

## Rank holders of 2014-2018 batch

Graduation day was held on July 28, 2018 to award Provisional Degree Certificates to 2014-2018 batch of students. Prof.G.Raghuram, Director IIM-Bangalore delivered the convocation address and highlighted the significance of innovation, responsibility and accountability to society and environment. Degrees were awarded to 114 Mechanical Engineering graduates. Likhita R Reddy secured First Rank and won Gold Medal.

Rank No.	Name	CGPA
1	Likhita R Reddy	9.69
2	Vidyardhara BV	9.55
3	Vaibhav A Rudragoudar	9.54
4	Shruti Murlidharan	9.37
5	M.Sairam	9.37
6	Shivaraj Nataraj	9.34
7	Surendra G Mattimadu	9.33
8	Niral GM Desai	9.30
9	Bala Sai Tarun	9.28
10	Aditya A	9.28

## The following are the Post Graduate Rank holders

Rank No.	Course	Name
1	Product Design and Manufacturing	Vinay Pharle
2	Product Design and Manufacturing	Yadhu S Aswan
3	Product Design and Manufacturing	Sohail Ahmad M Syad
1	Computer Integrated Manufacturing	Rahul R Vernekar

Mohammed Atiqh Ahmed-1st in acceleration in formula bharat 2018 member of IJITR-2 Publications.

Adithya KS-team member Baja- placed 9th at Baja Student India in 2016 as a part of Team Helios Racing- participated in Baja SAE India 2018 in Pithampur.

Shivaraj Natraj- Won 35 band competitions across India with band Project Mishram- Represented India at the World Vocal Conference La Voce Artistica, Ravenna, Italy.

Tejas R Kulkarni-Placed 2nd Overall- Formula Hybrid 2017 Conducted at New Hampshire USA by IEEE, SAE-Placed 8th Overall- Formula Bharat 2018 Conducted by SAE.

K Chandrahas- completed B Certificate in NCC (2017)- Completed C certificate in NCC (2018).

## Vyoma

Participated in AIAA DESIGN/BUILD/FLY April 2018 Wichita, USA. The team had the task of designing and building an UAV capable of doing three missions, two of which included carrying payload whose weight was decided on the throw of a die making the centre of gravity balance challenging. The challenge of mimicking serviceability of a commercial airliner (parts of the UAV should be detachable) was also tackled. Team secured 25th position overall. Placed 10th in the Design report.



## Ashwa Racing

Hybrid prototype RZ-X8H car participated in Formula Hybrid, 2018, which took place at the New Hampshire Motor Speedway, USA from the 29th of April to the 3rd of May. The team consisted of members in their 3rd year of Engineering who had designed, manufactured and fabricated the prototype throughout the previous year. The team got Best Team Spirit Award by General Motors. Obtained second place in design event, second in Acceleration event, second in Endurance and third in hitting the Ground Running Award. Overall Ashwa Racing was positioned at 2nd place overall among all the teams of the world.



Further they took part in this year's Formula SAE Italy Event competing against the top combustion teams from across the globe. The event was held from 11th July 2018 to 15th July 2018 in Varano de Melegari, a commune in the Province of Parma, Italy. The team placed amongst the top fifty, and has gained great insights and knowledge on optimising the prototypes for the coming race seasons.

## Team Helios



Team Helios team designs, fabricates, tests and publicizes an All-Terrain Vehicle (ATV) every year and competes in BAJA events – both national and international. The team has managed to bag numerous awards in the season of 2017-2018. Placed 2nd in Cost Presentation, 11th in Endurance event 5th place overall at Enduro Student India 2018. Placed 8th in Suspension in Traction event, 6th best design in the World in BAJA SAE India 2018.

## Training program at BEL, Bengaluru

A training program titled “Mechanical Engineering for Non – Mechanical Engineers” was conducted for employees of BEL, between 29th and 31st of October 2018 at Bharat Electronics Limited, Bengaluru by the department faculty consisting of Dr. JRN, Prof. JR, Prof. RCK, Prof. Rakesh Kumar, Prof. Gajanan, Dr. BSS, Dr. RSS and Dr. PRV at BEL training centre. Faculty delivered lectures on varied topics like engineering materials, metal fabrication and joining process, thermodynamics, fluid theory, heat transfer systems and equipments, power transmission, engineering drawing fundamentals, GD & T overview etc. BEL has given very much appreciation and acknowledged the faculty members for the conduction of training program. This program was co-ordinated by Prof. M.R. Srinivas and Dr. B.S. Suresh.

