

KAMARAJ

COLLEGE OF ENGINEERING & TECHNOLOGY



(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)

S.P.G.Chidambara Nadar - C.Nagammal Campus

S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

DEPARTMENT OF MECHATRONICS ENGINEERING

MECHATRONZ



DEPARTMENT OF MECHATRONICS ENGINEERING

VISION

To make the department of mechatronics engineering unique in the field of research and development towards industrial automation & robotics.

MISSION

To impart highly innovative and technical knowledge in mechatronics to the urban and unreachable rural students through “total quality education”.

PROGRAMME EDUCATIONAL OBJECTIVES

1. To provide basic knowledge in physics, chemistry, mathematics and necessary foundation in various concepts of mechatronics.
2. To impart training to the students to solve the real time problems related to the field of mechatronics and allied areas faced by the industry and society.
3. To provide an academic environment for the students to develop team spirit, leadership qualities, communication skills and soft skills exhibit professional responsibility with ethical code of conduct.

PROGRAM SPECIFIC OUTCOMES (PSO)

1. To understand and apply the recent technological developments in Engineering to develop products & software to cater the Societal & Industrial needs.
2. To develop solutions for fast learning and successful retention for the entire spectrum of automation technology.

PROGRAM OUTCOMES

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis:** Identify, formulate, research literature, and analyze electrical and electronics engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for problems in the field of electrical and electronics engineering and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modeling to complex engineering activities, with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the electrical and electronics engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice

9. **Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **Communication:** Communicate effectively on electrical and electronics engineering activities with the engineering community and with the society, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

ABOUT THE DEPARTMENT OF MECHATRONICS ENGINEERING

Our college with a vision to promote quality technical education to the rural folks, kicked off in the year 1998 with four branches. Knowing the importance of core branches, our dream to start Mechatronics branch comes true during the academic year 2014-2015. Mechatronics Engineering is a well-recognized course gaining importance in the industrial world. The unique features of the programme when compared with other B.E. programmes are the students are

1. Well equipped with computer skills
2. Trained in operating micro-controllers and programmable logical controllers.
3. Practiced in handling industrial sensors, hydraulic, pneumatic and electric drives.
4. Experienced in design of mechanical structure and learning of mechanisms in Manufacturing process.

This programme gives an exposure to bio-mechatronics, which integrates mechanical parts with a human being. The students of Mechatronics Engineering will do their project work in leading industries, which will help them to apply their theoretical knowledge to formulate and solve real life problems. This will be base for handling more challenging projects in an innovative application oriented projects from real life situations. The project work enables students to develop decision-making skills and to adapt to various uncertain situations in teams. Mechatronics Engineering helps the students to be placed in factories related to Robotics & Automation, Smart sensors & Actuators, MEMS & NEMS, Motion control systems, Computational intelligence, Real time embedded systems, Bio-mechatronics and Medical robotics.

ABOUT THE MECHATRONZ'22

This Newsletter brings the outline of our Department activities of the academic year 2021- 2022.

DEPARTMENT OF MECHATRONICS ENGINEERING

“Integration of Mechanics, Electronics and Intelligent Digital Controlling”

“The Sensitivity of a Surgeon, The precision of a Watchmaker, The skill of an Artist”

TOP 10 REASONS TO GET A MECHATRONICS DEGREE

- Multidisciplinary skills.
- High-impact jobs.
- Hands-on labs.
- Resources and equipment.
- Internships.
- Insider insights.
- Applicable skills.
- High standards.
- Good paying jobs + high starting salaries.
- A resume that stands out.

LABORATORY DETAILS

- Robotics Lab

- Microprocessor Lab
- Mechatronics Lab
- CAD Lab
- Industrial Automation Lab

SALIENT FEATURES

- KAMARAJ - SMC Pneumatics Centre for excellence
- FPSI Society
- ISTE Student Chapter
- Association of Mechatronics Engineering

Department of Mechatronics Engineering

Faculty Profile



Dr. K. KANNAN
Professor & Head

Sl. No	Name of the Faculty with Designation	Qualification	Specialization
1.	Dr. K. Kannan, Professor & Head	M.E., Ph.D.,	Digital Image Processing, Machine Vision, Embedded System and Robotics
2.	Dr. S. Rajesh Babu Assistant Professor	M.E., Ph.D.,	Power Quality, Renewable Energy Systems, Machine Learning.
3.	Dr. G. Sakthivel, Assistant Professor	M.E., Ph. D.,	Renewable Energy, Power Electronics Drives and Electrical Machine Drives
4.	Mr. A. Arul Kumar, Assistant Professor	M.E., (Ph. D)	Renewable Energy Source, Power Electronics Drives and Power Quality
5.	Mr. P. Balasundar, Assistant Professor	M.E., (Ph. D)	Manufacturing, Composite Material, Tribology and Powder Metallurgy
6.	Mr. S. David Blessley, Assistant Professor	M.E., (Ph. D)	Surface Coating, Material Characterization, Finite Element Method and Manufacturing
7.	Mr. S. Wesley Moses Samdoss, Assistant Professor	M.E., (Ph. D)	Wireless communication, Internet of Things, Artificial Intelligence, Machine Learning and Deep Learning
8.	Mr. A. Ganesan, Assistant Professor	M.E.,	Thermodynamics, Heat Transfer, Fluid Mechanics Refrigeration and Air Conditioning

Faculty Achievements

Copyrights

1. Embedded System Design Laboratory Manual by 1. Mr.S.Wesley Moses Samdoss AP/MTRE, 2. Dr. K.Kannan Prof/MTRE, 3. Dr. S. Rajeshbabu AP/MTRE.
2. Manufacturing Technology and sensors lab by 1. S.David Blessley AP/MTRE, 2.A.Arulkumar AP/MTRE, 3. Dr. K.Kannan Prof/MTRE 4.Mr.S.Wesley Moses Samdoss AP/MTRE.

