electronics and Comm. Engg	2	1	-
3	Mathematics	-	-	1
4	Physics	7	-	-
	<b>Total</b>	<b>18</b>	<b>1</b>	<b>1</b>

## 5. Activities Conducted

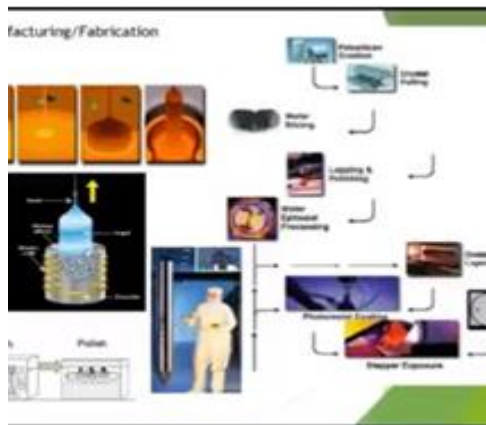
1. **Title** : Global Conference on Advanced Smart and Sustainable Technologies in Engineering (GCASSTE) - 2020
- Dates conducted** : 30<sup>th</sup> and 31<sup>st</sup> January 2020
- Keynote Speaker** : Dr. Prahlad V, Professor, National University of Singapore
- No. of Papers Received** : 220
- No. of Papers Presented** : 169



- 2. Title :** Use of Modern Tool in Wire-Arc Additive manufacturing
- Date conducted :** 21<sup>st</sup> Feb-2020
- Resource person :** Dr. Vijeesh V, Associate Professor, Department of Mechanical Engineering, NMAMIT

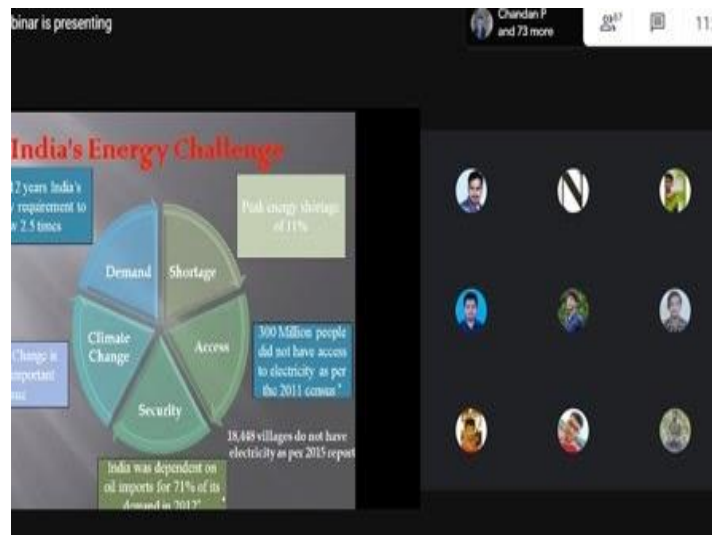


- 3. Title :** Semiconductors and their Manufacturing Process and Usage in Industry- An Overview
- Date conducted :** 25<sup>th</sup> June- 2020
- Resource Person :** Mr. Varun S Gupta, Accrete High Tech Solutions, Bangalore,





- 4. Title :** Webinar on Solar Technology/ Bio-Energy/ Solid Waste Management/ Rain Water Harvesting
- Date conducted :** 23<sup>rd</sup> and 24<sup>th</sup> December 2020
- Keynote Speaker :** Smt. Shanthi G, Mr. Manjunath, Mr. Santhosh Kumar, and Mr. Aravind from Mahatma Gandhi Institute of Rural Energy and Development (MGIRED) Govt. of Karnataka, Bangalore



## 6. Proposals Submitted

**Table 6:** The details of the projects Submitted during the year 2020.

Title	Principle Investigator	Agency	Budget (Lakh)
Fabrication of highly stable and environment friendly perovskite based solar cell	Dr. Raghavendra Sagar	SERB, New Delhi	34.5
I/V characterization measurement for high temperature	Dr. Raghavendra Sagar	DST, New Delhi	18.50
Machine Learning-based predictive mapping of Potential Fishing zones using remotely sensed LiDAR with UAV for the benefit of Coastal fishing community	Dr. G. Purushotham	DST, New Delhi	63.07
A Novel AI based UAV for COVID-19, Agricultural & Disaster Management applications	Dr. C R Rajashekhar	AICTE, New Delhi	24.97

## 7. Status of Ongoing Funded Projects

**Table 7:** Details of the ongoing funded projects during the year 2020.

Sl. No	Title of project	Principle Investigator	Grant Agency	Current status	Grants mobilized (in Lakh)
1	A study on enhancement of efficiency of solar cell by various modification techniques and Synthesis/Characterization of NLO materials	Dr. Raghavendra Sagar	Vision group of Science and Technology (VGST), Govt. of Karnataka	III installment Procurement	60.00
2	Fabrication of Graphene/bio-waste based hybrid system as flexible and high performance supercapacitors	Dr. Raghavendra Sagar	TEQIP Cell, VTU Belagavi	Utilization certificate Submitted	02.00
3	Technology-based agriculture sensors	Dr. Venkataramana Bhat P	Vision group of Science and Technology (VGST), Govt. of Karnataka	Revived for II installment	40.00
4	Sustainable Grey water Management System using Phytoremediation Technique	Dr. Jayaprakash M C	Vision group of Science and Technology (VGST), Govt. of Karnataka	Ongoing	05.00
5	Quality Improvement & Up-Gradation of the Existing Fish Meal and Fish Oil Industries and Extraction of Bio-diesel & Fishnure in Ecofriendly environment from their products	Dr. Lokesh	Karnataka Council for Technological Upgradation	Ongoing	42.00

## 8. Institution Grants for Research

**Table 8:** Details of funds allocated from the Institution towards the improvement of research infrastructure and conference attending fees.

Sr. No	Department	Funds allotted (Rs)	
		Research Infrastructure	Conference fess & expenses
1	Aeronautical Engineering	-	7,000
2	Civil Engineering	2,00,000	21,000
3	Computer Science and Engineering	2,00,000	7,000
4	Electronics & Communication	2,00,000	23,000
5	Information Science and Engineering	-	1,750
6	Mechanical Engineering	2,00,000	28,000
7	Mathematics	1,00,000	3,500
8	Chemistry	1,00,000	3,500
9	Physics	1,00,000	-

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