

RAJARAJESWARI COLLEGE OF ENGINEERING

#14, Ramohalli Cross, Kumbalagodu, Mysuru Road, Bengaluru - 560 074

(Approved by AICTE, New Delhi. Affiliated to the Visvesvaraya Technological University, Belagavi)



AN AUTONOMOUS INSTITUTION DEPARTMENT OF ROBOTICS AND AUTOMATION



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Chairman, RRG



Sri. A.C.S. Arunkumar
B.Tech (Hons), LMISTE, MIET, (UK), LMCSI,
Vice-Chairman RRG

We express our utmost gratitude to the Management, Rector, Principal, Dean R&D, and Vice Principal for their unwavering encouragement, inspiration, and support throughout the compiling and release of our latest newsletter "CYBORGS 2023-2024". Their constant support has been essential in bringing this publication to fruition.

Department at a Glance

The Department of Robotics and Automation was started in the academic year 2021-2022 with an intake of 60 students. The department boasts a team of highly qualified faculty members, possessing extensive experience in diverse fields of engineering. The Robotics and Automation program aims to plan, Design, Construct, and Operate and effective & independent usage of robotic devices. It is learned further the utilization of the computer systems required for its control, a sensor element, feedback, and information processing of Robotics and Automation devices.

The department is equipped with state-of-the-art laboratories featuring advanced software, facilitating accurate and efficient results. Additionally, the department conducts numerous seminars, workshops, and Industry-Institute Interactions to enhance the students' knowledge.



Dr. R Balakrishna
Principal, R.R.C.E.



Dr. M. Karthikeyan
Head - R&A

COURSE OFFERED: UG PROGRAMME
Bachelor of Engineering In Robotics and Automation - 4 Years

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College Vision

To provide an open opportunity to young generation for evolving their core competencies helping them to build their career as Global professionals to be an Autonomous Institution by achieving excellence in the field of higher education.

College Mission

To consistently strive for Academic Excellence to become a leading Institution in the field of Engineering, Management and Research to produce competent and ethically sound manpower for the benefit of Industry, Society, Nation and the Global Environment.

Department Vision

To develop technically skilled Robotics and Automation engineers with the systems & multidisciplinary approach in-line with the dynamic technologies for the competitive solution to the society.

Department Mission

- To provide a technical education through an effective teaching-learning process to meet the industry requirement.
- To teach the process of designing, creating, and using robots to perform a certain task in problem-solving skills and up-gradation of knowledge through a project-based approach in collaboration with industries.



Department Over View

Department of Robotics and Automation Engineering started in the year 2021 with a sanctioned intake of 60 students. The program is approved by AICTE, New Delhi and affiliated to Visvesvaraya Technological University, Karnataka. There are a total of 09 faculty members.



Many of them have more than 10 years of experience and have doctoral (PhD) degree. There are faculty members with good amount of industry experience. The number of Workshops, Industrial Visits, FDPs, Seminars, Skill Enhancement Program, Alumni talks, Mini-projects and Project exhibitions in the campus are increasing every year. Faculties and student projects are proposed for VGST, KSCST and VTU funding. Many Faculties and students have NPTEL online certification, and our students have excelled sports such as co-curricular activities like NCC, NSS, Karate, Cricket, Kabaddi and participated in state level and University level. All the activities are held through professional societies like ISTE, IETE and Department club.

The Robotics and Automation department focuses on the design, development, and implementation of robotic systems and automated processes. It integrates principles from mechanical engineering, electrical engineering, computer science, and artificial intelligence to create machines and systems that can perform tasks with high precision and efficiency. This department is involved in areas like industrial automation, autonomous vehicles, medical robotics, and artificial intelligence-driven manufacturing. It aims to advance technology to improve productivity, safety, and innovation across various industries.

