

# Crescent Mechanical News

Issue 2: January 2021



## Department of Mechanical Engineering

**B.Tech. in Mechanical, M.Tech. in CAD/CAM, Ph.D.**

Minor Degree on Robotics and 3D Printing

36 Years of Academic Excellence

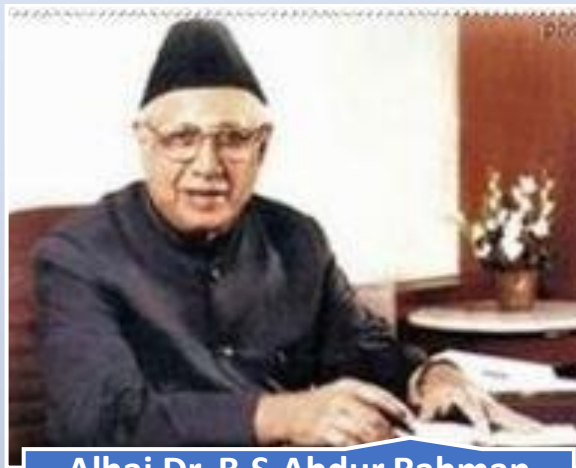
36 faculty members with 18 doctorates

Well-equipped labs with experienced technicians



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## Message from School Dean



**Dr. S. Rasool Mohideen**  
Professor & Dean  
School of Mechanical Sciences

- Knowledge production is the main driving factor in human advancement and one of the main objectives of any education Institution. A famous Arabic proverb says, "Everything diminishes when it is used except the knowledge", which is getting multiplied when it is being shared.
- The department of mechanical engineering with its 36 years of excellence has blossomed in to a robust entity, with its state-of-the-art infrastructure, modern teaching pedagogies, zealous research achievements and healthy interactions with the industries.
- I am happy to know that the department has come out with the second issue of the periodic newsletter and I'm sure that it will certainly help the department to share its knowledge, talents and achievements among the stakeholders.
- I take this opportunity to wish the students and staff all the very best.

## Message from Department Head



**Dr. H. Siddhi Jailani**  
Associate Professor & Head  
Department of Mechanical Engg.

- I have immense pleasure in bringing out the "Newsletter" of the Department of Mechanical Engineering. The department has conducted various activities such as virtual international conference, AICTE sponsored FDP, and Webinars.
- Many of our faculty members publish their research work in National and International Journals & Conferences. Some of our faculty members were resource persons for various webinars. The students of Mechanical Engineering frequently attend conferences and webinars. The projects of the final year students are as per the current requirement of the Industries. This newsletter will help us to showcase the various achievements of the department.
- I congratulate the editorial team for their sincere effort to bring out the newsletter.

## About the Department

The department of Mechanical Engineering started in 1984, is one of the oldest departments of this Institution. Bachelors in Mechanical Engineering, Masters in CAD/CAM, MS/Ph.D. by Research and minor degree programs are offered by us. We also offer Bachelors in Mechanical Engineering under part-time mode for the employees of Apollo Tyres and Mando Automotive Ltd. The programmes of the department were accredited by National Board of Accreditation (NBA).

The department has a new block with wifi connected classrooms, an air-conditioned conference hall, seminar hall, and a department library. Modern multimedia teaching technologies are used to supplement lectures and enhance the quality of teaching. Some of the modern practices like Project/Activity-based learning, Peer-assisted learning are followed. Softwares on different subjects are available at any time for self-learning by students. The department has 36 faculty members out of which 18 are with doctorates and others are pursuing. Experienced technicians are also available in each lab for training the students.

The department has well-equipped laboratories and workshops such as Professional Welding Lab, ROBO Lab – 4.0, Mechatronics Lab, Design Appreciation Lab, Friction Materials Lab, Surface Engineering Lab, CAD Lab, CIM Lab, Dynamics Lab, Fluid Mechanics & Machinery Lab, Machine Shop, Metrology Lab, Material Testing and Characterization Lab, Thermal Engineering Lab, and Basic Workshop. The major softwares available are PTC/ Creo 5, Siemens NX 12.0, ANSYS 2020 Campus solution, HYPERWORKS 2017, LS-DYNA 971\_R7, Mat lab V8 R 2013 a, and Lab VIEW.

The major equipment available for research purpose is ABB Industrial (Welding) Robo, Olivetti S2 – 3D Printer, CNC Turning Center, CNC Vertical Machining Center, Surface Roughness Tester, Coordinate Measuring Machine, Vision System, AE with Digital Scope & GPIB interface, Ultrasonic flaw detector, Pin on Disc Wear Tester, Salt Spray Corrosion Apparatus, Vibration Sensors, shakers and DAQ, Cryogenic Treatment Chamber, Engine Testing Facility, Engine Exhaust Emission Tester, Electrical Discharge Machine, Chase Testing Machine, MMAW Machine, GTAW Machine, GMAW Machine.



## DEPARTMENT NEWS

## New Labs



A Professional Welding Lab equipped with modern welding equipment is established in association with FRONIUS India at a cost of Rs 20,23,700. The major equipments purchased for this lab are Gas Tungsten Arc Welding (GTAW), Gas Metal Arc Welding (GMAW) and Manual Metal Arc Welding (MMAW).

## Patents

An Australian patent for “Design and Development of a low-cost solar dryer for drying vegetables and fruits” filed by Sathyamurthy Ravishankar; B, Madhu; D, Mageshbabu; R, Bharathwaaj; S, Vasanthaseelan; **A, Muthu Manokar**, with application number 2020103154 is **granted**.