## Invited talks

- Prof Raghaven delivered a talk on “Advances in Mechanical Engineering” at Rajarajeswari College of Engineering on 20th July 2018.
- Dr M Krishna delivered a talk on “Composite for Deep Sea Applications” at NSTL, Visakhapatnam on 24th July 2018.
- Dr HNNarasimha Murthy delivered a talk on “Manufacturing methods at CEP course on composites in underwater systems” at NSTL, Visakhapatnam on 24th July 2018.
- Dr M Krishna delivered a talk on “Research Methodology” at KSTA on 10th July 2018.
- Dr. J.R.Nataraj delivered a talk on “Metallography of Weldments” at two day Workshop on Metallography and laboratory practices organised by ASM, Dec. 2018.

Ananya Prints Bengaluru-85



**MechMatters Newsletter**

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**Issue 5**

**February 2019**

## Message

We are very pleased with the quality of the incoming students. It is up to us now to provide the same, if not better, learning experience for the enlarged study body, given resources constraints. Our students and faculty continue making progress in cutting-edge research. Many received recognition as well as research grants and consultancy works. More efforts have been directed towards societal benefits of our activities. We just welcomed Dr.P. K. Panda to join our faculty and will help our institute faculty. We hope to continue engaging alumni to assist the Department in achieving its goals. I hope you enjoy reading this issue of newsletter as in the past.

## Editorial Advisors:

Dr.K.N. Subramanya  
Dr. M. Krishna

## Editors:

Dr. G.R. Rajkumar  
Prof. V. Mamatha  
Prof. Amit R. Patil  
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## Mech. Dept. Vision

Imparting quality education in Design, Materials, Thermal and Manufacturing with emphasis on research, sustainable technologies and entrepreneurship for societal symbiosis.

Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young. The greatest thing in life is to keep your mind young. -Henry Ford

## RVCE-Mercedes Benz Centre

The German car manufacturer Mercedes –Benz under the initiative of Indo-German chamber of commerce introduces “Advanced course in Automotive Mechatronic” in association with RVCE. The course duration is one year with five modules viz. Mechanical module, Electronics Module, Advanced Automotive systems, Soft skill Development and Workshop Attachment module. The course content and methodology is derived in collaboration with Mercedes-Benz to suit the need of the advances in Automotive Mechatronic started September 2018.



## Consultancy projects since June 2018

- Machine process using IIoT for Rs.2.80 Lakhs from Kennametal, Bangalore Dr. H.D. Gopalakrishna, Dr. K.N. Subramanya Prof. Arun kumar P. Chavan are the coordinators.
- Design and Development of Torque multiplier for Rs 2.03 Lakhs from Topaz tools Cochin. Dr. M.Krishna, Dr. G.R. Rajkumar Prof. Gangadhar Angadi are the coordinators.
- Development of shear off mechanism for cap assembly of Torque multiplier for Rs 1.05 Lakhs from Topaz tools Cochin. Dr.M.Krishna, Dr.G.R.Rajkumar Prof.Gangadhar Angadi are the coordinators.
- Performance of underwater torpedo shells under hydrostatic pressure loading by experimental and coupled (thermal and hydrostatic pressure) analysis, Dr. H. Narshimamurthy and Dr. M. Krishna, NSTL DRDO, Vishakhapatnam, Rs. 5.31 lakh.

## Sponsored Research Projects since June 2018

- “Setting up of a custom engineered electro chemical discharge machining (ECDM) system for microfluidic devices” funded by VGST under K FIST –Level I, for Rs. 20 lakhs Principle Investigator Dr. P.V.Srihari, Co Principle Investigator Prof. Jinka Ranganayakulu.
- “Development of Zinc Oxide nanotubes based sensors for air pollution monitoring” funded by VGST, Govt of Karnataka under RGS/F for Rs.5 lakhs. Principle Investigator Dr.B.W. Shivaraj.