Robotics & Automation



Robotics and Automation



DEPARTMENT OF ROBOTICS AND AUTOMATION

Department Association members for the AY 2023-2024



Dr. Radhakrishna R. K.
Associate Professor / Staff In-charge



Nithashree L
1RR21RA017
President



Lohith M R
1RR21RA011
Secretary



Bhumika H S
1RR21RA003
Treasurer



Nithya B
1RR21RA018
Executive Member



TANZEEM
1RR22RA028
Treasurer



JAFFER A
1RR22RA010
Executive Member



Y GANASHREE
1RR23RA041
President



KRISHNA MURARI
1RR23RA020
Secretary

Executive Members

Events Conducted During the Academic year 2023-24 (even Sem)

Skill Enhancement Program for students

Date : 30/05/2024
Participants : All Semester Students
Event : Kalasourabha-2024 (College Cultural Fest)



Mr. Akarsh Kashyap S.
(1RR22RA002)
Secured 3rd Place in Quiz at College Level



3rd Place in Quiz



Faculties Congratulating the student

DEPARTMENT OF ROBOTICS AND AUTOMATION

Industrial Visit - M/s. Prob B Machine Pvt.

Date : 03/05/2024

Participants : 1st Year and 2nd Semester Students

Company : M/s. Prob B Machine Pvt. (Honing Machines) Ltd.

B-510/A, 4th cross, 9th Main Road, 4th Phase, Peenya, Bengaluru.



YANTROVE CLUB COMPETITION

Date : 03/05/2024

Participants : 6th Semester Students

Event : Rapid Tracer Competition

College : Dept of CSE (AIML) of Dayananda Sagar University



Rapid Tracer Robot Competition



1st Place in Rapid Tracer Robot Competition



Students receiving prize from the Dept. Head of AIML, Dayananda Sagar University.

DEPARTMENT OF ROBOTICS AND AUTOMATION

Skill Enhancement Program - JASC 2024 E- Learning Course (JANATICS)

Date : 27/06/2024

Participants : 6th Semester Students

Company : JASC 2024 E- Learning Course (JANATICS)

6th Semester Students participated in this Event



Ms. Bhumika H S



Mr. Lotith M R



Ms. Nithashree L



Ms. Nithya B



Certificates received by the students

DEPARTMENT OF ROBOTICS AND AUTOMATION

Skill Enhancement Event - Rank Selection Test 1 KAR NAVAL Unit NCC

Date : 10/08/2024
Regiment No: KA2022SDN106016
Rank : Petty Officer (PO) Cadet
NCC : 1 KAR NAVAL Unit NCC



KA2022SDN106016
CC.LOHITH M.R.



Written Test, Parade, Drill, Command, Stamina, etc. were the parameters used to test the cadets to attain Ranks in NCC.

Skill Enhancement NPTEL Course

Date : Jan - Apr 2024

Participant : Faculty of Robotics and Automation

Swayam : NPTEL Online Certification, funded by MoE, Govt. of India



Mrs. Manasa G,
Assistant Professor
Department of Robotics and Automation



NPTEL Certificate

Career Guidance Programme - 2024 - K2GE Overseas Education

Date : 12/07/2024

Participants : 2nd and 3rd Year students of R&A Department

Event : Dream for Tier-1 Universities Overseas

Company : K2GE Overseas Education Consultants



Dr. KARTHIKEYAN B S
Department of Psychology
K2GE Overseas Education Consultants

Inaugural Function of the event



Students interacted with the speakers



Dr. KARTHIKEYAN B S, K2GE Overseas Education Consultants addressing the students

Alumni Talk- 2024

Date : 13/07/2024

Participants : 2nd and 3rd Year Students

Company : Rangsons Aerospace Pvt Ltd, Bengaluru



**Mr. Hariharan P
(2021 Passed out Mechanical Engineering)
Associate Engineer
Rangsons Aerospace Pvt Ltd, Bengaluru**



Honoring Mr. Hariharan P



Addressing during the programme



Group photo

Industrial Visit- 2024 - M/s. Carl Zeiss Plant

Date : 17/05/2024

Participants : 2nd Year Students

Company : M/s. Carl Zeiss Plant, Bommasandra, Bengaluru.