An Indian Patent filed for “Eductor Based Power-Mixed Electric Discharge Machining (Pmedm) Setup” by **S. Jeavudeen, H. Siddhi Jailani**, M. Murugan with application No. 201941019464 is **published** on 20.11.2020



An Indian Patent filed for “System and method for analysis of roughness quality of flat specimens using image processing” by **J. Mahashar Ali**, **H. Siddhi Jailani**, M. Murugan with application No. 201941019465 is **published** on 20.11.2020



## New Doctorates



Mr. S. Mohamed Illyas was awarded doctorate by Jawaharlal Nehru Technological University for his work titled Experimental and Computational Analysis of Heat Transfer and Flow Characteristics of Swirling Jet Impingement Cooling under the guidance of Dr. B.R. Ramesh Babu, Dean - Research and Development, Chennai Institute of Technology, Chennai and Dr. V.V. Subba Rao, Principal, University College of Engineering – JNTUK, Narasorapet, Andhra Pradesh on 10.07.2020.



Mr. S. Jeavuden was awarded doctorate by our institution for his work titled Investigation of Mechanism and Optimization of Machining Parameters in the Novel Eductor based PMEDM Process under the guidance of Dr. H. Siddhi Jailani, Associate Professor & HOD of our department on 27.08.2020.

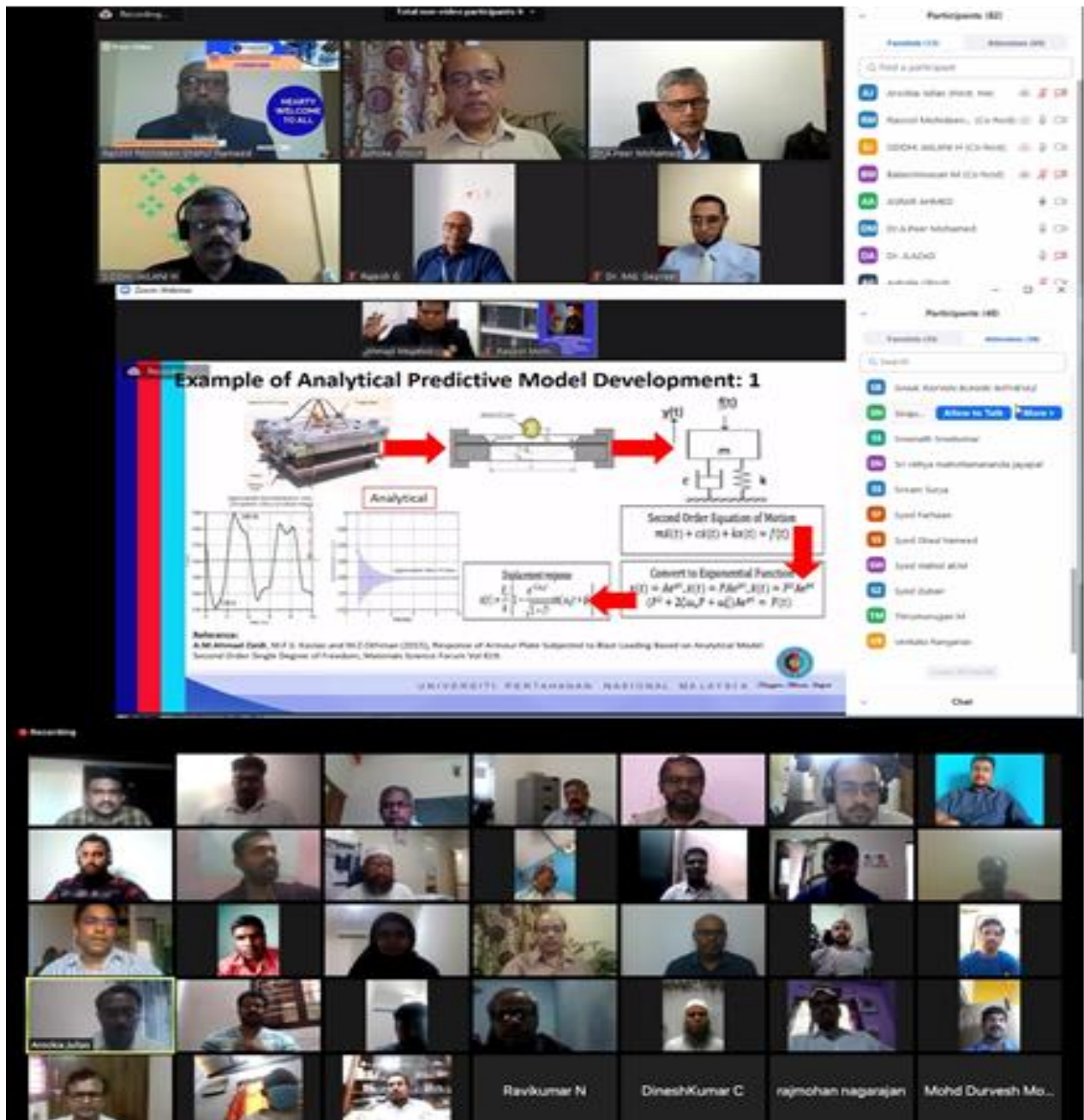


Mr. B. Suryarajan was awarded doctorate by our institution for his work titled Effects on Tribological performance of surface treated Natural fiber and Natural Fillers in Friction Composites under the guidance of Dr. M.A. Saibalaji, Associate Professor of our department on 05.11.2020.



Mr. D. R. Rajendran was awarded doctorate by Anna University Chennai for his work titled Experimental and CFD studies on the thermal performance of solar cavity receiver under the guidance of Dr. E. Ganapathy Sundaram, Professor, Mechanical Department, Velammal Engineering College and Dr. P Jawahar, Assistant Professor, Mechanical Department, NIT Agartala, Tripura on 09.09.2020.