## Journal Publications, 2018

- Effect of deposition time on structural, electrical and optical properties of Aluminium doped ZnO thin films by RF magnetron sputtering RS Tondare, BW Shivaraj, HN Narasimhamurthy, M Krishna, Materials Today: Proceedings 5 (1), 2710-2715, 2018.
- Effect of MWCNTs on piezoelectric and ferroelectric properties of KNN composites RN Nandini, M Krishna, AV Suresh, HNN Murthy Materials Science and Engineering: B 231, 40-56, 2018.
- Effect of chopped/continuous fiber, coupling agent and fiber ratio on the mechanical properties of injection-molded jute/polypropylene composites S Pailoor, HNN Murthy, P Hadimani, TN Sreenivasa Journal of Natural Fibers, 1-11, 2018-12-24, 2018.
- Production of fine-grained foils by large strain extrusion-machining of textured Ti-6Al-4V K Palaniappan, H Murthy, BC Rao Journal of Materials Research 33 (2), 108-120, 2018.
- Development of Silver Doped Titanium Oxide Thin films for Gas Sensor Applications JR Nataraj, PY Bagali, M Krishna, MN Vijayakumar Materials Today: Proceedings 5 (4), 10670-10680, 2018.
- Effect of Calcination Kinetics and Microwave Sintering Parameters on Dielectric and Piezoelectric Properties of (K0.5Na0.5) NBO3 Ceramics RN Nandini, M Krishna, AV Suresh, KN Rao Iranian Journal of Materials Science & Engineering 15 (2), 2018.
- Synthesis and Characterization of Copper Doped Zinc Oxide Thin Films for CO Gas Sensing SS Bharadwaj, HN Murthy, M Krishna, MGaniger, M Idris, P Anawal, arXiv preprint arXiv: 1803.0714, 2018.
- Influence of Nanoclays to the Matrix of Vinylester/Glass Composites on their Fire Behavior Properties N Raghavendra, HNN Murthy, KRV Mahesh, M Mylarappa, .. Materials Today: Proceedings 5 (10), 22526-22535, 2018.
- Development and Characterization of PVDF Thin Films for pressure sensors TS Roopaa, HNN Murthy, VVP Kumar, M Krishna Materials Today: Proceedings 5 (10), 21082-21090, 2018.
- Optimization Of Electroless Copper Coating Parameters On Graphite Particles Using Taguchi And Grey Relational Analysis YP Deepthi, M Krishna Materials Today: Proceedings 5 (5), 12077-12082, 2018.
- Longitudinal and transverse compressive properties of alumina nanoparticles filled



- epoxy/unidirectional glass fiber composite laminate under in-plane loading M Rajanish, NV Nanjundaradhya, RS Sharma, HK Shivananda, A Hegde, Materials Today: Proceedings 5 (1), 2921-2927, 2018.
12. Effect of graphene oxide nano filler on dynamic behaviour of GFRP composites NV Pujar, NV Nanjundaradhya, RS Sharma AIP Conference Proceedings 1943 (1), 020107, 2018.
  13. Numerical Prediction of Shear Modulus of Multi-Layer PUF Cored Sandwich Composites MA Ahmed, M Safiulla, RS Sharma, NV Nanjundaradhya Journal of Polymer & Composites 5(3), 55-61, 2018.
  14. Directional Interlaminar Shear Strength (ILSS) of nano-modified epoxy/unidirectional glass fibre composite M Rajanish, NV Nanjundaradhya, RS Sharma, HK Shivananda, A Hegde AIMS Materials Science 5(4), 603-613, 2018.
  15. Effect of scanning speed and tin content on the tribological behavior of femtosecond laser textured tin-bronze alloy A Bharatish, V Harish, RN Bathe, J Senthilselvan, S Soundarapandian Optics & Laser Technology 108, 17-25, 2018.
  16. Overview of Laser Absorptivity Measurement Techniques for Material Processing R Indhu, V Vivek, L Sarathkumar, A Bharatish, S Soundarapandian Lasers in Manufacturing and Materials Processing 5 (4), 458-481, 2018.
  17. Fretting Fatigue Study of Dovetail Joints with Retaining Pin PV Srihari, KB Kainthage, AA Mascarenhas, A Bharatish, K Ramachandra Research Journal of Engineering and Technology 9 (3), 233-240, 2018.
  18. Influence of Femtosecond Laser Parameters and Environment on Surface Texture Characteristics of Metals and Non-Metals-State of the Art A Bharatish, S Soundarapandian Lasers in Manufacturing and Materials Processing 5 (2), 143-167, 2018.
  19. Evaluation of Wear on Macro-Surface Textures Generated by ns Fiber Laser V Harish, S Soundarapandian, L Vijayaraghavan, A Bharatish Lasers in Manufacturing and Materials Processing 5 (1), 71-80, 2018.
  20. Dry Sliding Wear Characteristics of Aluminum 6061-T6, Magnesium AZ31 and Rock Dust Composite R Balachandar, R Balasundaram, G Rajkumar IOP Conference Series: Materials Science and Engineering 314 (1), 012013, 2018.
  21. Statistical Investigation of Tool Geometry for Minimization of Cutting Force in Turning of Hardened Steel SK Harisha, GR Rajkumar, V Pawar, M Keshav Materials Today: Proceedings 5 (5), 11277-11282, 2018.
  22. Performance Studies and Injection Timing Optimisation for LHR Single Cylinder