Patents

1. Oil Recovery System from Underweight Pouches by Dr.K.Kannan and Dr.G.Sakthivel.

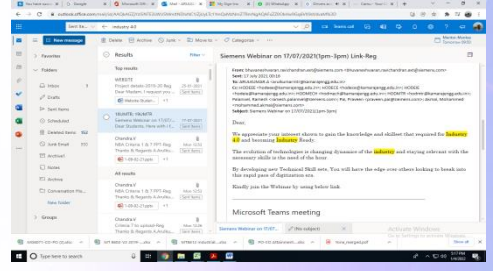

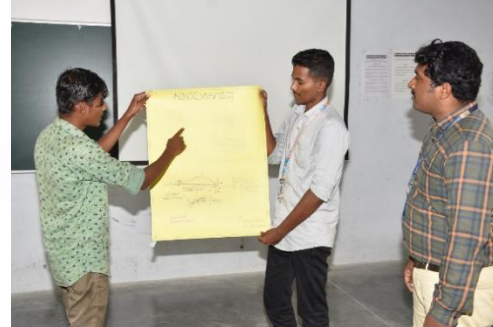

Faculty Publications

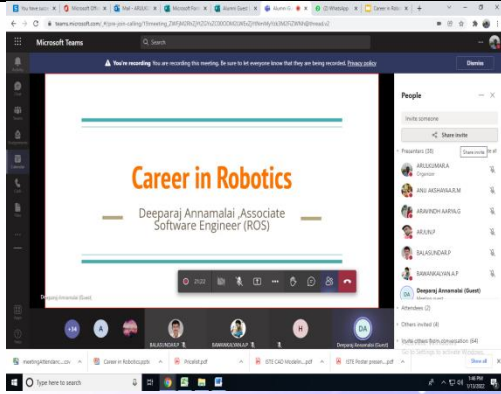

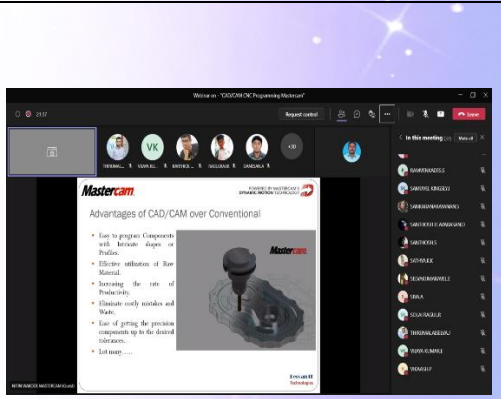
1. K. Kannan, Enhancement of Proton Density Weighted Magnetic Resonance Images using Singular Value Decomposition in Wavelet Domain, Research & Reviews: Journal of Embedded System & Applications, Volume 10, Issue 2, 2022.
2. K. Kannan, Application of Partial Differential Equations in Multi Focused Image Fusion, International Journal of Advanced Networking and Applications, Volume: 14 Issue: 01 Pages: 5266-5270(2022) ISSN: 0975-0290.

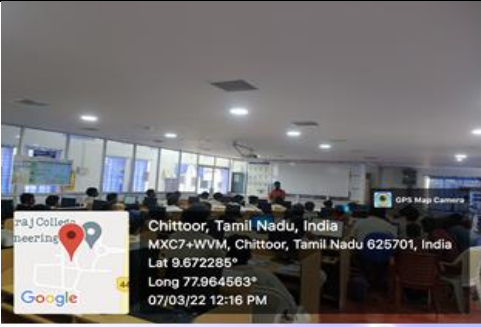
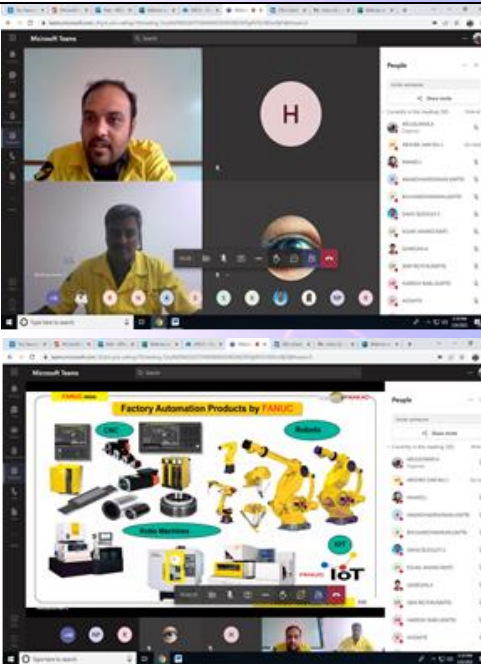

NPTEL courses

1. S. David Blessley, AP/MTRE completed an NPTEL course (8 weeks) on “Joining Technologies for metals” under Elite category during July to September 2022.

