INNOVATIVE LABS

PROPEL LAB – I (ROBOTICS AND EMBEDED SYSTEM LAB)

DR. RAJAT VASUDEVA MURTHY
Coordinator

SRI RAJATHA B.
Technical Staff

The lab provides a platform for students having interest in the field of Robotics and Embedded Systems. Major projects in the lab are related to the Machine Learning in Robotics space and Internet of Thing(IoT) in Embedded Systems. Through these projects students get to experience the depth of technologies. Students in here learn how to program a micro-controller, design a robot using many equipment's which are at the disposal of propel lab. The students pass on the knowledge gained by working in the lab to their juniors by conducting workshops and competitions. Lab also facilitates academic and funded projects.

Lab is supported by many industries and organizations like, ARM Ltd, Mediatek Labs, Nuetech Solar Systems Pvt. Ltd., ALS, and IIT – Bombay. At present we have 3 patents pending, 1 copyright, 7 international and 6 national publications. We have also received more than 10 awards from prestigious organizations like TCS, ARM, TI, IITB, and ONGC. We have youtube channel: Experiments@BMSCE.

PROPEL LAB - IV (SAE BULLZ RACING)

DR. RATHANRAJ K J

SRI. RAJESH. P

- Bullz Racing founded in the year 2010, is the Automotive engineering division of BMS College of Engineering, Bangalore.
- We are an all-student collegiate club of SAEINDIA, strategic alliance partner of the Society of Automotive Engineers, or SAE International. We primarily intend to take the experience of engineering beyond four walls and into the real world. We are a team of young, hungry and eager students from various disciplines of engineering.
- Over the years, we have participated in various National Level engineering competitions and have carved a niche for ourselves.
- This is where ardour shall strive as we do what we're best at: Innovation and Its Application.

2011: FIRST CAR – BEST DESIGN AWARD BAJA SAE - KOREA

2017: FIRST GO-KART: TOP 20 OUT OF 150 TEAMSAT NKRC 2017

2015: FIRST ELECTRIC CAR – 7TH PLACE OVERALL MAHINDRA BAJA SAE 2015

2017: 3RD PLACE OVERALL MAHINDRA BAJA SAE 2015

PROPEL LAB – II (3 D PRINTING)

SRI.SREEKANTH N V
Coordinator

Background:

3 D printing is a new technology which the world is embracing at a very fast rate which is also called as Additive Manufacturing. In comparison with the traditional manufacturing process this promises the users to create drawings in 3 D and then manufacture it directly with minimum or no post processing.

This technology is only three decades old and has promising future for research and innovation. There is a large demand for people who are trained in this technology as engineers, operators and designers. The demand for 3 D printing due to its cost and affordability will pave way to a new era of manufacturing.

Areas of applications in Industries:

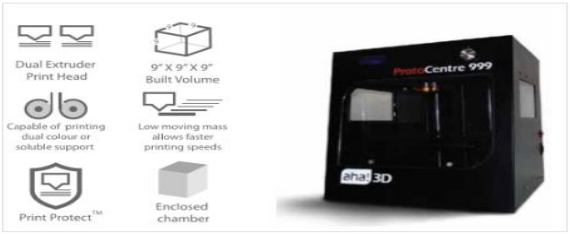
- Automotive
- Architecture
- Aerospace
- Electrical & Electronics
- Medical & Dental
- Manufacturing
- Defence etc...

Genesis:

The facility of 3 D printing lab was inaugurated in the year June, 2014 by Dr. B S Ragini Narayan, Donor Trustee, BMSET, Dr. U Chandrashekar, Former Addl. Director, GTRE Bangalore & Sri. M Krishnaswamy, Project Director(Retd.) ISRO, Bangalore in presence of various dignitaries.

The lab was inaugurated with three 3 D printers from Aha 3 D Protocentre 999 models. The lab from the day of its genesis till date has been able to help a lot of students and researchers in printing their ideas into real world objects. The students are curious about the technology involved in 3 D printing and there has been numerous visits by students and faculties from neighbouring institutes and in house who have shown keen interest in using the facility.

Facility:



PROPEL LAB – III (AEROSPACE LAB)

SRI.RAM ROHIT V

Coordinator

SRI K. SATYANARAYANA REDDY

Technical Staff

The facility of Aerospace lab was inaugurated in the year 2012 by Dr.Roddam Narasimha and Wing Commander D P Sabarwal. Since, Aero BMSCE is participating in various National and International Aero Design competitions.

Our Aim:

- To Create Awareness about the Exciting Fields of Aviation and aerospace.
- To encourage UG Students to take up R&D, Innovation and Entrepreneurship.
- To provide the opportunity for students to use their learning to solve complex engineering challenges, through projects and competitions.

What we do at Aero BMSCE:

- Aero BMSCE is a student team working on complex engineering challenges, such as designing aircrafts to perform according to required parameters such as reducing empty weight and maximizing weight of payload carried.
- We work on innovative projects to promote interdisciplinary research. We have completed many projects such as Project Kalam, Quadcopter Project, etc.
- We also participate in National and International Aero Design Competitions, which have different problems to be solved.

Facility:

- Laser Machine (Cutting & Engraving) 3Axis.
- CNC Milling Machine.
- Fat Shark Attitude SD Goggles with MIG v5 Head Tracking.
- Grupuner MZ-24 12 Channel Transmitter.
- Turnigy HD Wi-Fi Camera.
- Dremel 4000 machine.
- Stanley 53 Set tool box.
- Turnigy Thrust Measuring Stand.
- Two Sky surfer trainer planes.
- Apple Work station (Design, Analysis, and Report etc.).
- Bosch GLM 80 Laser Rangefinder.
- Air compressor for laser machine.
- Water chillier for laser machine.
- Oxygen cylinder for laser machine.

Achievements of the Team

- Secured in the first prize(One lakh) overall (micro) in SAE India competition March 2020, Anna University, Chennai.
- Participated in Technoxian Quadcopter Challenge 22nd to 25th September 2019, New Delhi.
- Participated in SAE Indian Southern Section 2019, Anna University, Chennai.
- Overall 3rd rank, 2nd place in a design report, in SAE India Southern Section 2018, Anna University, Chennai.
- Secured 23rd rank in SAE Aero Design East 2018 held in Lake Land, Florida, USA.
- Best innovation in the micro class of Manovegam Aero Championship 2017 in SAE India held at SIT Tumkur.
- 17th place out of 30 teams in Boeing 2017 held at IIT Madras.
- Secured 14th rank in SAE Aero Design East 2016 held in California, USA.
- 2nd place in Boeing competition out of 174 teams across India.
- Secured 13th rank in SAE Aero Design West 2016 held in California, USA.
- Secured 14th rank in SAE Aero Design West 2015 held at Los Angeles, USA.
- Secured 15th rank in SAE Aero Design West 2014 held in Texas, USA.
- Secured 18th rank in SAE Aero Design West 2013 held at Los Angeles, USA.
- Best presentation at IITM Shaastra 2013.
- Secured 23rd rank in SAE Aero Design East 2012 held at Atlanta, USA.
- 1st place at NIT Trichy 2012.
- 1st place at NIT Warangal 2012.
- 1st place at IIT KGP Kshitij 2012 Laws of Motion.
- 3rd place at IITM Shaastra 2011 Wright Design.
- 1st place at IITM Shaastra 2011 Top Gun.

MAHINDRA BAJA SAE 2018

PROPEL LAB – V (BSNCSIS)

DR. ANIL CHANDRA

SRI. SREENIVAS MURTHY

DR. RATHAN RAJ K J