UBDTCE

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Mechanical Engineering Department 2022 -2023

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Department of Studies in Mechanical Engineering

University BDT College of Engineering
Davangere- 577 004, Karnataka, India
(A Constituent College of VTU, Belagavi)

VISION

Providing quality technical education and moral values to meet the societal needs

MISSION

1) Providing quality engineering education through teaching and training.
2) Learning through internship, research and project work.
3) Encourage participation in co-curricular and extra-curricular activities.

WORKSHOP CONDUCTED IN THE DEPARTMENT

Mechanical Department Organised Two days Entrepreneurship Development Programme on **'Importance of Entrepreneurial Mindset Among Students'** in DOS in Mechanical Engineering on 02-03, May 2023, held at UBDTCE, Davanagere, Sponsored in Memory of Sri S Dakshinamurthy proud Alumni (1960 pass out) by his family members. **Dr S B Mallur** was Coordinator and **Dr Irappa Sogalad, Dr R P Swamy, Dr Vijay Kumar Dr C G Sreenivasa were Co-Coordinator**s for this Entrepreneurship Development Programme.

EDP was Sponsored in memory of Late. Sri. S. DAKSHINA MURTHY, by his family members, a two Days Entrepreneurship Development Program (EDP), on, "IMPORTANCE OF ENTREPRENEURIAL MINDSET AMONG STUDENTS" has been organized by the department of studies in Mechanical Engineering of University BDT College of Engineering during May 02 to 03, 2023, to inspire & inculcate importance of entrepreneurial mindset among students.

The EDP receives the tremendous response and about 160 applications were obtained in a short period of time. Finally keeping the response and infrastructural constraints in mind 135 applications were selected for participations.

It is an immensely satisfying fact that all the 08 resources people identified, made it to the EDP and all the 08 sessions were held as per the schedule with very minimal changes. Wide range topics related to importance of entrepreneurial mindset among students were covered by eminent resource persons with diverse background. The sessions were conducted in very lively environment with total active participations of delegates.

All students, faculty and staff members of Mechanical

Engineering Department express our deep sense of

gratitude and heartfelt thanks to all family members of Late. Sri. S. Dakshina Murthy (Proud Alumni (1960 pass-out) of Mechanical Engineering Department) for sponsoring two days Entrepreneurship Development Programme (EDP) on "Importance of Entrepreneurial Mindset among Students" held during 02.05.2023 to 03.05.2023.

'ನವೋದ್ಯಮ ಸ್ಥಾಪನೆಗೆ ಹತ್ತಾರು ಅವಕಾಶ'

ದಾವಣಗೆರೆ: 'ನವೋದ್ಯಮ ಸ್ಥಾಪನೆಗೆ ಈಗ ಸುವರ್ಣಯುಗ. ಹೀಗಾಗಿ ಹೊಸ ಉದ್ಯಮಗಳನ್ನು ಆರಂಭಿಸಲು ಇಂದು ಹತ್ತಾರು ಅವಕಾಶಗಳಿವೆ' ಎಂದು ಬೆಂಗಳೂರಿನ ಕೃಷಿ ಕಲ್ಪ ಕಂಪನಿ ಸಿಇಒ ಸಿ.ಎಂ. ಪಾಟೀಲ್ ಹೇಳಿದರು.