Group Photo of faculties and students before visiting the company



Carl Zeiss Plant



Mr. Manjunath M., Team Lead of Process (Production Engineering), briefs the students



Group Photo at Carl Zeiss Plant (Main Entrance Gate)

Career Guidance program on "Solid Works 2024"

Date : 19/06/2024

Participants : 2nd and 3rd Year Students

Company : M/s. Jnana Infotech Ltd., Bengaluru.



Ms. Gayathri, Jnana Infotech Ltd., Bengaluru



Speaker Ms. Gayathri, Jnana Infotech Ltd. addressing the students



Students of 2nd and 4th year RA are attending the program

Career Guidance program on "Sensors and Actuators"

Date : 24/05/2024

Participants : 1st, 2nd and 3rd Year Students

College : Department of Electronics and Communication Engineering
R. L. JALAPPA Institute of Technology, Bengaluru



Dr. Shivaprasad K.M, Vice Principal & Professor, Department of Electronics and Communication Engineering
R L JALAPPA Institute of Technology, Bengaluru



Felicitating the Chief Guest



Students and faculties participation in the program



Group photo taken at the end of the sessions

Technical Talk - 2024 - Innovation and E- Patent Filing

Date : 28/05/2024

Participants : 1st Year and 2nd Semester Students

Topic : Innovation and E- Patent Filing



Dr. Aravinthan K.
Associate Professor

Department of Civil Engineering, Rajarajeswari College of Engineering



Dr. Aravinthan K. addressing the 2nd semester students



Group photo with Dr. Aravinthan K. with students of the Robotics and Automation

Career Guidance Programme on Algorithmic Thinking and Solving

Date : 28/05/2024

Participants : 1s, 2nd & 3rd Year Students

Company : Exskillence, SanDcigo, USA.



Dr. S R Subramanya
President & CEO - Exskillence, SanDcigo, USA



Dr. S R Subramanya addressing and interacting with the students



Group photo with Dr. S R Subramanya

DEPARTMENT OF ROBOTICS AND AUTOMATION

Faculty Development Program

Date : 13/5/2024 to 17/5/2024

Participant : Dr. Vishwanath K C, Associate Professor

Company : M/s. Sansera Engineering,

M/s. Prabha Industries,

M/s. Bosch,

M/s. Toyota Kirloskar Autoparts Pvt Ltd,

M/s. Toyota Kirloskar Motors



Events conducted at Sansera Engineering Pvt. Ltd.



Industrial Visit during the program and certificates were distributed to the participants

Design Patent Grant Received

Date : 19/05/2024
Country : Intellectual Property, India.
Title : ROBOTIC ARM FOR PRECISION MANUFACTURING
Patent No : 417390-001
Inventors : Dr. Thanuj Kumar M, Dr. Radhakrishna R Kumshikar,
Prof. V Sreepathi, Dr. Anand A, Prof. Praveen Kumar S P.



Design Patent Grant Received

Date : 02/07/2024
Country : Intellectual Property, India.
Title : Solar Water Heater with Twisted Elliptical Sectioned Absorber Tubes
Patent No : 544036
Inventors : Dr. N. Sreenivasalu Reddy, Dr. Vishwanath K. C.,
Dr. Karthikeyan M., and Dr. C. Ramesh



DEPARTMENT OF ROBOTICS AND AUTOMATION

Faculty Development Program - Current Trends in Mechanical Engineering

Date : 20/05/2024 to 25/05/2024 (6 Days)
Participant : Sub. Lt. Dr. Thanuj Kumar M. and Dr. Radhakrishna R. K.
College : Shri Vishnu Engineering College for Women, Bhimavaram.
Title : Current Trends in Mechanical Engineering-Case Studies from Industries & Academia to Promote Innovation, Design Thinking and Startups.