## Programs organized



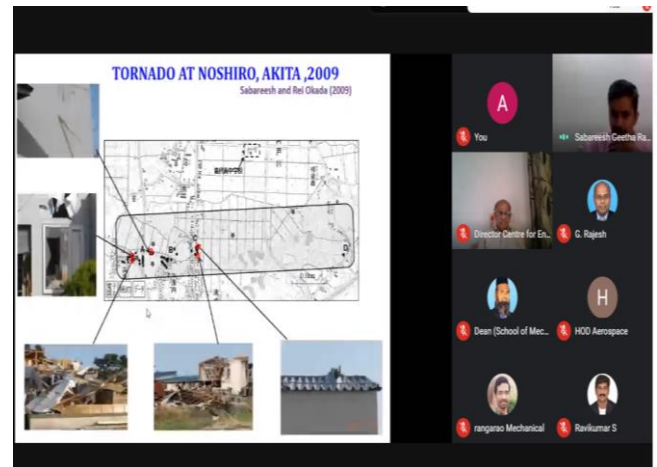
A Virtual **International Conference** on Emerging Trends in Design, Manufacturing, Materials and Thermal Sciences, ETDDMT 2020 was jointly organized by Departments of Mechanical, Aerospace and Automobile Engineering from 24<sup>th</sup> to 25<sup>th</sup> September 2020. More than **100 abstracts** were received. All the papers were reviewed by a team of internal and external expert members from IIT, IIITDM, Anna University, MIT, SSN, Hindustan and other reputed institutes. Around 100 authors/Co-authors and faculty members from Crescent participated in this conference.

The conference was **inaugurated** by well-known industrialist **Mr. Prakash Anantharaman**, Vice President (R&D), Renault Nissan Technology & Business Center India. The inaugural address was delivered on Industry 4.0. Dr. S. Rasool Mohideen, Professor & Dean (Mechanical) delivered the welcome address. Dr. A. Peer Mohamed, Vice-Chancellor (i/c)





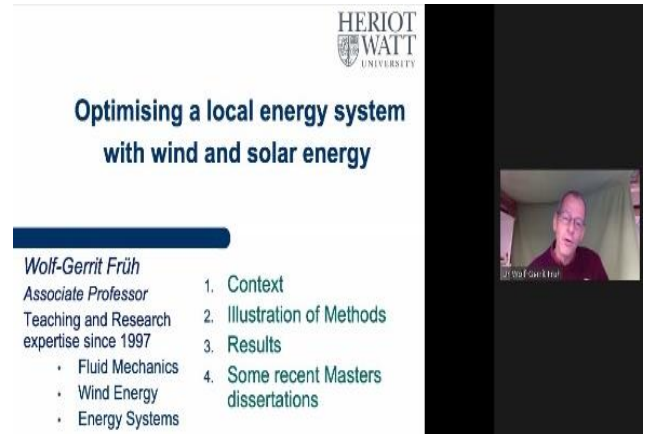
The resource persons are experts in the field from eminent institutions like IIT Madras, IIT Kanpur, IIITDM Kancheepuram, IIITDM Jabalpur, RRCAT Indore, CSIR-CLRI, CIPET, Anna University, VIT, Crescent and Industries like Next big innovation lab and Monotech systems. Various topics in the field of Additive Manufacturing were covered over 16 sessions.



The webinar on “**Fluid Structure Interaction-Experimental Studies For Simulating Unsteady Wind Events**” was organized in collaboration with BITS Pilani, Hyderabad on 8<sup>th</sup> September 2020. The presentation was delivered by **Dr. G. R. Sabareesh** from BITS Pilani, Hyderabad. The webinar offers a brief introduction to fluid structure interaction and simulation of unsteady winds.



The webinar on “**Future Readiness for Mechanical Engineering students**” was conducted on 11<sup>th</sup> September 2020. Mr. Tamil Selvan Mahalingam, Founder & CEO, Future Captains interacted with the students. The webinar emphasized creating awareness about different career opportunities available to the students, identification of strengths and weaknesses of a student to choose suitable career fields and the skills that are required to be developed.



An International Webinar on “Optimizing local energy system with Wind and Solar Energy” was organized on 03<sup>rd</sup> November 2020. Dr. Wolf-GerritFruh, Associate Professor, Heriot-Watt University, UK delivered the presentation. He discussed the challenges faced by a small community to get cheap electricity, power conversion, energy balancing, costing, optimization, analysis of various renewable energy sources and case studies followed by the current research trends in the field of renewable energy.



## FACULTY NEWS

### Awards



Dr. S. MOHAMED ILLYAS and Mr. K. Sathick Basha received the Best Learning Catalyst Award from M/s Apollo Tyres Ltd, Chennai on 5 September 2020.

### Invited Talk

A poster for a five-day FDP. At the top, it says "K. RAMAKRISHNAN COLLEGE OF ENGINEERING Autonomous Institution". Below that, it mentions affiliations with Anna University and AICTE. The main title is "One week FDP on 'APPLICATIONS OF DATA SCIENCE IN MECHANICAL ENGINEERING'". The dates are "21<sup>st</sup> & 25<sup>th</sup> September 2020". It is organized by the "Department of Mechanical Engineering (NBA Accredited)". The guest speaker is "Dr. V. Muralidharan, Associate Professor, Department of Mechanical Engineering, B.S. Abdur Rahman University, Chennai". There is a small photo of Dr. V. Muralidharan on the right.

Dr. V. Muralidharan delivered a lecture in the AICTE sponsored five days FDP on "Applications of Data Science in Mechanical Engineering" organized by K Ramakrishnan College of Engineering on 22.09.2020.