Diesel Engine Fuelled with Biodiesel Blends G Anjaneya International Journal of Applied Engineering Research 13 (1), 131-135, 2018.

23. Multi-objective Optimization Using Taguchi's Loss Function-Based Principal Component Analysis in Electrochemical Discharge Machining of Micro-channels on Borosilicate Glass J Ranganayakulu, PV Srihari Advances in Manufacturing Processes, 349-360, 2018.
24. Prapul Chandra A.C, Byregowda, Ayub khan, 'Investigation of compressive properties of wollastonite reinforced ABS composites, International Journal of Engineering and Technical research 8(4), 65-68, 2018.
25. Anjaneya G, Prabhakar Reddy C, Udaya Ravi M, 'Performance Studies and Injection Timing Optimisation for LHR Single Cylinder Diesel Engine Fuelled with biodiesel blends', International Journal of Applied Engineering Research 13, 131-135, 2018.
26. Mamtha V, Narasimha Murthy H.N, Anand Gaikwad, Sham Aan Mankunipoyil, Sridhar Ramakrishna, and Phani Ayalasomayajula Ratna, 'Antibacterial and Flame Retardant Properties of Ag-MgO/Nylon 6 Electrospun Nanofibers for Protective Applications', Clothing and Textiles Research Journal, 1-14, 2018, DOI: 10.1177/0887302X18783071.

#### FDP/Conference Attended

1. R. Chandra kumar attended Summer School in Tribology from 18-22 June 2018 at Indian oil institute of Petroleum Management, Gurgaon. This was organised by Tribology Society of India. Technical sessions included topics such as lubricant chemistry, testing of automotive components etc. . Speakers from IISc, IITs, Indian oil R&D, DMRL and industries such as L&T, Bruker etc. Delivered the talks.
2. Keshavamurthy Y C Attended Two weeks Faculty Development Program on Advanced Manufacturing, from 16 -27 July 2018, conducted by the Department of Mechanical Engineering, B M S College of Engineering, Bengaluru.
3. Abhiram E R Attended Faculty Enrichment Program on Mechanics of Materials ' from 23-27 July 2018, organised by Department of Product Design and Manufacturing, Center for PG Studies , Visvesvaraya Technological University, Jnana Sangama, Belagavi.
4. Prof. Rakesh Kumar participated in "First Course in Computational Fluid Dynamics: Development, Application and Analysis (FCCFD - 2018)" conducted by Indian Institute of Technology, Bombay during June 25 - 29, 2018.
5. Prof. Rakesh Kumar participated in a short term course on "Computational Fluid

Dynamics" during august 13 - 17, 2018 under the quality improvement program of All India Council for Technical Education, New Delhi conducted by Indian Institute of Science, Bengaluru.