Certificate of Sub. Lt. Dr. Thanuj Kumar M..



Certificate of Dr. Radhakrishna R. K.

Faculty Development Program -

Effective Curriculum Design and Evaluation Process for Autonomy

Date : 15/05/2024 to 19/05/2024 (5 Days)

Participants : Faculty members of all departments

College : RRCE



Effective Curriculum Design and Effective Process for Autonomy from 15/05/2024 to 19/05/2024
For all faculty members of RRCE

Career Guidance Programme - Higher studies in abroad - 2024

Date : 17/05/2024

Participants : 3rd Year Students

Company : Career Coach and Guide



Mr. Ravi and his team is briefing about the program and 6th Sem RA & ME Students



Mr. Ravi and his team is briefing about the program

One Day Workshop on Advance Training on LabVIEW

Date : 28/06/2024

Participants : 3rd Year Students

Institute : M/s. LabVIEW Academy, SJB Institute of Technology, Bangalore



Dr. Ravikumar A.V, Associate Professor, Chief Coordinator of the LabVIEW Academy , SJB Institute of Technology, Bangalore



Dr. Ravikumar A.V teaching and training the students of 3rd year students



Resource person Dr. Ravikumar A.V with faculties and students

A Start-up Competition - 2024

Date : 15/05/2024
Participants : 1st and 3rd Year Students
Topic : Vyavahara Spaedhanam
Result : 3rd Prize



Ms. Nithashree L (1RR21RA017), Mr. Zubair Ali (1RR23RA043), Mr. Sameer Magi (1RR23RA031), Mr. Vinaykumar Tondihal (1RR22RA040), and Mr. Muthukrishnan (1RR23RA022) received 3rd prize in the event.

DEPARTMENT OF ROBOTICS AND AUTOMATION

Prototype Project Exhibition

Date : 24/05/2024

Participants : All students of all semesters

College : RRCE



Faculty Knowledge Enhancement

Date : 24/05/2024 to 26/05/2024

Participant : Dr. Vishwanath K C

Company : M/s. SRISHTI Innovation Exchange-2024.



Chief Guest is felicitated by Mr. Sunder Raju, Founder of Atria Institute of Technology, Bangalore