A poster for a webinar. At the top, it says "We Make You Shine". Below that, it says "St. JOSEPH'S INSTITUTE OF TECHNOLOGY St. JOSEPH'S GROUP OF INSTITUTIONS OMR, CHENNAI - 600 119". It mentions "DEPARTMENT OF MECHANICAL ENGINEERING (NBA ACCREDITED)". It is in association with "THE INSTITUTION OF ENGINEERS (INDIA) KANCHEEPURAM LOCAL CENTRE". The webinar is titled "Recent Advances of Photovoltaic Thermal (PV/T) System". The guest speaker is "Dr. A. Muthu Manohar". The date and time are "14-10-2020" and "05.00 PM TO". There is a small photo of Dr. A. Muthu Manohar in the center.

Dr. A. Muthu Manohar delivered a guest lecture titled "Recent advances of Photovoltaic Thermal (PV/T) system" at a student's webinar on 14<sup>th</sup> October 2020 organized by the Department of Mechanical Engineering, St. Joseph's Institute of Technology, Chennai and The Institution of Engineers (India)





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### Onboard Wear Analysis of Disc Brake Pad using Digital Twin

Dr.M.A.Saibalaji

Associate Professor

B.S.Abdur Rahman Crescent Institute of Science & Technology  
Chennai

Dr. M. A. Sai Balaji delivered a lecture titled “Cyber-Physical Manufacturing systems for Future Industries” in the AICTE sponsored STTP organized by the Department of Mechanical Engineering of IFET College of Engineering on 13.08.2020.



SRM INSTITUTE OF SCIENCE AND TECHNOLOGY  
DEPARTMENT OF AUTOMOBILE ENGINEERING  
KATTANKULATHUR – 603203, INDIA.

CFAM/FEP

### HONOUR FOR AN EXPERT TALK



Dr. M.A. SAIBALAJI

Associate Professor, BSACIST, Chennai

In recognition of his Expert Talk on

Comparative study of disc brake pads sold in Indian market – Impact on safety and environmental aspects

In the Six Days Faculty Development Programme on  
AUTOMOTIVE FRICTION MATERIALS

Organized by  
Centre for Automotive Materials, Department of Automobile Engineering, SRM Institute of Science and Technology, Kattankulathur

Dr. M.A. Sai Balaji delivered a lecture titled Comprehensive study of disc brake pads sold in the Indian market in the FDP on Automotive Friction Materials conducted by Centre for Automotive Materials of Department of Automobile Engineering SRMIST, Kattankulathur Campus on 17.12.2020.

**HINDUSTAN**  
INSTITUTE OF TECHNOLOGY & SCIENCE  
(DEEMED TO BE UNIVERSITY)

**SCHOOL OF MECHANICAL SCIENCES**  
**DEPARTMENT OF MECHANICAL ENGINEERING**

Cordially invites you for the Online Guest Lecture  
On  
“CAN MAGNESIUM ALLOY BE THE NEXT ALUMINIUM ALLOY ?”  
By  
Dr.M.THIRUMURUGAN  
Associate Professor,  
Department of Mechanical Engineering,  
B.S. Abdur Rahman Crescent Institute of Science and Technology,  
Chennai-48.

Dr. M. Thirumurugan delivered a lecture titled “CAN MAGNESIUM ALLOY BE THE NEXT ALUMINIUM ALLOY?” in the Hindustan Institute of Science and Technology on 13.11.20.

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Sathy Nandan Road, Srivilliputhur (Pattinam), Coimbatore-641 037

**DEPARTMENT OF MECHANICAL ENGINEERING**  
**CERTIFICATE OF APPRECIATION**  
is presented to  
**DR.M. THIRUMURUGAN, M.E.,PH.D.,PDF**  
ASSOCIATE PROFESSOR MECHANICAL ENGINEERING  
B.S. ABDUR RAHMAN CRESCANT INSTITUTE OF  
SCIENCE AND TECHNOLOGY, CHENNAI  
for being the resource person in the  
Webinar on  
Bulk mettalic glass - An overview  
on august 8th 2020  
Dr.P.Tamil Selvam  
Dean / Mech

Dr. M. Thirumurugan delivered a lecture in the webinar on “Bulk Metallic Glass - An Overview”, in SNS College of Technology on 08.08.20.

**KAMARAJ**  
COLLEGE OF ENGINEERING & TECHNOLOGY  
(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)  
S.P.O. Chidambaram Nader - C.Nagamalai Campus  
S.P.O. C.Nagar, K.Velakulam - 625 701 (Near Virudhunagar), Madurai District.

### Keynote Speakers

Dr. A. Muthu Manohar,  
Assistant Professor,  
Mechanical Engineering,  
B.S.Abdur Rahman Crescent Institute of  
Science and Technology,  
Chennai.



Dr. A. Muthu Manohar delivered a lecture in the “Virtual Web Conference” organized by the Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, Virudhunagar on 7<sup>th</sup> August 2020.