6. Prof. Jinka Ranganayakulu participated in a course on "Electrochemistry Basics, Analysis and Applications" during June 11 - 15, 2018 under the quality improvement program of All India Council for Technical Education, New Delhi conducted by Indian Institute of science, Bengaluru.
7. Prof. Jinka Ranganayakulu participated in MeitY, Govt. Of India, sponsored a six day faculty development program on "Computational Research Techniques using MATLAB (CRT 2018)" organized by the E&ICT Academy, National Institute of Technology, Warangal from 9<sup>th</sup> - 14<sup>th</sup> July 2018.
8. Prof. Abhiram participated in ten day GIAN course on "Theoretical aspects on reactive flows during Dec 24 2018 - Jan 2 2019 at NIT Warangal, Telangana.

#### NPTEL

Department of Mechanical Engineering Took initiation and conducted orientation programs on NPTEL programs. About 49 students qualified the exams in various courses in Jul-Sep 2017, Feb-Mar 2018 and Jan-Apr 2018 batches. About 13 students bagged topper ranks in various courses.

Four faculty members qualified the NPTEL courses. Also, two faculty members have secured top performing mentor awards for the period Jan - June 2018, Dr P. V. Srihari for the course Introduction to Mechanical Vibration, Prof. Jinka Ranganayakulu and Prof Ramakrishna Hegde for the course Metal Cutting and Machine Tools.

About 80 students qualified the exams in various courses in July - October 2018 and August - September 2018 batches. About 23 students bagged top ranks in various courses. Four faculty members qualified the NPTEL courses. Also, two faculty members have secured ranks. Prof. Jinka Ranganayakulu has secured top 2% rankers with Elite + Gold medal in Robotics Course and Prof. Gangadhar Angadi has secured top 2% rankers with Elite in Manufacturing of Composites.

#### Ph.D Awarded

1. Prof. V L Jagannatha Guptha, Assistant Professor, Completed final Ph.D viva voce in VTU, on 27 August 2018 on the thesis titled "Analysis of deformation and strength behavior of polymer based laminated composites under bi-axial loading" under the guidance of Dr. Ramesh S. Sharma.
2. Prof. Ramakrishna Hegde, completed final Ph.D. Viva-Voce in Karpagam University on 21st August 2018 on the thesis titled 'Investigations On The Effect Of Ageing Heat Treatment And Shot Peening On

Fatigue And Fracture Behaviour Of Aluminium 6061 Based Metal Matrix Hybrid Composites".

3. Mr. Ashik K.P, Research Scholar completed Final Viva Voce of Integrated Degree (M.Tech + Phd) in VTU, on 25 August 2018 on the thesis titled "Static and Dynamic Characteristics of Polymer based bi-woven glass and natural fiber laminated composites" under the guidance of Dr. Ramesh S. Sharma.

#### Post doctoral

Institute of Post Doctoral Fellowship from IIT-madras was awarded to Dr. Bharatish A, Assistant professor in the field of Femtosecond laser surface texturing of tin bronze alloy for improved tribological performance" carried out under the guidance of Dr. Soundarapandian S, Professor, IIT Madras. July 2018.

#### Ready Engineer Program 2017-18

A certificate distribution program for first batch of READY ENGINEER Students was organized on 13 August 2018. Dr H.N Narasimha Murthy addressed the students and distributed the certificates. 41 students of mechanical engineering have been certified as READY ENGINEER by TATA Technologies. Top five students have got placement opportunity.



#### Shreyas Kulakarni - outstanding performer in sports

Shreyas S Kulkarni of fifth semester Mechanical Engg is a versatile player of Table Tennis. He represented Karnataka State team in various events that includes cadet, sub-junior, junior, youth and men category. Bronze medalist in the junior doubles event in the junior and youth national and inter-state championship table tennis tournament held in Dharamshala. Gold medalist in the SGFI nationals in under 19 category held in telangana. Represented India and secured bronze medal in the team events at the 5th Asian l games held in Singapore in 2016. He represented Karnataka State u-19 team at youth nationals in Vadodara 2017. Represented Karnataka State senior mens team at senior nationals 2017 held in ranchi and finished 9th position in the team



events. (2017). Selected to represent Karnataka State mens team at national games 2018. Represented VTU at the inter-universities championships - south zone and secured third place held in Coimbatore. Represented VTU at the all-india inter universities championships. Ranked 2 in the state in the youth boys under 21 years category. He stood Top - 64 in india in the youth boys category 2018.