Association Activities

S.No	Date	Event details	Resource Person/Jury/	Photos
1.	17-07-2021	Siemens Webinar on Industry 4.0	Resource Person: Er.Mohamed Akmal, Manager, Siemens Ltd, Coimbatore.	
2.	24-12-2021	One day workshop on Basic Electronics	Dr. K. Kannan, Mr. G. Sakthivel, Mr. A. Arul Kumar, Mr. S. Wesley Moses Samdoss	
3.	27-12-2021	ISTE Competition-Poster Presentation	Dr. S. Rajeshbabu, AP/MTRE	
4.	27-12-2021	ISTE Competition - CAD Modeling	Jury Person: Mr. David Blessley, AP/MTRE A.Ganesan,AP/MTR E	

5.	13-01-2022	Alumni Guest Lecture on Career in Robotics	<p>Resource Person :</p> <p>C.Deeparaj Annamalai,</p> <p>Associate Software Engineer (ROS),</p> <p>Katomaran Technolgies Pvt.Ltd</p> <p>SF No.348-1A3, Sri Lakshmi Nagar II Thanneer Pandhal Road,</p> <p>Peelamedu, Coimbatore, Tamil Nadu 641004</p>	
6.	24-02-2022	Alumni Guest Lecture on "GATE Preparation"	<p>Mr.R.Rakesh,PG Student(Industrial Automation) (Alumnus 2015-2019 Batch),National Institute of Technology, Trichy.</p>	
7.	28-02-2022	Webinar on "CAD/CAM CNC Programming MasterCam"	<p>Mr.Nitin Wakode, Director, Decaan IT Technologies,Pune.</p>	

8.	07-03-2022	Alumni Guest Lecture Series on "Placement Opportunities through LinkedIn"	Er. P.Ganjendran, (Alumnus batch 2015-2019) Quality Lead, Ashok Leyland, Chennai.	
9.	09-03-2022	Webinar on "Recent Trends in Robotics"	R.Prasanna, Assistnat Manager, Fanuc India Pvt Ltd, Bangalore.	
10.	28-03-2022	Guest Lecture on "Applications of Pneumatics in industries"	Er.K.Mandar Trymabak Purnaik, M.E., Assistant Manager, SMC Corporation (India) Pvt Ltd., Chennai.	

11.	11-04-2022	Guest Lecture on "IoT"	Mr.S.Karpagalingam , Data Engineering Analyst,Optum India Pvt Ltd	
12.	23-03-2022	One day workshop on "Industrial Automation using Pneumatics & PLC"	Dr. K. Kannan, Mr. G. Sakthivel, Mr. A. Arul Kumar, Mr.P.Balasundar	
13.	18-03-2022	One day workshop on "Embedded Systems & Robotics using Firebird Platform"	Dr. K. Kannan, Mr.P.Aravind,AP/ECE, Mrs.C.Nagavani,AP/ECE	
14.	22-04-2022	Guest Lecture on "Machine Learning"	Mrs.Gayathri Prakash, Technical Trainer, Networks Systems, Madurai.	

<p>15.</p>	<p>27-04-2022</p>	<p>ISTE Competition on "Technical Quiz"</p>	<p>-</p>	
<p>16.</p>	<p>30-04-2022</p>	<p>Guest Lecture on "Control and Directional Valves"</p>	<p>Er. S. Sasikumar Deputy Manager & Training & Marketing, SMC Corporation (India) Private Limited, Chengalpet, Tamil Nadu.</p>	

Department of Mechatronics Engineering

Attended FDPs/STTPs/Fellowship Programmes

S.No.	Name Of The Faculty	Name Of The Programme	Duration	Organizing Institution	Participated /Attended
1	Mr S.David Blessley	Industrial IoT and Robotics	22-11-2021 to 27-11-2021	National Institute of Technical Teachers Training and Research, Chandigarh	Attended
2	Mr. S.Wesley Moses Samdoss	RPA Design and Development v3.0 - Educator Readiness program	22-11-2021 to 26-11-2021	UiPath Academic Alliance	Attended
3	Mr S.David Blessley	Fabrication, Characterization and Strengthening Mechanism of Composites	13.12.2021 to 18.12.2021	Academy of Maritime Education and Training (AMET), Chennai	Attended
4	Mr P. Balasundar	Fabrication, Characterization and Strengthening Mechanism of Composites	13.12.2021 to 18.12.2021	Academy of Maritime Education and Training (AMET), Chennai	Attended
5	Mr P. Balasundar	Advancement of Pneumatics and Hydraulics	21.12.2021 - 27.12.2021	P.A.C. Ramasamy Raja Polytechnic College, Rajapalayam	Attended