## Journal Publications

1. Essa F.A., Ammar H Elsheikh, Ravishankar Sathyamurthy, **Muthu Manokar, A**, Kandeal, A.W., Shanmugan, S, Kabeel A.E., Swllam W. Sharshir, Hitesh Panchal, Younes M.M., "Extracting water content from the ambient air in a double-slope half-cylindrical basin solar using silica gel under Egyptian conditions, *Sustainable Energy Technologies and Assessments*, 39, 100712, 2020.
2. **Muthu Manokar, A**, Yazan Taamneh, Abd Elnaby Kabeel, Prince Winston D, Vijayabalan, P, Balaji D, Ravishankar Sathyamurthy, Padmanaba Sundar S, Mageshbabu D, "Effect of water depth and insulation on the productivity of an acrylic pyramid solar still - An experimental study", *Groundwater for Sustainable Development*, 10, 100319, 2020.
3. Prabu Krishnasamy, Rajamurugan, G and **Thirumurugan, M**, "Performance of fiber metal laminate composites embedded with AL and CU wire mesh", *SAGE, Journal of Industrial Textiles*, 0(0) 1-18.
4. Ravishankar Sathyamurthy, Abd Elnaby Kabeel, Madhu Balasubramanian, Mageshbabu Devarajan, Swellam W Sharshir, **Muthu Manokar, A**, "Experimental study on enhancing the yield from stepped solar still coated fumed silica nanoparticle in black paint, *Materials Letters*, 272, 127873, 2020.
5. Mohammed El Hadi Attia, Zied Driss, **Muthu Manokar, A**, Ravishankar Sathyamurthy, "Effect of aluminum balls on the productivity of solar distillate, *Elsevier, Journal of Energy Storage*, 30, 101 466, 2020.
6. Kamlesh Pansal, Bharat Ramani, Kishor kumar Sadasivuni, Hitesh Panchal, **Muthu Manokar, A**, Ravishankar Sathyamurthy, Kabeel. A.E, Suresh. M, Mohammad Israr, "Use of solar photovoltaic with active solar still to improve distillate output: A review", *Groundwater for Sustainable Development*, 10, 100341, 2020.`
7. **Varun Kumar Arulvizhi and Selvakumar Alandur Somasundaram**, "Nd: YAG Laser Welded Stainless steel 304: The effects of Al<sub>2</sub>O<sub>3</sub>, Micro Particles Addition", *SAE International*, SAE Technical Paper 2020-28-0418-2020.
8. **Asrar Ahmed, K, Rasool Mohideen, S, Balaji, M.A.S., Surya Rajan, B**, "Tribological Performance of Brass Powder with Different Copper and Zinc Content in the Brake Pad", *Tribology in Industry*, Vol.42, No.2177-190, 2020.
9. **Ravikumar, S**, Kanagasabapathy, H, **Muralidharan, V**, "Multi-component Fault Diagnosis of Self Aligning Troughing Roller (SATR) in Belt Conveyor System using Decision Tree - a Statistical Approach", *Faculty of Mechanical Engineering, FME Transactions* 48, 364-371, 2020.

10. **Ravikumar, S, Muralidharan, V**, Ramesh, P, Cheran Pandian, "Fault Diagnosis of Self Aligning conveyor Idler in Coal Handling Belt conveyor system by statistical features using random forest algorithm", *Springer Nature, Singapore Pte Ltd*, 978-984-15-7241-8\_16, 2021.
11. Nagarajan, K.J., Balaji, A.N., **Sathick Basha, K**, Ramanujam, N.R., Ashok Kumar, R, "Effect of agro waste  $\alpha$ -cellulosic micro filler on mechanical and thermal behavior of epoxy composites", *International Journal of Biological Macromolecules*, 152 327-339, 2020.
12. Mohammed El Hadi Attia, Karthick, A, **Muthu Manokar, A**, Zied Driss, Abd Elnaby Kabeel, Ravishankar Sathyamurthy, Mohsen Sharifpur, "Sustainable potable water production from conventional solar still during the winter season at Algerian dry areas: energy and exergy analysis", *Journal of Thermal Analysis and Calorimetry*, 10973-020-10277-x.
13. Baskara Sethupathi, P, Chandradass, J, **Sai Balaji, M.A.**, "Comparative study of disc brake pads sold in Indian market - Impact on safety and environmental aspects", *Environmental Technology & Innovation*, <https://doi.org/10.1016/j.en.2020.101245>.
14. Lokeshkumar, J, Ramasamy, N and **Mohamed Bak, K**, "Compressive response on Kevlar hybrid Composite Pipe under Sea Water Environment", *AIP Publishing*, 978-0-7354-4013-5/\$30.
15. **Sirajudeen, N, and Abdur Rahman, M**, "Influence of aging and mass fraction of  $Al_2O_3$  on Mechanical Properties of Al6082/ $Al_2O_3$  composite produced by stir casting", *Metal Science and Heat Treatment*, Vol.62, Nos.3-4, 2020.
16. **Mahashar Ali, J Siddhi Jailani, H**, Murugan Mariappan, Mohamed Fahad, S, "Optical surface roughness evaluation of ground specimens using speckle line images", *SAE International*, 2020-28-0514, 2020.
17. Ravindra Pathak, **Serajul Haque**, "Characterization of Expanded Polystyrene by Pyrolysis Process for Plastic Waste to Fuel", *International Journal of Advanced Sciences and Technology*, Vol.29, No.7, pp.11643-11651, 2020.
18. Ravindra Pathak, **Serajul Haque**, "Experimental Evaluation of Low-Density Polyethylene by Pyrolysis Route", *International Journal of Advanced Science and Technology*, Vol.29, No.7, pp.13652-13661, 2020.
19. Chandrika, V.S., Mohamed Thalib, M, Alagar Karthick, Ravishankar Sathyamurthy, **Muthu Manokar, A**, Umashankar Subramaniam and Stalin, B, "Performance assessment of free standing and building integrated grid connected photovoltaic system for southern part of India", *Building Services Engineering Research & Technology*, DOI:10.1177/0143624420977749.

