



**B.M.S. College of Engineering, Bengaluru -560019**  
Autonomous Institute, affiliated to VTU

1. Name of the lab: Product Innovation Lab
2. Department: ICRD/Mechanical/Electrical
3. Location of the lab: Ground Floor, Mechanical department
4. Faculty in charge:  
Dr. R N Ravikumar, Lab Director ([rnravi.mech@bmsce.ac.in](mailto:rnravi.mech@bmsce.ac.in))  
Sreekanth N V Lab Incharge and Technology evangelist  
([snv.mech@bmsce.ac.in](mailto:snv.mech@bmsce.ac.in))
5. Associated with industry, if any: Dassault Systemes, 3D PLM India, La Fondation France/India
6. List of Equipments/facilities along with specifications and photographs + software with versions:
  - 3D experience Software- 20 licences+ 5 licences 2022 version
  - 15 Workstations (12 donated by Dassault Bangalore office)+ 3 purchased recently high end systems)



- 6 DOF Robotic Arm



- Poppy Robot



- Lulzbot 3D Printer



- Ultimaker 3D printer



Specifications	Dimensions
AC input	100-240 V, 1.4 AMPS
Electrical	50-60 Hz, 221 Watt max
Speed and precision	Print speed: 30mm/s-300mm/s Travel speed: 30mm/s-300mm/s Precision: 12.5/12.5/5 micron
Temperatures	Nozzle temperature: 180-260°C Heated bed Temperature: 50-100°C Operational Temperature: 15-32°C Storage Temperature: 0-32°C
Build Volume	223x223x205mm
Print surface	Heated bed (50-100°C)
Layer Resolution	Up to 20 micron
Sound	Average operational noise: 49dBA
Physical dimensions	Desktop size: 357x342x388mm Shipping size: 400x400x550mm Weight: 11.2/18 kg
Layer Resolution	Fast:0.2mm Normal: 0.1mm High: .06mm Ultra
Nozzle diameter	0.4mm
Supported filaments	PLA, ABS, CPE
Filament diameter	2.85mm
connectivity	Stand-alone SD card printing
Software	Supplied software: Cura File Types: STL/OBJ/DAE/AMF

## 7. Major Achievements till date:

-As an extended activity of the lab 3D Experience was conducted an event call TECHATHON “Gamification Based Learning Experience” using platform on 24th & 25th Feb 2018 among different colleges from INDIA.BMSCE won the competition with a team of 16 members.

-Dr. Meena & Prof. Sreekanth N V from Electrical department and Mechanical were funded from La Fondation for developing next generation VR lab based curriculum for enhancement of learning .

-Introduction of 3D Experience and Additive manufacturing in 1st Year Lab

-Utilization of 3D Experience to M.Tech Machine design students and Manufacturing Science as PLM course- Industry and Academia teaching experience to students. From product conceptualization to Product launch and service in development of Vlab project.

-T V S interns students from Branch of IEM Names SHREERAKSHA G. S, SHRADDHA P.G, ANUSHA G , have created PROCESS PLANNING AND SIMULATION (Create assembly line simulation for Jupiter vehicle assembly incorporating the current changes in process and propose a suitable line balance to achieve required production volume.)

under the guidance of K. N. Prasad during the month June - August 2019

-Two One day programmed were conducted to Students to know about the 3D Experience Software in Delmia and RFLP. More than 40 Students were learned and implemented in the academic project.

-RFLP Session with Mechanical Engineering 14th Sept 2019 was held during Phase Shift

-In the month of September and October 2019 Dassault systems conducted free certification exams for students to explore about software.

Initially they conducted 3DEXPERIENCE Collaborative Business Innovator certification for students to know about platform accessing.

-In the month of October 2019-2020 they conducted CATIA 3DEXPERIENCE – Mechanical Designer certification at the level of ASSOCIATE. More than 150 students from various Branch of engineering stream(Both UG & PG) has participated and many of students successfully completed the exam.

-More than 30 students from various branch participated in “ConnectNext National Conference” organised by, La Fondation Dassault Systemes on 17th & 18<sup>th</sup> September 2020. A student from 5th Semester Mechanical Dheeraj R won the THIRD Prize in Inspired Project Idea Contest

-In the year 2021 a joint project with Dassault Systemes involving electrical and mechanical was funded by La foundation on Smart grid development.

- In year 2021 students developed virtual lab exercise involving electrical and mechanical students for industry

- In the year 2022 two projects from La Fondation has received funding for two projects one on water resources and another on fish farming, to which the initial hand holding is done in the PI Lab.