6	Dr.K. Kannan	ATOS Syntel & ICT Academy's "Digital Teaching Techniques"	27.12.2021 - 31.12.2021	ICT Academy	Participated
7	Mr S.David Blessley	Six days Faculty Development Program on Thermal Engineering	03.01.2022 - 08.01.2022	FX Engineering College	Attended
8	Mr A.Ganesan	Six days Faculty Development Program on Thermal Engineering	03.01.2022 - 08.01.2022	FX Engineering College	Attended
9	Mr A.Ganesan	"Fabrication, Characterization and strengthening Mechanism of Composites"	13.01.2021 to 18.01.2021	AMET University, Chennai.	Attended
10	Mr P. Balasundar	Online Elementary FDP on "Advancement in Manufacturing Technology"	17.01.2022 - 21.01.2022	Guru Ghasidhas Vishwa Vidhyalaya, Bilaspur, Chhattisgarh	Attended
11	Mr A.Ganesan	Virtual Faculty Development Program on "Trendy Manufacturing with Generative Design using Fusion 360"	24.01.2022 to 29.01.2022	ICT Academy, Chennai.	Attended
12	Mr S.Wesley Moses Samdoss	Hands-on Introduction to Artificial Intelligence and Machine Learning	24-01-2022 to 28-01- 2022	PALS	Attended

13	Mr P. Balasundar	IP Awareness/Training	31.01.2022	Intellectual Property Office, India	Attended
14	Mr S.David Blessley	Six day Induction/Refresher program on “Modern Technologies for Teaching”	31.01.2022 - 05.02.2022	PSR Engineering College, Sivakasi	Attended
15	Mr P. Balasundar	Online Elementary FDP on “Management of Hydrocarbon Exploration and Production waste”	07.02.2022 - 11.02.2022	Dibrugarh University, Dibrugarh, Assam	Attended
16	Mr S.Wesley Moses Samdoss	Machine Learning with Jetson Nano	07-02-2022 to 11-02-2022	Kamaraj College of Engineering and Technology	Attended
17	Mr P. Balasundar	“What, Why and How of Patents”	14.02.2022	VVV College for Women, Virudhunagar	Attended
18	Mr S.David Blessley	“What, Why and How of Patents”	14.02.2022	VVV College for Women	Attended
19	Mr A.Ganesan	“What, Why and How of Patents”	14.02.2022	VVV College for Women	Attended
20	Mr P. Balasundar	Online Elementary FDP on “Energy Engineering”	21.02.2022 - 25.02.2022	Defence Institute of Advanced Technology, Pune, Maharashtra	Attended

21	Dr. S. Rajeshbabu	Control System and Sensor Technology	28/02/2022 to 04/03/2022	National Institute of Technical Teachers' Training and Research, Kolkata	Attended
22	Mr S.David Blessley	Water -A precious natural resource	22.03.2022 - 26.03.2022	Bangalore Institute of Technology, Bengaluru	Attended
23	Dr. G.Sakthivel	Advances in Renewable Energy and Electric Vehicles	26-03-22 to 30-03-22	Department of EEE, NIT Silchar	Attended

Department of Mechatronics Engineering

Higher Studies Details

S. No.	Name of the Student	Degree	Name of the Institution
1	Prince Yona R L C	M.Sc in Rail, Transport and Logistics	German Institute of Science and Technology, Singapore.
2	RAHINI G	M.E - Industrial Safety Engineering	Mepco Schlenk Engineering College, Sivakasi.
3	ROHINI G	M.E - Industrial Safety Engineering	Mepco Schlenk Engineering College, Sivakasi.

Department of Mechatronics Engineering

Placement Details

S.No.	Roll Number	Student Name	Company Name
1	18UMTR002	ARULMUTHURAM.H	Amigos Diecasting, Coimbatore.
2	18UMTR003	KARTHICKRAJ.M	Cetas IT
3	18UMTR004	DHANASEKARAN.V	TVS Upasana Limited, Chennai.
4	18UMTR005	SIVAKUMAR.T	Entrepreneur
5	18UMTR006	ROHIND.A.K	Marlion
6	18UMTR007	RAMESH PANDIAN.A	APPTIVO
7	18UMTR008	SANTHOSH.P	TVS Upasana Limited, Chennai.
8	18UMTR009	MARIKANNAN.A	TATA ELXSI
9	18UMTR010	TAMILSELVAN.V	Extramarks
10	18UMTR013	SYLESH KARTHIK.M	StepsIn Technologies, Coimbatore
11	18UMTR014	MOHAMMED AFRID.S	TVS Upasana Limited, Chennai.
12	18UMTR015	THANGA MANIKANDAN.M	JMI
13	18UMTR019	ABISHEK SAM RAJ.J	WIPRO
14	18UMTR020	HARSHINI.T	Accenture
15	18UMTR022	SARAVANAKUMAR.P	Chanisys

16	18UMTR023	ANAND.L	TATA ELXSI
17	18UMTR025	SIVARAJ.R	MyDBOPS
18	18UMTR026	SIVA.P	APPTIVO
19	18UMTR028	CHANDRU.M	Cognizant technology services (CTS)
20	18UMTR030	DIYANESH.D	TATA ELXSI
21	18UMTR032	VISHNU KUMAR.P	Extramarks
22	18UMTR033	JOY SEBASTIN.S	StepsIn Technologies, Coimbatore
23	18UMTR034	VISHNU PRASATH.M.S	APPTIVO