20. Sriharikota Chandra Sekhar, Karuppasamy Karuppasamy, Vedaraman, N, Ravishankar Sathyamurthy, PalanimuthuVijayabalan, Ammar Elshiekh, Vinayagam Nandanakumar, Athikesavan **Muthu Manokar**, "Process optimization and characterization of manila tamarind seed oil extracted by the soxhlet method", *International Journal of Energy for a Clean Environment*, 22(1):31-52, 2021.
21. Asif Afzal, Mohammed Samee, A.D., Jilte R.D., Md. Tariqul Islam, **Muthu Manokar**, A, Kaladgi Abdul Razak, "Battery thermal management: An optimization study of parallelized conjugate numerical analysis using Cuckoo search and Artificial bee colony algorithm", *International Journal of Heat and Mass Transfer*, 0017-9310, 2020.
22. Mohammed El Hadi Attia, Zied Driss, Abd Elnaby Kabeel, Karthick Alagar, **Muthu Manokar Athikesavan**, Ravishankar Sathyamurthy, "Phosphate bags as energy storage materials for enhancement of solar still performance", *Environmental Science and Pollution Research*, <https://doi.org/10.1007/s11356020-12018-x>.
23. Vignesh Kumar Ramalingam, Alagar Karthick, Manoj Praveen Vijayan Jeyalakshmi, Arul Marcel Moshi Antony Joseph Decruz, Athikesavan **Muthu Manokar**, Ravishankar Sathyamurthy, "Enhancing the fresh water produced from inclined cover stepped absorber solar still using wick and energy storage materials", *Environmental Science and Pollution Research*, <https://doi.org/10.1007/s11356020-12018-x1>.
24. Mohammed El Hadi Attia, Zied Driss, Abd Elnaby Kabeel, Asif Afzal, **Muthu Manokar, A**, Ravishankar Sathyamurthy, ""Phosphate bed as energy storage materials for augmentation of conventional solar still productivity", *Environmental Progress & Sustainable Energy*, Doi:10.1002/ep.13581.
25. Stephen Bernard, S, Jayakumari, L.S., **Md. Javeed Ahmed**, Arulmurugan, S, "Tribological and mechanical properties of biobased reinforcement in a friction composite material", *REVISTAMATERIA*, V.25 N.03, ISBN 1517-7076 artigo e-12785-2020.
26. Showkat Ali, **Karunanithi, R, Prashanth, M**, & Sivasankaran, S, "A novel study on mechanically alloyed nanocrystalline Ti-6Al-4V fabricated by spark plasma sintering", *Taylor & Francis, Powder Metallurgy*, <https://doi.org/10.1080/00325899.2020.1867.391>
27. Kabeel, A. E., **MuthuManokar, A.**, Sathyamurthy, R., Prince Winston, D., El-Agouz, S. A., &Chamkha, A. J, "A review on different design modifications employed in inclined solar still for enhancing the productivity," *Journal of Solar Energy Engineering*, vol. 141, no. 3, pp.1-12, 2019.
28. Kabeel, A.E., Ravishankar Sathyamurthy, Swellam W. Sharshir, **Muthumanokar**,



- A, Hitesh Panchal, Prakash, N, Prasad, C, Nandakumar, S, El Kady, M.S., "Effet of water depth on a novel absorber plate of pyramid solar still coated with TiO<sub>2</sub> nano black paint", *Journal of Cleaner Production*, 213, 185-91, 2020.
29. **Prashanth M, Karunanithi, R, Rasool Mohideen, S**, Sivasankaran, S, "An exploration on microstructural observation and mechanical behavior of nanocrystallite Al 7017 alloy via mechanical alloying and uniaxial hotpressing, *Materials Characterisation*, 171(2021) 110803.
  30. Essa, F.A., Omara, Z.M., Abdullah, A.S., Shanmugan, S, Hitesh Panchal, Kabeel, A.E., Ravishankar Sathyamurthy, Wissam H. Alawee, **Muthu Manokar, A**, Ammar H. Elsheikh, "Wall Suspended Trays inside stepped distiller with Al<sub>2</sub>O<sub>3</sub> / Paraffin Wax mixture and Vapour Suction: Experimental Investigation", *Journal of Energy Storage*, 22, 102008, 2020.
  31. **Mohamed Bak, K**, Raj Kumar, G, Ramasamy N and Vijayanandh, R, "Experimental and Numerical Studies on the mechanical characterization of EPDM / S-SBR Nano clay composites", *Materials Science and Engineering*, IOP Publishing, 912 (2020) 052016.
  32. **Mohamed Bak, K**, "Mechanical Investigation of coconut coir reinforced epoxy composite spur gear", ICSTEE 2020, ICSTEE20-ME-19.
  33. Ravishankar Sathyamurthy, Mageshbabu, D, Madhu, B, **Muthu Manokar, A**, Rajendra Prasad, A, Sudhakar, M, "Influence of fins on the absorber plate of tubular solar still - An experimental study", *Materials Today: Proceedings*, 2214-7859, 2020.
  34. Stephen Bernard, S, Suresh, G, **Md, Javeed Ahmed**, Mageshwaran, G, Madanagopal V, "Performance analysis of MWCNT fluid parabolic trough collector for whole year", *Materials Today: Proceedings*, 2214-7853, 2020.

## Conference Presentations

- **Mr. Rajesh G, Mr. S. Syed Zubair, Mr. Jamesha Ibrahim, Dr. K. Mohamed Bak** presented their papers at the Virtual International Conference ETDMMT 2020, organized by Departments of Mechanical, Aerospace and Automobile Engineering on 24.09.2020 and 25.09.2020.
- **Mr. MD. Javeed Ahmed** participated in the "International Conference on AI, Robotics and Automation", conducted by the ICT academy global technology forum from 14.10.2020 to 18.10.2020.
- **Mr. MD. Javeed Ahmed** participated in the "Tribo-India Conference" conducted by the SRM Institute of Science and Technology from 10.12.2020 to 12.12.2020.

