

MECHATRONICS ENGINEERING: The TOP View Advantage!

Unlike conventional practices of engineering system, Mechatronics is a interdisciplinary and concurrent approach of designing systems integrated from mechanical, electrical, electronics, control and computing domains. An education in this field gives the advantage of looking real world engineered systems from the top, understanding the hand-shakes between their sub-systems and controlling them resulting in products with improved quality.

Academic Programs Offered:

The Department of Mechatronics Engineering was started in the academic year 2005-2006 and has developed to the level of offering the following programs.

- ◆ B.Tech Mechatronics Engineering
- ◆ B.Tech. Mechatronics Engineering with Robotics Specialization
- ◆ M.Tech Mechatronics Engineering
- ◆ Doctoral Program (Ph.D.)

Laboratories:

<u>Academic Laboratories</u>	<u>Research Project Laboratories</u>
<ul style="list-style-type: none">◆ Mechatronics Laboratory◆ Signal Processing and Embedded Control Laboratory◆ Electronic Devices and Circuits Laboratory◆ Sensors and Actuators Laboratory	<ul style="list-style-type: none">◆ Autonomous Systems Laboratory◆ Motion Analysis Laboratory◆ Smart Materials Laboratory◆ Product Development Laboratory

Placement

The multi-disciplinary curriculum enables the students to be eligible for both mechanical and non-mechanical companies apart from Mechatronics Engineering companies. This is a typical advantage of a multi-disciplinary program.

CONTACT

DEPARTMENT OF MECHATRONICS ENGINEERING

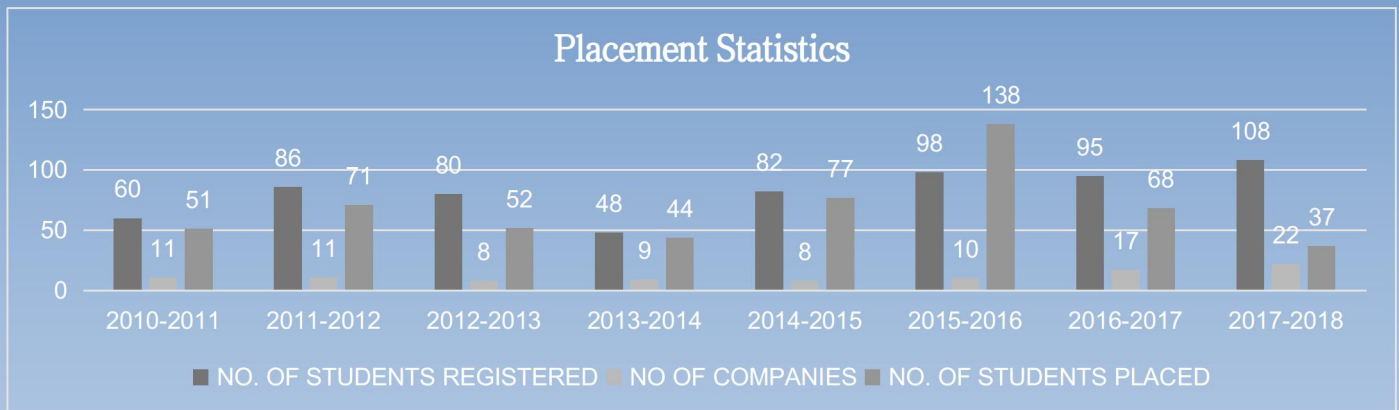
2ND FLOOR, HI-TECH BLOCK, MAIN CAMPUS (ON GST ROAD)

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KATTANKULATHUR, 603203

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Website: www.srmuniv.ac.in/engineering/department-of-mechatronics-engineering/about-the-department

Placement Trend



Our Recruiters



Solar Electric Vehicle from Team ETROS

Unique Strengths of the Department

- ◆ Comprehensive foundation on contributing domains
- ◆ Project based learning
- ◆ Tutorial and computer simulations interleaved lectures
- ◆ Multi-disciplinary faculty members
- ◆ State-of-art laboratory facilities with emphasis on exploring practical intricacies
- ◆ Specialization-emphasized curriculum through structured electives and choice based flexible curriculum
- ◆ Software Implementation based Assignments for Students
- ◆ Special Workshops and Short Term Training Programs targeting Skill Development
- ◆ Technical team sponsorship participation in competitions of international status
- ◆ Graduate level depth in final Year Projects for Under-graduate Students

Trust Areas of Expertise

- ◆ Mechatronics
- ◆ Industrial Automation
- ◆ Manufacturing Systems
- ◆ Fluid Power Systems
- ◆ Robotics and Machine Vision

Key Facilities

- ◆ NI Mobile Robots
- ◆ Siemens PLC and Festo Closed Loop Pneumatic System
- ◆ NI cDAQ Data Acquisition Systems (Analog, Digital, Specialty Signals)
- ◆ Real Time Controller for Software and Hardware – in – loop testing
- ◆ cRIO Real Time Controller and c-series modules for motion control
- ◆ Embedded Vision System & Smart Camera, Lighting systems
- ◆ NI Elvis compatible Quanser trainers for VTOL, ROTPEN
- ◆ Keysight Mixed Signal Oscilloscopes
- ◆ Keysight Test and Measurement Instruments
- ◆ MATLAB, SIMULINK and Labview Software Packages