Entrepreneur Details

S. No.	Name of the Student	Name of the Company
1	SIVAKUMAR T	Cyphers tech solutions, Madurai.
2	DHINESH KUMR. M	
3	GOKUL	M in 1 Automation, Madurai.
4	SARAVANAN.R	
5	JAYA SURYA.G	
6	DIYANESH.D	

Department of Mechatronics Engineering

Student's Internship Details

2019-2023 Batch

S. No.	Roll No.	Name	Duration	Industry Details
1	19UMTR001	SANTHOSH ELAVARASAN.D	28/06/2022 to 12/07/2022	Silver Chemicals, Madurai
2	19UMTR002	SABESH NOVIN.S	27/06/2022 to 11/07/2022	Cyphers Tech Solutions, Madurai.
3	19UMTR003	ARJUN.P	27/06/2022 to 11/07/2022	R. R Industries, Virudhunagar.
4	19UMTR004	SELVAKUMARAVEL.E	27/06/2022 to 10/07/2022	Prime Electrical Solutions, Madurai.
5	19UMTR005	MOHAMMED IBRAHIM.S	27/06/2022 to 10/07/2022	Prime Electrical Solutions, Madurai.
6	19UMTR006	THIRUMALAISELVA.J	25/06/2022 to 12/07/2022	Doowon Electronics India Pvt.Ltd., Kancheepuram.
7	19UMTR007	KRISHNAPRAKASH.M	27/06/2022 to 11/07/2022	Siva Maruti, Madurai.
8	19UMTR008	SANKARANARAYANAN.S	27/06/2022 to 11/07/2022	Cyphers Tech Solutions, Madurai.
9	19UMTR009	SATHYA.K.K	27/06/2022 to 13/07/2022	ATC Tires Private Limited, Tirunelveli.

10	19UMTR010	ANU AKSHAYAA.R.M	14/04/2022 to 02/05/2022	A.E. Engineering, Madurai.
11	19UMTR011	HARI RAJ.P.R	27/06/2022 to 11/07/2022	Siva Maruti, Madurai.
12	19UMTR012	GOWTHAM.G	27/06/2022 to 13/07/2022	ATC Tires Private Limited, Tirunelveli.
13	19UMTR013	ARAVIND.N	27/06/2022 to 11/07/2022	Siva Maruti, Madurai.
14	19UMTR014	SIVA.A	28/06/2022 to 12/07/2022	Silver Chemicals, Madurai
15	19UMTR015	KARTHICK NISSANTH.N	27/06/2022 to 11/07/2022	Siva Maruti, Madurai.
16	19UMTR016	VIKAASH.P	24/06/2022 to 11/07/2022	Eminent Technology Solutions, Madurai
17	19UMTR017	VIJAYA KUMAR.E	28/06/2022 to 12/07/2022	Silver Chemicals, Madurai
18	19UMTR018	BASKARA PANDI.P	25/06/2022 to 12/07/2022	Selva Ganapathy Lathe and Welding Works, Madurai

19	19UMTR019	HARIHARAN.G	27/06/2022 to 12/07/2022	Sri Venkateshwara Boards, Virudhunagar
20	19UMTR020	RAGULRAJ.K	25/06/2022 to 2/07/2022	Manna Foods Private Limited, Madurai.
21	19UMTR021	RAMA CHANDRU.T	27/06/2022 to 13/07/2022	ATC Tires Private Limited, Tirunelveli.
22	19UMTR023	PRASANNA.M	27/06/2022 to 11/07/2022	Japastin Sagayam Engineering Works, Virudhunagar.
23	19UMTR024	MOHAMED NAZEER ANSARI.H	27/06/2022 to 12/07/2022	Sri Venkateshwara Boards, Virudhunagar
24	19UMTR026	BAWANKALYAN.A.P	27/06/2022 to 13/07/2022	ATC Tires Private Limited, Tirunelveli.
25	19UMTR027	NAVEENKUMAR.V	28/06/2022 to 12/07/2022	Silver Chemicals, Madurai
26	19UMTR028	SANTHOSH.S	25/06/2022 to 12/07/2022	Doowon Electronics India Pvt. Ltd., Kancheepuram.
27	19UMTR029	DEVADHARSHINI.D	14/04/2022 to 02/05/2022	A.E. Engineering, Madurai.

28	19UMTR030	MANOJ PRABHU.M	14/04/2022 to 02/05/2022	A.E. Engineering, Madurai.
29	19UMTR031	PONRAM.R	28/06/2022 to 12/07/2022	SVS Foods, Madurai.
30	19UMTR032	NARANDRA KUMAR.R	27/06/2022 to 16/07/2022	PKS Engineering, Madurai
31	19UMTR033	JOTHI VENKATESH.K	27/06/2022 to 11/07/2022	Cyphers Tech Solutions, Madurai.
32	19UMTR034	SANJEEV.K	27/06/2022 to 13/07/2022	ATC Tires Private Limited, Tirunelveli.
33	19UMTR035	SOLAI RAGUL.R	28/06/2022 to 12/07/2022	Silver Chemicals, Madurai
34	19UMTR036	RAMVENKADESH.S	27/06/2022 to 13/07/2022	ATC Tires Private Limited, Tirunelveli.
35	19UMTR037	SAMUVELKINGSLY.T	14/04/2022 to 02/05/2022	A.E. Engineering, Madurai.
36	19UMTR038	MOHAMED ALTHAF.A	25/06/2022 to 12/07/2022	Manna Foods Private Limited, Madurai.