## Videos Published

- **Dr. S. Jeavudeen** published a series of videos on YouTube for Optimization Techniques with a total duration of 4 hrs 30 minutes.
- **Dr. A. Arockia Julias** published a series of short videos on YouTube for Introduction to AUTOCAD with a total duration of about 1 hr.
- **Mr. G. Rajesh** published a series of short videos on YouTube for AUTOCAD Tutorials with a total duration of about 1 hr 35 minutes.
- **Mr. M. Balasrinivasan** published a series of short videos on YouTube for Engineering Graphics with a total duration of about 1 hr 25 minutes.

## Programs attended

- Dr. Mohamed Bak K participated in the webinar on "Need of Cyber Security Skills & Job Opportunities" organized by Skills India Ltd, Chennai on 7.7.2020.
- Dr. Mohamed Bak K participated in the Online Webinar on "Idea to revenue for Entrepreneurs in the AI space", organized by CIIC, BSAR Crescent Institute of Science And Technology, Chennai on 10.07.2020.
- Dr. Mohamed Bak K attended the Webinar on "Aeroengines: Structural Engineers", organized by the Department of Aerospace Engineering, BSAR Crescent Institute of Science And Technology, Chennai on 11.7.2020.
- Dr. Mohamed Bak K participated in the 2<sup>nd</sup> live FDP on "Application of Moodle LMS" organized by the Department of Management Studies, BSACIST In Collaboration with DY Patil College of Engineering, Pune from 11.07.2020 – 25.07.2020.
- Dr. Mohamed Bak K attended the Webinar on "Experimental Aerodynamics-A Visual Tour", organized by the Department of Aerospace Engineering, BSAR Crescent Institute of Science And Technology, Chennai on 18.7.2020.
- Dr. Mohamed Bak K attended the Webinar on "Welding of Nickel Based Super alloys: Scope and Challenges" conducted by the Department of Mechanical Engineering, KPR Institute of Engineering and Technology on 20.7.2020.
- Dr. Mohamed Bak K participated in the Online Webinar on "Investor Behaviour and Psychology", organized by CIIC, BSAR Crescent Institute of Science And Technology, Chennai on 30.07.2020

- Dr. Serajul Haque, Dr. A. Muthu Manokar attended 14 days online FDP titled “Materials Science & Nanotechnology” (MSNT 2020) conducted by the Department of Chemistry, B. S. Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai during the period 3.08.2020 to 17.08.2020.
- Dr. A. Muthu Manokar participated in the webinar on 5 days AICTE sponsored online FDP organized by the Department of Mechanical Engineering, National Institute of Technology Raipur from 24.8.2020 to 29.08.2020
- Mr. S. Syed Zubair, Dr. Mohamed Bak K participated in the online workshop on “Design and Development of E content” organized by the center for innovation in Teaching & Learning (CITL), BSAR Crescent Institute of Science And Technology, Chennai on 12.8.2020.
- Dr. Mohamed Bak K attended the Webinar on “Virtual Labs for Mechanical Engineering”, organized by Mathworks, Chennai on 24.8.2020.
- Dr. A.S. Selvakumar participated in the workshop on “Gas nitriding and Nitro carburising current status and future challenge” conducted by IIT Madras in partnership with ASM International on 7.9.2020.
- Dr. V. Muralidharan participated in the webinar on “Condition Based Monitoring for CNC Machine Tools” organized by Central Manufacturing Technology Institute, Bengaluru on 09.09.2020.
- Dr. Mohamed Bak K attended the Webinar on “Artificial Intelligence for Science and Engineering Applications in MATLAB” organized by Mathworks, Chennai on 22.9.2020.
- Dr. Mohamed Bak K participated in the International Virtual Workshop on “Advancements in Design and Materials for product development”, organized by the Department of Mechanical Engineering, Vellore Institute of Technology (VIT), Vellore during the period of 3.10.2020 to 04.10.2020.
- Dr. Mohamed Bak K participated in the STTP (Virtual Mode) on “Writing and Publishing High Impact Research Publications and Scientific Documents” organized by AICTE and Raja Lakshmi Engineering College during the period of 5.10.20 to 10.10.2020.
- Mr. S. Syed Zubair participated in the online workshop on “Recent Advancements in Energy Storage Systems for Electric Vehicles”, SRM Institute of Science and Technology on 17.10.2020 and 18.10.2020.
- Mr. S. Syed Zubair participated in the online workshop on “Electrification: Future of Mobility”, SRM Institute of Science and Technology on 10.11.2020.

- Mr. N. Ravikumar participated in the webinar on “CMOS Sensors, Camera & Autonomous Driving & Full Vehicle NVH” organized by Skill Lync on 24.11.2020 and 5.12.2020.
- Dr. Serajul Haque, Dr. Mohamed Bak K participated in the AICTE sponsored STTP on “ Be the Change Teaching-Learning Process”, organized by HR & faculty Training Academy, BSAR Crescent Institute of Science And Technology, Chennai during the period of 07.12.20 to 12.12.2020.
- Dr. M.Thirumurugan, Mr. Rajesh G, Mr. ASRAR AHMED, Dr. Karunanithi Rasu, Dr. Surya Rajan B, Mr. J MAHASHAR ALI, Mr. SathickBasha K attended the AICTE sponsored FDP on “ 3D Printing and Design”, organized by the Department of Mechanical Engineering, BSAR Crescent Institute of Science And Technology, Chennai during the period of 07.12.20 to 12.12.2020.
- Mr. SathickBasha K, Mr.B. Suryarajan participated in the FDP on “Automotive Friction Materials” organized by the Department of Automobile Engineering, SRM Institute of Science and Technology, Chennai from 14.12.20 to 19.12.2020.
- Mr. J Mahashar Ali participated and completed successfully AICTE Training And Learning (ATAL) Academy Online FDP on “Manufacturing & Monitoring”, from 14.12.2020 to 18.12.2020 at VNIT NAGPUR.
- Mr. N. Ravikumar participated in the webinar on “Workshop: Introduction to control systems and feedback, FDP in Recent advancement in electric vehicle technology” conducted by SRM institute of science and technology.
- Dr. M. Thirumurugan participated in the webinar on “The powder metallurgy technologies for 3d printing” organized by Mepco schlenk Engineering College, Sivakasi.