ನಗರದ ವಿಶ್ವವಿದ್ಯಾಲಯ ಬಿಡಿಟಿ ಎಂಜಿನಿಯರಿಂಗ್ ಕಾಲೇಜಿನ ಯಾಂತ್ರಿಕ ವಿಭಾಗದಿಂದ ವಿಭಾಗದ ಹಿರಿಯ ವಿದ್ಯಾರ್ಥಿ ಎಸ್.ದಕ್ಷಿಣ ಮೂರ್ತಿ ಅವರ ಸ್ಮರಣಾರ್ಥ ಶುಕ್ರವಾರ ಹಮ್ಮಿಕೊಂಡಿದ್ದ ಎರಡು ದಿನಗಳ ಸ್ಟಾರ್ಟಪ್ ಕುರಿತ ಉದ್ಯಮಶೀಲತೆ ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯಕ್ರಮ ಉದ್ಘಾಟಿಸಿ ಮಾತನಾಡಿ, ಮೊದಲು ಯಾವ ವ್ಯವಹಾರ ಮಾಡಬೇಕು ಎಂಬುದನ್ನು ನಿರ್ಧರಿಸಬೇಕು. 'ಜತೆಗೆ ಆ ಉದ್ಯಮ, ವ್ಯವಹಾರದ ಕುರಿತು ಸಾಕಷ್ಟು ಸಂಶೋಧನೆ ಮಾಡಬೇಕು ಎಂದರು.

ಅನುಭವ ಇರುವ ಕ್ಷೇತ್ರದಲ್ಲಿ ಉದ್ಯಮ ಸ್ಥಾಪಿಸುವುದು ಸೂಕ್ತ. ಔದ್ಯಮಿಕ ಅನುಭವ ಇಲ್ಲವೆಂದಾದರೆ, ಮೊದಲು ಆ ಕ್ಷೇತ್ರದ ಬಗ್ಗೆ ತಿಳಿದುಕೊಂಡು, ಅನುಭವ ಪಡೆದು ಉದ್ಯಮ ಆರಂಭಿಸಬೇಕು. ಪ್ರತಿ ಉದ್ಯಮವನ್ನು ಕಾಪಾಡುವ ಸಾಮರ್ಥ್ಯ ಇರುವುದು ಗ್ರಾಹಕರಿಗೆ ಮಾತ್ರ. ಹೀಗಾಗಿ ನೀವು ನೀಡುವ ಸೇವೆ ಅತ್ಯುತ್ತಮವಾಗಿರಬೇಕು. ಅಲ್ಪವೇ ಸ್ವರ್ಧೆ ನೀಡುವ ಉದ್ಯಮಗಳಿಗಿಂತ ಒಂದು ಹೆಜ್ಜೆ ಮುಂದೆ ಆಲೋಚಿಸಬೇಕು ಎಂದು ಸಲಹೆ ನೀಡಿದರು.

ಅಧ್ಯಕ್ಷತೆ ಪ್ರಭಾರ ಪ್ರಿನ್ಸಿಪಾಲ್ ಡಾ.ಮಲ್ಲಿಕಾರ್ಜುನ್

ದಾವಣಗೆರೆಯ ಬಿಡಿಟಿ ಕಾಲೇಜಿನಲ್ಲಿ ಆಯೋಜಿಸಿದ್ದ ಉದ್ಯಮಶೀಲತೆ ಅಭಿವೃದ್ಧಿ ಕಾರ್ಯಕ್ರಮವನ್ನು ಸಿ.ಎಂ. ಪಾಟೀಲ್ ಉದ್ಘಾಟಿಸಿದರು.

ಎಸ್. ಹೊಳಿ ಮಾತನಾಡಿ, ಭಾರತದಲ್ಲಿ ಉದ್ಯಮ ಆರಂಭಿಸುವವರಿಗೆ ಹಣಕಾಸು ನೆರವು ನೀಡಲು ಸಾಕಷ್ಟು ಸಂಸ್ಥೆಗಳು ಮುಂದೆ ಬರುತ್ತವೆ. ಭಾರತ ಸರಕಾರವೂ ಹಣಕಾಸು ನೆರವು ನೀಡುತ್ತದೆ ಎಂದು ತಿಳಿಸಿದರು.