37	19UMTR039	ANANTH.R	27/06/2022 to 11/07/2022	Siva Maruti, Madurai.
38	19UMTR041	NALANRAJ SHANMUGAM.S	25/06/2022 to 12/07/2022	Manna Foods Private Limited, Madurai.
39	18UMTR036	PRITHIVIRAJAN.M	27/06/2022 to 11/07/2022	R. R Industries, Virudhunagar.
40	18UMTR037	RAJAPRABHU.T	16/05/2022 to	ZOHO Corp, Chennai.

2020-2024 Batch

1	20UMT001	R.NAVEEN	27/06/2022 to 12/07/2022	Vilvam offset Printers, Sivakasi.
2	20UMT002	G.RAHUL	28/06/2022 to 12/07/2022	Star Converters, Vilupuram
3	20UMT003	R.GEMRELTON	28/06/2022 to 12/07/2022	Hi-Tech Services, Virudhunagar.
4	20UMT004	C.VEERANAN	28/06/2022 to 12/07/2022	Star Converters, Vilupuram

5	20UMT005	S.KARTHIKEYAN	28/06/2022 to 12/07/2022	Star Converters, Vilupuram
6	20UMT006	K.SAKTHIBALA	28/06/2022 to 12/07/2022	Gem AC R Service, Virudhunagar
7	20UMT007	R.RAMANAVEL	28/06/2022 to 12/07/2022	Star Converters, Vilupuram
8	20UMT008	M.E.NAVEENPRAK ASH	28/06/2022 to 12/07/2022	Jahnvi Motor(P) Ltd.,Madurai.
9	20UMT009	V.ANANDAKRISH NAN	28/06/2022 to 12/07/2022	Gem AC R Service, Virudhunagar
10	20UMT010	S.BHUVANESHW RAN	28/06/2022 to 12/07/2022	Star Converters, Vilupuram
11	20UMT011	S.SABARIVASAN	28/06/2022 to 12/07/2022	Gem AC R Service, Virudhunagar
12	20UMT012	R.MANIKANDAN	28/06/2022 to 12/07/2022	Gem AC R Service, Virudhunagar
13	20UMT013	K.HARRISHBABU	26/06/2022 to 10/07/2022	Sunshiv Electronic Solutions, Coimbatore.

14	20UMT014	P.KRISHNA KUMAR	28/06/2022 to 12/07/2022	Gem AC R Service, Virudhunagar
15	20UMT015	V.HARISH RAMACHANDRAN	28/06/2022 to 12/07/2022	Star Converters, Vilupuram
16	20UMT016	R.ESAKKI ANAND	28/06/2022 to 12/07/2022	Gem AC R Service, Virudhunagar

Student's In-plant training Details

S. No.	Roll No.	Name	Duration	Industry Details
1.	19UMTR022	MOHAMED ANAS.S	25/06/2022 to 04/07/2022	Indfurr Superheat Furnaces, Chennai.

Department of Mechatronics Engineering

STUDENT'S ARTICLES



AWS ROBOMAKER

Robots perform increasingly complex tasks in our houses, warehouses, and even hospitals. But to work effectively and safely in the real world, robots need sophisticated software. Such software requires robust, repetitive, and scaled testing and training to eliminate code errors and ensure safety.

Even so, testing robotics applications and training machine-learning models present their own set of challenges.

Real-world testing is expensive, time-consuming, and difficult to scale. That's why computer simulation is an essential tool for developers to build and test intelligent robotics applications.

Cloud-Based Simulation :

AWS RoboMaker provides a cloud-based simulation service that makes it faster and easier than ever to build and test robotics applications.

AWS RoboMaker makes simulation affordable and accessible by providing the tools developers need to test and iterate code in virtual environments. That way, you can focus on your core mission: building better robots.

Benefits of simulation :



Reduce the risk and cost of testing in the real world with 3-dimensional virtual environments, or “simulation worlds”.



Run hundreds of varied tests simultaneously to accelerate testing and increase testing coverage.



Automate testing into a DevOps workflow to find and fix bugs earlier.

Hurdles to using local-computer simulation :



Building 3D simulation worlds is expensive, time-consuming, and requires specialized skills .



Sizing, procuring, deploying, managing, troubleshooting, and scaling server infrastructure to run simulations is expensive.