#### Placement

Placement started from July for 2014 - 18 batch students. Total 114 offers were made to 82 students of mechanical department with highest salary package till date of Rs. 12 lakh per annum from "Future Supply Chain". Average salary offering was Rs. 4.6 Lakh per annum among the 82 students.

#### Achievers of 2014-18 Batch

V Manoj Kumar - obtained first prize in Kannada Essay writing, published two papers, II Prize in Funnovation - CSI Bangalore, NSS core member.

Vishal Kannan - Participated in General Management Programme and Seven Eleven Strategy for entering Middle East Markets at Stanford University - 0 Internship at Cross Fields Tokyo, Japan, Speaker by invitation at Keio University, Tokyo and Waseda University, Tokyo - Wizroot Fellowship - Data Scientist and Financial Analyst (1 in 10) - Two papers published, Placement coordinator.

Ketan Baad - NCC Participated in Republic day parade 2016

Avinash B Chalekar - represented RV in VTU in Kho-Kho and Kabbadi.

Shubham Jalan - Winner of Bangalore Entrepreneurship Challenge - 2015, Vice-President, Corporate Partnership - cell 2016-17, Member of Business Advisory Board, E-cell, 2017-18.

Shruti Muralidharan - Represented RVCE in Table tennis VTU zonals runner up - 2015, 2016, SAE INDIA Kalpana Chawla Award 2016-2017 - 2nd Place All India.

M Sairam - Cricket VTU interzonal Winners 2018, VTU zonal winners 2015, 2016 and 2018- KSCA 5th division champions - Represented the College team for 4 years- Brakes Sub-system head of Team Helios Racing.

Amrut Chougule - represented college team in zonal ball badminton league- winners of interzonals in ball badminton 2017-18- winner of cricket festos 2015 & runners of cricket festos in 2016- Joint secretary of Team Yantra.

Himadrie Sharma - Winner, interdepartment kabbadi tournament.

Vidyardhara B V - Participated and placed 18th at the SUAS 2016 event, Maryland as part of Project Jatayu - Winner (2nd place) in National Level event "Funnovation" organized by DRDO and CSI - Winner (3rd place) in Intercollege Project Presentation event at Dr. Ambedkar Institute of Technology - Qualified in GATE 2018 - 3 publications - Team Leader at Project Jatayu.

Sukshith - Recommended for INDIAN NAVY at NSB Coimbatore - participated in All India Thal Sainik Camp, New Delhi.

Shankar Sriram - Vice captain of college football team - runner-up at VTU Football interzonals held at Belgaum 17-18.

Mohan M - Cleared INDIAN AIRFORCE Exam - AFCAT and selected for SSB - Pursuing Research Project under a Scientist at IISc and published 6 international journal papers - Winner (2nd position) - Funnovation, a National level competition organised by DRDO and CSI - Winner (3rd position) - Project Presentation, Intercollege event at Dr. Ambedkar Institute of Technology.

Neeraj Bagi - Secretary and President of ISHRAE RVCE chapter (2017 & 2018) - Represented Bangalore chapter at Hyderabad (zonal) and Delhi (national) - 1st place at inter-collegiate aQuest quiz - Attended international workshop on CO2 refrigeration at IITM.

Mohammad Muthahir - Head of CARV Hindi in RVCE for the year 2017-2018 - Won many street play competitions at national level.

Ojus Kaushal - Director of Public Relation in Rotract club of RVCE - Organizer of various events conducted by ROTRACT in 2016-17.

Niral G M Desai - Chief Technology Officer of Team Chimera RVCE (2016-2018) - Qualified GATE 2018 - Winner Inter-collegiate HVAC aQuest quiz 2017 (ISHRAE).

Aditya C - student placement coordinator - owns a startup - slyther, solar solutions - participation in guinness world record event.

Annapu Reddy kiran Kumar - worked in Astra robotics (technical team) - member FPSI, member of ISHRAE, internship at TE Connectivity.

Prajwal C P - awarded Guinness world record for largest blood donation camp held at Tumkur August 2016 and for largest diabetic awareness camp held at Tumkur February 2017 - elected as president of FPSI student chapter RVCE.

Vishnusagar Reddy P - participated in AIR 47 in Indian Engineering Olympiad 2017 - Paper Publication.