ದಿ ಎಸ್.ದಕ್ಷಿಣಮೂರ್ತಿ ಅವರ ಪುತ್ರಿ ಡಾ. ಎಂ.ಡಿ.ಭಾರತಿ ಮಾತನಾಡಿದರು. ಯಾಂತ್ರಿಕ ವಿಭಾಗದ ಮುಖ್ಯಸ್ಥ ಡಾ.ಎಸ್.ಬಸವರಾಜಪ್ಪ ಕಾರ್ಯಕ್ರಮ ಸಂಯೋಜಕ ಡಾ.ಶೇಖರಪ್ಪ ಬಿ. ಮಲ್ಲೂರ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕ ಡಾ.ಸಿ.ಜಿ.ಶ್ರೀನಿವಾಸ್, ಡಾ.ಈರಪ್ಪ ಸೊಗಲದ, ಡಾ.ವಿಜಯಕುಮಾರ್ ಇತರರಿದ್ದರು.

INDUSTRIAL VISIT

Mechanical Engineering 4th Semester B.E students along with Faculty members **Dr. S B Mallur, Dr. Irappa Sogalad** and Technical Staff Sri. **G A Kuber**, Foreman and **Sri Govindappa D N**, Instructor, visited **K K Foundries, Harihar** on 26-08-2022 as a part of curriculum.

Industrial Visit by Fourth Semester Students

CONFERENCE, SYMPOSIA, SEMINARS, WORKSHOPS, INVITED LECTURES ETC. ATTENDED BY TEACHERS

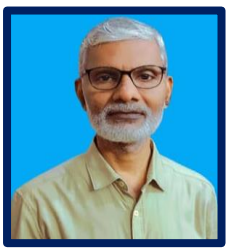
- **Dr S B Mallur, has given invited talk** on "Importance of Entrepreneurial Mindset Among Students", Entrepreneurship for Engineers(EDP), UBDTCE, Davanagere, Karnataka, on May 2, 2023 and on "Quality Characteristics of Entrepreneur" 2nd Phase Student Induction Program for 1st year BE Students for the academic year 2022-2023, UBDTCE, Davanagere, Karnataka, on June 09, 2023.
- **Dr C G Sreenivasa has given invited talk** on "Importance of Entrepreneurial Mindset Among Students", Entrepreneurship for Engineers(EDP), UBDTCE, Davanagere, Karnataka, on May 3, 2023 and on "Entrepreneurship" 2nd Phase Student Induction Program for 1st year BE Students for the academic year 2022-2023, UBDTCE, Davanagere, Karnataka, on June 09, 2023.
- **Dr K Mohamed Kaleemulla and Dr K G Satish** have attended online one week Faculty Development Programme on "Innovative and emerging thrust areas of civil, electrical and mechanical engineering conducted by Sandip Foundations, Sriram Polytechnic, Madhubani, Bihar, held on 3-8th April 2023.
- **Dr K Mohamed Kaleemulla and Dr K G Satish** have attended Faculty Development Programme on "Open Source Software and Tools for Modern Teaching", conducted by Government Engineering College, Haveri supported by Vision Group of Science and Technology, held on 18-21st 2022.

RESEARCH PAPERS PUBLISHED BY FACULTY IN JOURNALS

Paper published by Dr. E S Prakash

- Dadapeer D and **Dr. E S Prakash**, "Numerical simulation of HCCI Combustion with Gasoline+Methyl Tera butyl blend" , Indian journal of science and technology, Vol.15(44), pp. 2422-2431, 2022.
- Dadapeer D and **Dr. E S Prakash**, "Influence of Nano cerium oxide in emissions reduction with methyl tertbutyl ether gasoline blends, international journal of renewable energy", accepted for publication, 2023.