## STUDENT NEWS

## Journal Publications

1. **M. Mohamed Thalib**, A. Muthu Manokar\*, Fadl A Essa, N.Vasimalai, Ravishankar Sathyamurthy, Fausto Pedro Garcia Marquez\*, “Comparative study of tubular solar stills with phase change material and nano-enhanced phase change material” Energies, ISSN 1996-1073, MDPI, Volume 13 (15), Article number: 3989; 2nd August 2020, Impact Factor: 2.702, CiteScore: 3.82, <https://doi.org/10.3390/en13153989>
2. Yazan Taamneh, A. Muthu Manokar, **Mohamed Thalib**, A.E Kabeel, Ravishankar Sathyamurthy, Ali J Chamkha\*, “Extraction of drinking water from modified inclined solar still incorporated with spiral tube solar water heater”, Journal of Water Process Engineering ISSN: 2214-7144, Elsevier, Volume 38, Article number:101613, December 2020, Impact Factor: 3.465, CiteScore: 4.8, <https://doi.org/10.1016/j.jwpe.2020.101613>
3. Chandrika; M. **Mohamed Thalib**; A Karthick\*; Ravishankar; A, Muthu Manokar, S. Umashankar; B, Stalin, “Performance assessment of free standing and building integrated grid connected photovoltaic system for southern part of India”, Building Services Engineering Research and Technology, ISSN:1477-0849, SAGE Publishing, 6th December 2020, Impact Factor: 1.4, <https://doi.org/10.1177/0143624420977749>
4. **Mohamed Thalib**, M. Vimala, A. Muthu Manokar\*, Ravishankar Sathyamurthy, Milad Sadeghzadeh, Mohsen Sharifpur “Energy Exergy and Economic investigation of passive and active inclined solar still: Experimental Study”, Journal of Thermal Analysis and Calorimetry, ISSN:1588-2926, Springer, Impact Factor: 2.731 (Accepted for publication)

## Campus Recruitment

SI	RRN	Name	Organization
1.	160021601191	MOHAMMED YUSUF AFSAR.A	Emerson
2.	160021601067	JOSE. P. RAJESH	TEAM
3.	160021601109	Mohammed Fazil M.A	Bridgestone Pvt Ltd
4.	160021601108	MOHAMMED FARZAN .S	Bridgestone Pvt Ltd
5.	160021601127	D. NITHISH KUMAR	Bridgestone Pvt Ltd
6.	160021601131	S. PAVAN KUMAR	Bridgestone Pvt Ltd
7.	160021601044	EZHILVEL	Bridgestone Pvt Ltd
8.	160021601152	B Sarathkumar	Delphi TVS
9.	160021601047	FAROOQ AFZAL KHAN A	Delphi TVS
10.	160021601187	S.V. Yuwan Kaargil Raj	Delphi TVS
11.	160021601034	ASHWANTH KUMAR J	Delphi TVS
12.	160021601201	Saikrish R	Sanmina
13.	160021601189	Bablu Bera	Sanmina

## Placement Drives

Sl.	Name of company	Date	Venue	Annual Pay (in Lakhs)
1.	JBW	8.7.20	Virtual Drive	1.50
2.	Studymode	17.7.20	Virtual Drive	3.50 - 5.00
3.	Foxconn	25.7.20	Virtual Drive	2.00
4.	Kyungshin Industrial Motherson Pvt Ltd	3.7.20	Virtual Drive	1.80
5.	Emerson		Virtual Drive	3.50
6.	Tenovia	3.8.20	Virtual Drive	3.50
7.	Bridgestone Automotive India Pvt Ltd	6.8.20	Virtual Drive	1.80
8.	Sanmina SCI India Pvt Ltd	7.9.20	Virtual Drive	3.25
9.	Renault Nissan Automotive India Pvt Ltd	14.9.20	Virtual Drive	2.00
10.	Kaar Technologies (P- II)	16.10.20	Virtual Drive	7.00

**ALUMNI CORNER****Office of Alumni Relations***in association with***Department of Mechanical Engineering**

Alumni Entrepreneurs Webinar on

**How to become an Entrepreneur****Friday 27<sup>th</sup> November | 02.15 PM****SPEAKER****K. Subramanian**Chief Operating Officer for alfaTKG India  
located at IIT Madras Research Park**Crescent Alumnus, B.Tech - Mech , 1998 Batch**

As part of the Alumni Startup success story, a webinar was given by Mr. K. Subramanian, Chief Operating Officer for alfaTKG India located at IIT Madras Research Park. They develop Industry 4.0 IT and IoT Solutions for Japanese factories such as Mitsubishi Heavy Industries, Toyota, Airbus and Boeing suppliers. He emphasized the need for technology up-gradation and maintaining quality to improve the standard of Indian students. Many students attended the webinar and get motivated to start their own startup companies.

## EDITORIAL TEAM



Dr. A. Arockia Julias  
Coordinator



Dr. V. Muralidharan  
Member



Dr. K. Mohamed Bak  
Member



Dr. B. Surya Rajan  
Member



Mr. G. Rajesh  
Member