Dassault Systems with BMSCE in the following forums regularly

- Peer Learning Experience groups and Committees
- Swymm Community Forum
- Webinars and seminars in the industries
- Curriculum strengthening through inclusion of lab in curriculum
- Internships for Masters and Undergraduates
- Executive council meetings to handhold institutes
- Training for faculty and Certifications
- Visits to college regularly on guest lectures
- Faculty Visit to the company for technical discussions
- Aakruthi Contests for students
- Regular online interactions with the teams and Professors
- Campus Placements
- Email interactions with students and industry for complete support
- Visit to labs by various teams to help students
- Exhibitions and Technical events

8. Photographs



## Few Testimonials of PI Lab Student Beneficiaries

1. Mr. Siddharth V H (2018 batch) PI Lab Internship  
TAAL Technologies

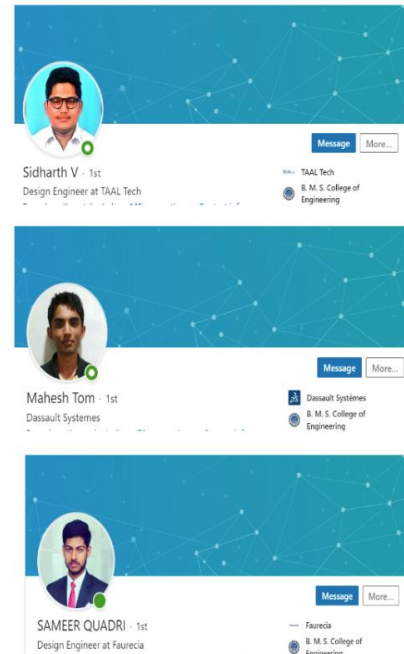
"It helped me firstly during my project in college and later on it helped me in my career in the field of aerospace. I thank BMSCE for providing students software and lab which are futuristic"

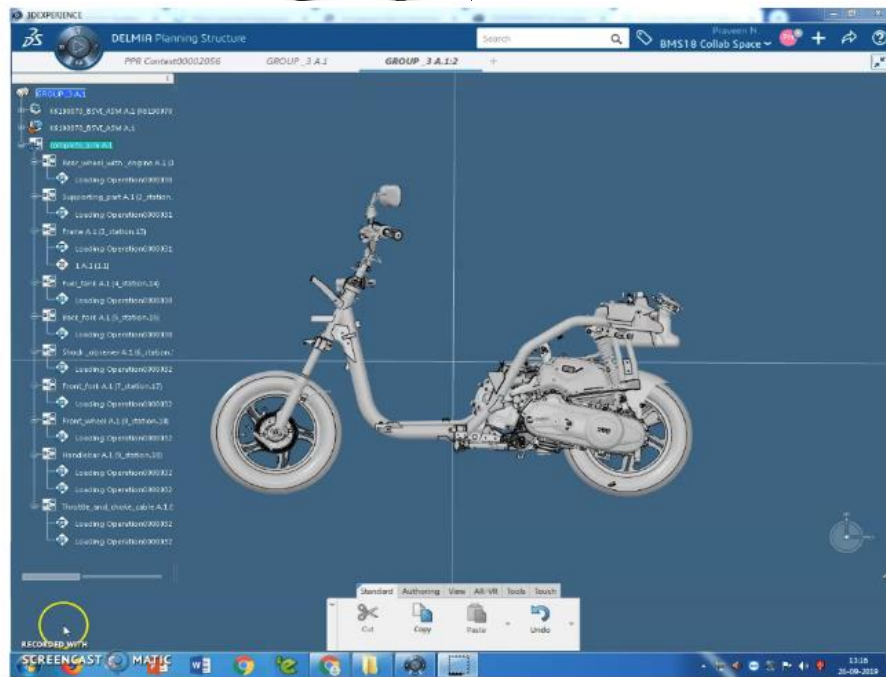
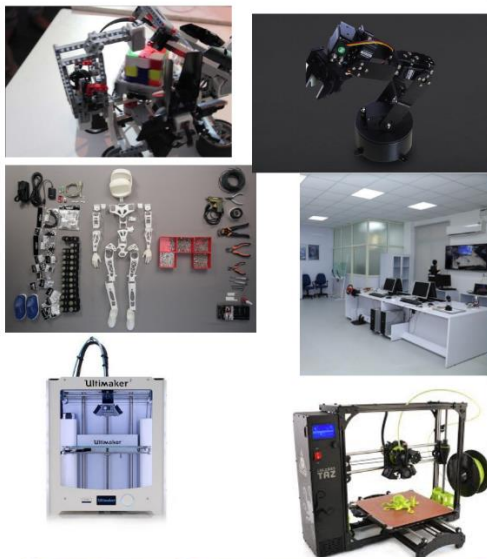
2. Mr. Sameeruddin Q (2018 batch)  
Faurecia India

" I participated in the Internship in the lab and this helped me to secure a designers role in the present company" I thank Dassault Systemes, and Prof. Sreekanth and Dr. RN Ravikumar for this wonderful opportunity provided to me."

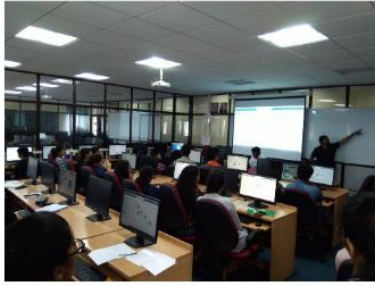
3. Mahesh Tom (2018 batch)  
Dassault Systemes Bangalore

" I used it to develop few parts during my student days which gave me an insight into the working of the 3D experience platform."









Inspired Project Idea Contest