Paper published by Dr. Irappa Sogalad



- Aravinda Pai, **Irappa Sogalad** and S. Basavarajappa (2023) Effect of thickness on mechanical properties of modified 9Cr 1Mo steel welds made by narrow gap hot wire gas tungsten arc welding process, Welding International, 7:4,185-205,Taylor And Francis Publications, https://doi.org/10.1080/09507116.2023.2207750

- Aravinda Pai, **Irappa Sogalad**, Prabhat Kumar, S. Basavarajappa, S.J. Suresha , Impact properties of modified 9Cr 1Mo steel welds: Comparison between cold wire and hot wire gas tungsten arc welding processes, International Journal of Pressure Vessels and Piping, 198 (2022) 104672, pp1-23, https://doi.org/10.1016/j.ijpvp.2022.104

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- C.R. Raghavendra, S. Basavarajappa, Irappa Sogalad (2021) Grey Relational Analysis for optimization of wear parameters and surface roughness on nano composite coating, Journal of the Indian Chemical Society, 98(10) pp.1-12 https://doi.org/10.1016/j.jics.2021.100171

Paper published by Dr. Sheharappa B Mallur

1. Shridhar H. Budapanahalli, **Shekharappa B. Mallur**, Arun Y. Patil, Abeer Mohamed Alosaimi Anish Khan, Mahmoud Ali Hussein and Abdullah M. Asiri, "A Tribological Study on the Effect of Reinforcing SiC and Al2O3 in Al7075: Applications for Spur Gears" Metals is an international, peer-reviewed, open access journal published monthly online by journal of MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations, Metals 2022, 12, 1022. https://doi.org/10.3390/met12061028.
2. Meghana, **Shekharappa B Mallur**, , H R Manohara, , Sreenivasa R, "Effect of holding time on hardness of A413 alloy with B 4 C intermetallic", GIS Science Journal (Publisher: Wichmann Verlag, Germany), Vol.,9, Issue 08, August 2022. ISSN NO : 1869-9391, VOLUME 9, ISSUE 8 , 2022.
3. R. Sreenivasa. **Shekharappa B. Mallur** "ANN Technique Implementation for Wear Prediction of Bronze-Based Composites Under Dry Sliding Conditions" Journal of Failure Analysis and Prevention (2022), https://doi.org/10.1007/s11668-022-01529-zVolume 22, Issue 5, November 2022
4. Shridhar H. Budapanahalli · Sandeep C. Dhaduti., **S. B. Mallur** "Fatigue Analysis of Hybrid Aluminium 7075 Composite Gears, Springer- The Institution of Engineers (India) 2023, (ORIGINAL CONTRIBUTION) https://doi.org/10.1007/s40033-023-00499-2, J. Inst. Eng. India Ser. D, 06 June 2023.
5. Rakshithashree K S, **Shekharappa B. Mallur**, Sreenivasa R "Investigation of the correlation between the different mechanical properties of jute composites", GIS Science Journal (Publisher: Wichmann Verlag, Germany), VOLUME 10, ISSUE 8, 2023. ISSN NO: 1869-9391 (PAGE NO: 630-638 DOI:20.18001.GSJ.2022.V10I8.23.411523).

Paper published by Dr. Mallikarjun C

- K. Ajay Kumar and **C. Mallikarjuna**, "Microstructure and mechanical properties of A356/Al2O3/MoS2 hybrid Nanocomposites", ScienceDirect Materials Today: Proceedings, Vol. 54, pp.415-420, 2022.
- K. Ajay Kumar and **C. Mallikarjuna**, "Wear behavior of A356/ Al2O3/MoS2 hybrid nanocomposites", ScienceDirect Materials Today: Proceedings, Vol. 54, pp.409-414, 2022.
- K. Ajay Kumar and **C. Mallikarjuna**, "Investigation of Mechanical Properties of Aluminium356 reinforced with Nano Alumina and Studying the effect of addition of MoS2 on Aluminum Nanocomposites", *International Journal of Mechanical Engineering*, Vol 7, No. 4, pp.161-166, 2022.
- K. Ajay Kumar and **C. Mallikarjuna**, "Investigating the Wear Characteristics of Aluminium356/ Alumina Nanocomposite and Studying the impact of MoS2 addition into Aluminium356/ Alumina Nanocomposite", *International Journal of Mechanical Engineering*, Vol 7, No. 4, pp.167-173, 2022.
- Lingaraju S.V, **Mallikarjuna C**. and Venkatesha B.K., "Investigation on Wear Analysis of Aluminium (Al) 7075 Alloy Reinforced with Titanium Carbide (TiC) and Graphene (Gr) Nanoparticles", Advanced Technologies in Solid-State Materials Research , Vol 339, pp.125-134, Dec 2022.
- Lingaraju Sannananjapla Vageshappa, **Mallikarjuna C**, Saleemsab Doddamani, "Effect of addition of TiC nanoparticles on the tensile strength of Al7075-graphene hybrid composites", Research on Engineering Structures and Materials, Vol 9(1), pp.19-30, 2023.