Benefits of RoboMaker Simulation:



Cost-effectively run, scale, and automate simulation



Improve testing without additional development resources



Run hundreds more simulations per day than local-computer simulation



No infrastructure to buy or manage



J. THIRUMALAI SELVA.

IV-MECHATRONICS ENGINEERING

ALL MEN ARE NOT CREATED EQUAL

There is a popular phrase in this world that we all came across at least once in our life, which is “**ALL MEN ARE CREATED EQUAL**”, but it is nothing but a beautiful lie according to me. This phrase helped a lot of people to feel better about themselves, but in the end its nothing the bitter truth is “**ALL MEN ARE NOT CREATED EQUAL**”. We may have a lot of things in common, but the way we live our lives will be different, the way we handle tough situations and how we decide during hard times may have their differences. Even though we are not superior or inferior to others, we all have our own strengths and weaknesses. We are like pieces in a puzzle no two are the same, there will be similar pieces, but there will not be a same piece, just like in a puzzle, similar pieces will complete you, and dissimilar pieces will go away from you after some time, and just like a puzzle, in life a similar person will complete you and a dissimilar person will go away from you no matter what you do.. Just like the phrase “Life is a drama stage, we are the artists and we all have our own roles to play”, what I’m trying to say is “This world is like one big jigsaw puzzle and we are the pieces of it, No one is supposed to fill others place, You can only fill your place, and when you do everything will be alright”. Every single one of us is unique and each and every one of us will have our matching piece, just like our friends match with us. When you are in a tough situation know this that “**YOU ARE UNIQUE**” and there will never be another you, because all of us are not created equally, we are created to be unique we have our own specialties, and every single one of us is special. So hang in there and always know this **YOU ARE SPECIAL**.

Peace out.












By





Manoj prabhu .M



DISTRIBUTION OF ROS 1:

DISTRIBUTION	RELEASE DATE	POSTER	TUTURTLE IN TUTORIAL	EOL DATE
ROS NOETIC NINJEMYS	MAY 23 RD , 2020			MAY, 2025
ROS MELODIC MORENIA	MAY 23 RD , 2018			MAY, 2023 (BIONIC EOL)
ROS LUNAR LOGGERHEAD	MAY 23, 2017			MAY, 2019
ROS KINETIC KAME	MAY 23 RD , 2016			APRIL, 2021 (XENIAL EOL)
ROS JADE TURTLE	MAY 23 RD , 2015			MAY, 2017

ROS INDIGO IGLOO	JULY 22 ND ,2014			APRIL,2019 (TRUSTY EOL)
ROS HYDRO MEDUSA	SEPTEMBER 4 TH ,2013			MAY,2015
ROS GROOVY GALAPAGOS	DECEMBER 31, 2012			JULY,2014
ROS FUERTE TURTLE	APRIL 23,2012			----
ROS ELECTRIC EMYS	AUGUST 30,2011			----
ROS DIAMONDBACK	MARCH 2,2011			----

ROS BOX TURTLE	MARCH 2, 2010	 Box Turtle		----
ROS C TURTLE	AUGUST 2,2010			----

DISTRIBUTION IN ROS 2 :

DISTRIBUTION	RELEASE DATE	LOGO	EOL DATE
HUMBLE HAWKSBILL	MAY 23,2022		MAY 2027
GALACTIC GEOCHLONE	MAY 23,2021		NOVEMBER 2022

<p>FOXY FITZROY</p>	<p>JUNE 5,2020</p>		<p>MAY 2023</p>
<p>ELOQUENT ELUSOR</p>	<p>NOVEMBER 22, 2019</p>		<p>NOVEMBER 2020</p>
<p>DASHING DIADEMATA</p>	<p>MAY 31,2019</p>		<p>MAY 2021</p>
<p>CRYSTAL CLEMMYS</p>	<p>DECEMBER 14,2018</p>		<p>DECEMBER 2019</p>

BOUNCY BOLSON	JULY 2,2018		JULY 2019
ARDENT APALONE	DECEMBER 8 , 2017		DECEMBER 2018
BETA 3	SEPTEMBER 13,2017		DECEMBER 2017
BETA 2	JULY 5,2017		SEPTEMBER 2017
BETA 1	DECEMBER 19,2016		JULY 2017
ALPHA 1- ALPHA 8	AUGUST 31,2015		DECEMBER 2016

Sankaranarayanan S

Final Year Student

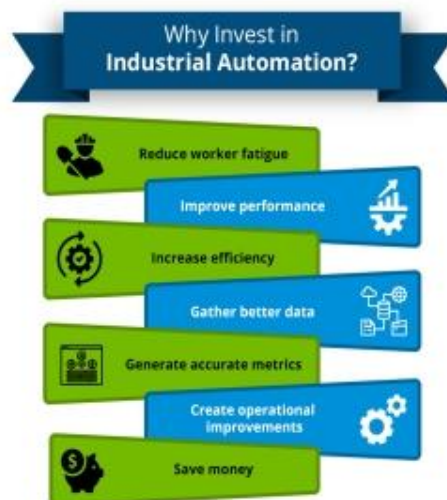
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INDUSTRIAL AUTOMATION & ITS NEED

Industrial Automation is the set of technologies that concern with use of different system like mechanical, electronics and computer-based system in the operation and control of production. The demand for the products increases as the population increases. The traditional method of production lags in operation control and speed of production. This can be overcome with the help of Industrial Automation.

The main advantages of industrial automation include higher production rates and increased productivity, more efficient use of materials, better product quality, improved safety, shorter workweeks for labor, and reduced factory lead times.