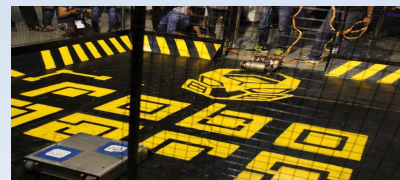
Team Auto Creed's Racing Cart



Team SPARS in United States



Autonomous Surface Vehicle from Team ASV



Phoenix Bot from Team DIRT

Funded Projects

- ◆ Self Balancing Mobile Robot (SE Scheme, SRMIST)
- ◆ Development of Micro Aerial Vehicle (SE Scheme, SRMIST)
- ◆ Spine Testing Simulator (SE Scheme, SRMIST)
- ◆ Mixed Reality Based HMI (SE Scheme, SRMIST)
- ◆ Vision Based Target Tracking Simulator (under evaluation with BRNS)

No. of Patents Filed (as on June 2018) : 4

Title of the patent	Status /Year
A hot wire machining system and method for polymer materials	Filed /2018
Mobile Robot comprising linear actuator fabricated from smart materials	Filed /2018
Design and development of active table	Filing in progress
A robot balancing over a sphere with a high density compact chassis of reduced height	Filing in Progress

Total No. of Research Publications indexed in Scopus Database (as on June 2018): 40

FACULTY PROFILE

Faculty Name	Qualification	Designation	Area of Research
Dr. G. Murali	PhD	Professor & Head	FEA, Smart Materials Automation
Dr. B.K. Vinayagam	PhD	Professor	Flexible Manufacturing Systems
Dr. R. Senthilnathan	PhD	Associate Professor (G II)	Computer vision & Robotics
Dr. T. Muthuramalingam	PhD	Associate Professor (G II)	Micro-machining & Automation
Dr. M. Santhosh Rani	PhD	Assistant Professor (S.G.)	Hybrid Energy systems & Hybrid Vehicles
Mr. Sanjay Kumar Kar	M.E.	Assistant Professor (Sr.G.)	Robotics Industrial Automation Renewable Engineering
Mrs. T. S. Rajalakshmi	M.E.	Assistant Professor (Sr.G.)	Control, Automation, signal processing
Mrs. R. Gangadevi	M.E. (PhD)	Assistant Professor (Sr.G.)	Hybrid energy system, Nano-fluids, Robotics
Mr. K. Sivanathan	M.E. (PhD)	Assistant Professor (Sr.G.)	Autonomous Systems
Mrs.P.R. Shobana Swarna Ratna	M.E.	Assistant Professor (Sr.G.)	Bio-Mechatronics, Additive manufacture
Ms. D. Gayathiri	M.E.	Assistant Professor (Sr.G.)	Smart Material, Bio Mechanics
Mr. M. Chandrasekaran	M.E. (PhD)	Assistant Professor (O.G.)	Machine tool condition monitoring, Additive manufacturing
Mrs. V. Krithika	M.E. (PhD)	Assistant Professor (O.G.)	Hybrid Electric Vehicle, Hybrid energy storage system
Mr. S. Vasanth	M.E. (PhD)	Assistant Professor (O.G.)	Hybrid vehicle, Renewable Engineering, Laser Machining
Mr. J.Thiyagarajan	M.E.	Assistant Professor (O.G.)	Automotive Electronics, Mobile Robotics
Mr. A. Lakshmi Srinivas	M.E.	Assistant Professor (O.G.)	Mobile Robotics, Automation
Dr. S. Senthil Raja	PhD	Assistant Professor (O.G.)	Smart Actuators
Mr. M. Thirugnanam	M.E.	Assistant Professor (O.G.)	Machine design, Nano-fluids, Machining process automation
Mr. A.Josin Hippolitus	M.E. (PhD)	Assistant Professor (O.G.)	Deep learning & Robotics
Ms. D. Sasikala	M.E.	Assistant Professor (O.G.)	Networks,VLSI, Signal Processing
Mrs G. Madhumitha	M.E.	Assistant Professor (O.G.)	Robotics, Control & Automation
Mr. G. Balakumaran	M.E.	Assistant Professor (O.G.)	Tool condition Monitoring
Mr. J. Arivarasan	M.E. (PhD)	Assistant Professor (O.G.)	High temperature materials
Mr. S. Vigneshwaran	M.E.	Assistant Professor (O.G.)	Automation, Medical Mechatronics
Mr. S. M. Vignesh	M.E. (PhD)	Assistant Professor (O.G.)	Machine & Metrology
Mr. N. Pradeep	M.E.	Assistant Professor (O.G.)	Smart structures
Mr. K. Saravanan	M.E.	Assistant Professor (O.G.)	Industrial robotics
Mrs. R. Srividhya	M.E.	Assistant Professor (O.G.)	Automation
Mr.B. Goutham Mareeswaran	M.E.	Assistant Professor (O.G.)	Soft Robotics, Industrial IOT Control & Automation
Dr. M. Mohamed Rabik	PhD	Assistant Professor (O.G.)	Vehicular Networks, control
Mrs. Nandhini.M	M.E.	Assistant Professor (O.G.)	Image processing & soft computing
Mr. R. Ranjith Pillai	M.E. (PhD)	Assistant Professor (O.G.)	Robotics control
Ms. Cross T.Asha Wise	M.E. (PhD)	Assistant Professor (O.G.)	Digital circuits using organic field effect prosisection
Mr.Natraj Athreya	M.E.	Assistant Professor (O.G.)	Bio MEMS, Micro technique, Automation
Mr.K.Sridharan	M.E.	Assistant Professor (O.G.)	Phase Locked Loop, Hybrid Electrical Vehicle