Paper published by Dr. Kishan Naik

- G Madhavi, CR Raghavendra, and **Kishan Naik**, "Influence of Aluminium Oxide Coating on Aluminium and Stainless Steel Cookwares Deposited by Air Plasma Spray Process", Recent Advances in Materials and Modern Manufacturing: Select Proceedings of ICAMMM ,Springer Nature Singapore, pp.: 469-478, 2022.
- K Kiran Kumar, Banjara Kotresha, **Kishan Naik**, "Effect of Partial Filling of Metal Foams on Exergy Transfer in a Vertical Channel" , Recent Advances in Mechanical Engineering: Select Proceedings of ICRAMERD, Springer Nature Singapore, pp.: 157-166,2022.
- K Kiran Kumar, Banjara Kotresha, **Kishan Naik**, "Energy Transfer and Irreversibility of Metal Foams Filled in a Vertical Channel", Journal: Journal of Thermal Science and Engineering Applications, Volume: 15, Issue: 8, 2023.
- Kiran Kumar, Banjara Kotresha, **Kishan Naik**, "Flow and heat transfer irreversibility in partial filled metal foams", International Journal of Thermal Sciences, Vol: 184, Pages: 107968, 2023.
- Amreen Taj, RP Swamy, **Kishan Naik**, KN Bharath, "Effect of nano-filler aluminum oxide and graphene on flammability properties of kenaf epoxy composites" , Journal of The Institution of Engineers (India): Series D, Vol: 104, Issue: 1, pp. 143-154, 2023.
- Amreen Taj, Swamy RP, **Kishan Naik**, and Bharath KN, "Physical effects of nanoaluminum oxide and nanographene on kenaf epoxy composite; vacuum bagging process", Journal of Applied Polymer Science, John Wiley & Sons, Inc., Vol.140,Issue: 4, Pages: e53374, 2023.

Paper published by Dr. C G Sreenivasa

- Mahendra K C, **Sreenivasa C. G.**, Anil Kumar H M and Veerabhadrappa Algur, (2022), "Effect of Process Parameters on Tensile Behaviour of FSW AA 6061-AA 7075 Reinforced with TiO2 Particles using Statistical Approach", Journal of Mines, Metals and Fuels, 70(8A): 1- 479, DOI: 10.18311/jmmf/2022/32014.
- Mahadev and **Sreenivasa C G** (2022), "Studies on Powder Metallurgy Process to Produce Aluminum Metal Foam by Using Taguchi Optimization Techniques", Journal of Optoelectronics Laser, Vol.41, No.8, pp.655-662.
- Mahadev M., **Sreenivasa C G** and Borgaonkar A V (2022), "Effect of Influencing Parameters on Developing Aluminium Metal Foam by Using Powder Metallurgy Technique with a Foaming Agent as a Wax Powder, Journal of Porous Materials, https://doi.org/10.1007/s10934-022-01405-z.
- Mahadev M., **Sreenivasa C G.**, Manjunath P G C., Avinash L., Singhal P., Pandit D and Malik V, "Influence of Foaming Agents on Mechanical and Microstructure Characterization of AA6061 Metal Foams", Journal of Process Mechanical Engineering, Vol.1, No.13, pp.1-13, 2022.