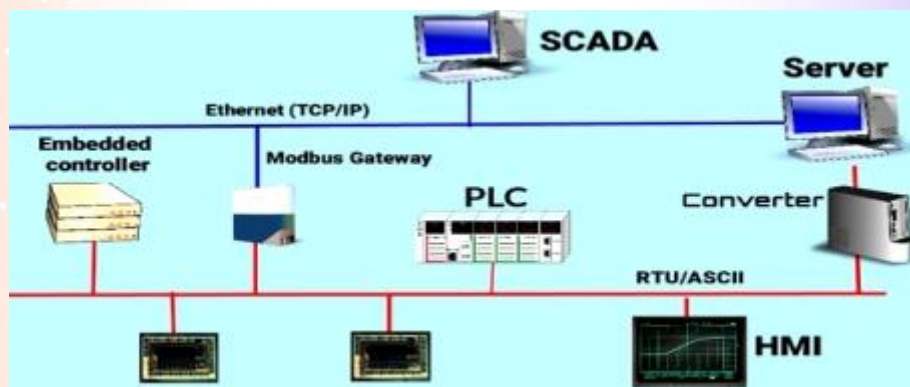


Industrial Automation can be carried out by various technologies like Programmable Logic Controller (PLC), intelligent controllers. It can also be achieved by the systems like Supervisory Control and Data Acquisition (SCADA) and Distributed Control System (DCS). PLC is an industrial grade computer that is capable of being programmed to perform control function. PLC are used in controlling the process in Industries and multiple PLC are connected

through communication channels to build systems like SCADA and DCS. PLC consists of CPU, Input /Output Module, Power Supply, Programming Devices. The leading PLC manufacturer are Siemens, Rockwell Automation, Allen Bradley, Mitsubishi Electric.



SCADA is system with multiple stand- alone controller like PLC are grouped together as one to control and monitor the Whole production sector. The SCADA systems include hardware and software components. The hardware gathers and feeds data into field controller systems, which forward the data to other systems that process and present it to a human-machine interface (HMI) in a timely manner. SCADA systems also record and log all events for reporting process status and issues. SCADA applications warn when conditions become hazardous by sounding alarms.



In order for SCADA systems to obtain its functionality, it needs a protocol for transmitting data. Some of the SCADA protocols include Modbus RTU, RP-570, Profibus and Conitel. Standard protocols are IEC 61850 (in which T101 branched out), IEC 60870-5-101 or 104, and DNP3. These communication protocols are standardized and recognized by all major SCADA vendors. Some of the SCADA vendors are Honeywell, ABB, Siemens Electric, Schneider Electric.

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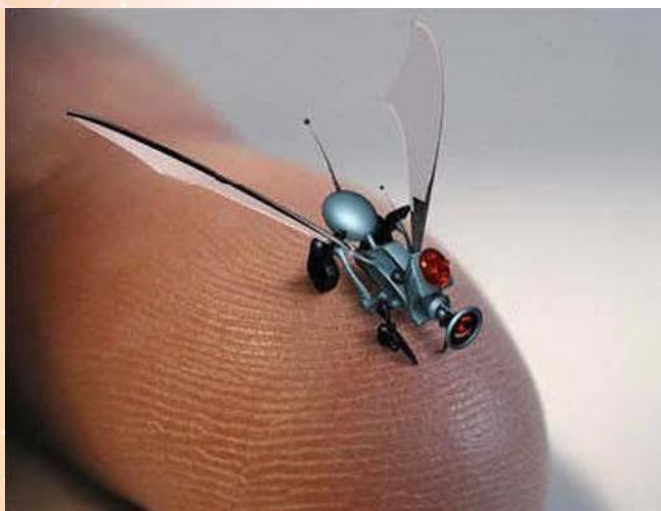
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Future Of NANOBOTS

Nanobots are robots that carry out a very specific function and are 10-100nm wide. The field of nanorobotics brings together several disciplines including nanofabrication processes used for producing nanometers, nanoactuators, nanosensors, and physical modeling at nanoscales. Nanorobotic manipulation technologies, including the assembly of nanometer-sized parts, the manipulation of biological cells or molecules, and the types of robots used to perform these tasks also form a component of nanorobotics.

In future many countries are planning for a war in space by training their space army but in my point of view instead of space army they can develop nanobots for their defence technology and attacking purpose. Nanobots can create mass destruction without any evidence. Because the size of the nanobots is very small and even some nanoparticles can dissolve in blood. These nanobots are much smaller than a standard of human hair and the insect-like nanobots could be performed for various tasks, including injecting toxins into people or can directly affect the environment. We can create nano-drone like insect and these insect cannot be suspicious by anyone due to their nanostructure so we can use these nano-drones for various spy application. We can also create artificial health problem to humans through nanobots.



To strengthen country's power these nanorobots plays a vital role in future. Country's like Russia, China and U.S.A are started to invest billions on nano-weapons research So every government must offer funds to nano-research for their country's development. These nano-weapons are more harmful than nuclear weapon.

At the same time every country must develop their own anti-nanobots system to resist from these nanobots. But at present situation there is no awareness in this anti-nanobot system.

According to scientist diseases like cancer, diabetes may be cured by these nanobots because the process in these diseases are take place in nanoscale so by studying these process with the help of nanobots we can cure the disease permanently. And we can also do some difficult operation in our body with these nanobots due to their nanostructure. And we can also improve the durability of the normal robots by using specific nanomaterials through bottom-up approach and top-down approach.

From this we can infer that nanobots are used for both good and bad purpose. It all depends on our hands. So we need to utilize these nanobots properly.

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