Paper published by Dr. K Mohamad Kaleemulla

- Mohamed Kafeel Delvi and **K Mohamed Kaleemulla**, "Tensile and compressive mechanical properties of ZA27/molybdenum disulfide, metal matrix composite", Research on Engineering Structures & Materials, Accepted on 23rd March 2023. In Press. DOI: http://dx.doi.org/10.17515/resm2022.583me1112
- R.S. Ramesh, Saleemsab Doddamani and **K Mohamed Kaleemulla**, "Fracture toughness investigations of AA6061-SiC composites: Effect of corrosion parameters", Materials_Chemistry and Physics, Accepted on 17th July 2023, DOI:10.1016/j.matchemphys.2023.128224
- Saleemsab Doddamani and **K Mohamed Kaleemulla**, "Analysis of light weight natural fiber composites against ballistic impact: A Review", International Journal of_Lightweight Materials and Manufacture, 6(3):450-468 Feb 2023, DOI:10.1016/j.ijlmm.2023.01.003
- Vishal D, Saleemsab Doddamani and **K Mohamed Kaleemulla**, "Structural and modal analysis of crankcase of single cylinder diesel engine", International Journal on Interactive Design and Manufacturing (IJIDeM) 17(3):1-9, November 2022, DOI:10.1007/s12008-022-01101-x

Paper published by Dr. K G Satish

- Siva Prakash P and **K G Satish**, "Study of Fracture Toughness for Aluminium Matrix Composites: Taguchi Approach", International Journal of Research and Analytical Reviews, Volume 9, Issue2, PP 431-439, 2022.

- Siva Prakash P and **K G Satish** "Investigation on the effect of coating for the scratch resistance of aluminium matrix composite reinforced with SiC particles" International Journal of Scientific Research and Engineering Development, Volume 5, Issue 6, PP 1175-1180, 2022.
- Harsha H M and **Dr K G Satish**, "A Statistical Analysis on Tensile behavior of Single Edge Notched Jute Hybrid Composites", International Journal of Advanced Research in Science, Communication and Technology (IJARSCT), ISSN (Online) 2581-9429, Volume 2, Issue 1, pp.522-528, October 2022.
- Harsha H M and **Dr K G Satish**, "Fracture toughness optimization of single edge notched jute hybrid uniaxial tension composites", International Research Journal of Modernization in Engineering Technology & amp; Science (IRJMETS), e-ISSN: 2582-5208, Volume 4, Issue 10, pp.1257-1263, October 2022
- Siva Prakash P and **Dr K G Satish** " Experimental study on the scratch resistance for ramp loading of aluminium matrix composites reinforced with sic particles" *International Research Journal of Modernization in Engineering Technology and Science.* Volume 5: Issue 6, pp. 2702-2707, 2023.
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PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Ability to understand the concept of mechanical engineering and apply them in various areas like design and development, thermal and fluid systems, materials and manufacturing, automation, and management science to solve the real time problems.

PSO2: Ability to solve mechanical engineering problems using analytical, software, and computational tools with a focus on research and innovation to arrive at sustainable and cost-effective solution.

PH.D. DETAILS: GUIDING / AWARDED

Name of Faculty	Awarded	Submitted	Guiding
Dr. E S Prakash	--	01	--
Dr. S B Mallur	2	01	01
Dr. Irappa Sogalad	2	--	4
Dr. Mallikarjun C	2	--	2
Dr. R P Swamy	2	--	--
Dr. Vijay Kumar	--	--	--
Dr. C G Sreenivasa	1	--	2
Dr. Kishan Naik	2	--	2
Dr. K Mohamad Kaleemulla	--	1	--
Dr. K G Satish	1	2	--

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Graduates will acquire fundamental technical knowledge and analytical skills to become successful mechanical engineers to serve the industry and society.

PEO2: Graduates will equip with self-learning abilities for their professional careers and pursue further studies or entrepreneurial endeavours.

PEO3: Graduates will harness the potential to bridge the gap between industry and academia for societal needs with a focus on research and innovation.