Student Project Demo model



Dr. Vishwanath K. C. as jury members interacting with students

CLASS TOPPERS

IN VTU 5TH SEMESTER VTU EXAMS HELD DURING
APRIL 2024

All Secured First Class with Distinction



Ms.Nithya B
1RR21RA018
89.6%
1st Rank



Ms.Bhumika H S
1RR21RA003
88.8%
2nd Rank



Ms.Jeevika D K
1RR21RA009
86 %
3rd Rank



Ms.Nithashree. L.
1RR21RA017
84 %



Ms. Nisanka Mansi Chandran
1RR21RA016
83.4%

Congratulations

All Secured First Class with Distinction

CLASS TOPPERS

IN VTU 3RD SEMESTER EXAMS HELD DURING JAN 2024



Mr.ROHITH V GOWDA
1RR22RA019
84.1%
1st Rank



Ms.BHUVANESHWARI G
1RR22RA004
83.1 %
2nd Rank



Mr.PREM KUMAR G
1RR22RA017
83 %
3rd Rank

Congratulations

All Secured First Class with Distinction

CLASS TOPPERS

IN VTU 1ST SEMESTER UNIVERSITY EXAMS HELD DURING
DEC 2023 / JAN 2024



Ms.AKSHAYA P
1RR23RA003
88.9 %
1st Rank



Ms.AKANKSHA SINGH
1RR23RA001
85 %
2nd Rank



Mr.SHARATH RAO B
1RR23RA033
84.1 %
3rd Rank

Congratulations
All Secured First Class with Distinction

DEPARTMENT OF ROBOTICS AND AUTOMATION

Faculty Skill Enhancement - Ship Attachment Camp - NCC

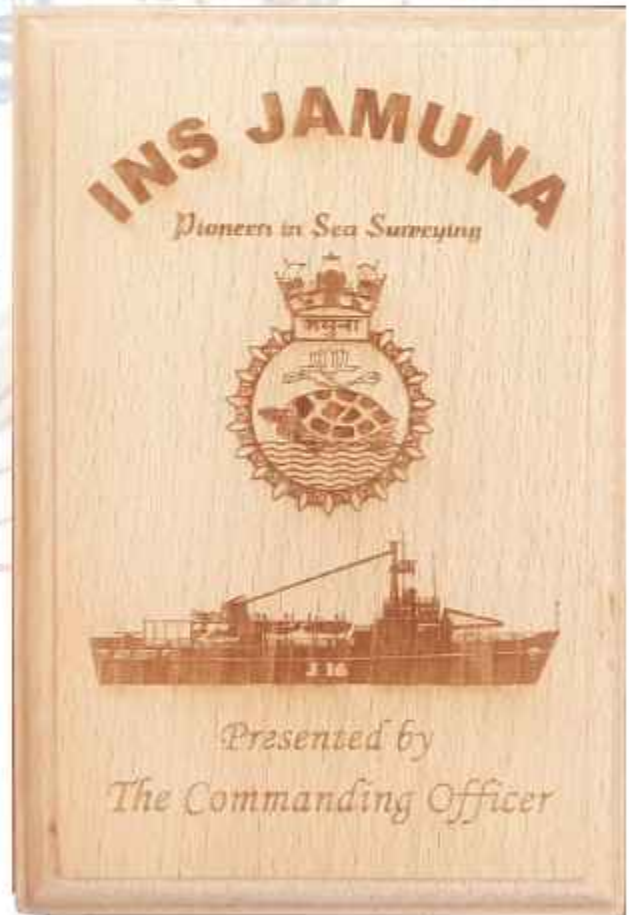
Date : 20/07/2024 to 31/07/2024 (12 days National Camp NCC)

Participant : Sub. Lt. dr. Thanuj Kumar M.

Camp : Ship Attachment Camp at Southern Naval Command, Kochi



Sub. Lt. Dr. Thanuj Kumar M.
at INS Jamuna



DEPARTMENT OF ROBOTICS AND AUTOMATION

Student Skill Enhancement -

Pre Yachting Regatta 2024 Camp by 3 Kar Naval Unit, Mysuru

Date : 22/07/2024 to 31/07/2024 (10 Days National Camp NCC)

Participant : Ldg. Cdt. Gnanashree N V

Camp : Pre Yachting Regatta 2024 Camp by 3 Kar Naval Unit, Mysuru at
Royal Mysuru Sailing Club, Krishnarajasagara



Ldg. Cdt. Gnanashree N V



Academic Year 2023-24

Patents

Sl. No.	Name of the Applicants	Title	Year	Application Number	Status
1	Dr N Sreenivasalu Reddy	Mosquito Trapping Device	2024	413567-001	Granted
2	Dr N Sreenivasalu Reddy, Dr Vishwanath K C, Dr Karthikeyan M, Dr Ramesh C.	Flat Plate Solar Water Heating System with Twisted Elliptical Tubes	2024	202041050521	Granted
3	Dr.Thanuj Kumar M Dr. Radhakrishna R Kumshikar	Robotic Arm for Precision Manufacturing	2024	417390-001	Granted

Publications

International Journal

1. Radhakrishna R Kumshikar, R. Shankara Reddy “Experimental and Numerical Analysis of Woven Bamboo and Jute Fiber Reinforced in Epoxy Composites” *Mechanics of Advanced Composite Structures*, Vol 11, Issue 2 - Serial Number 23, November 2024, Pages 103–118, DOI:10.22075/mac.2023.30534.1504
Link : https://macs.semnan.ac.ir/article_8056.html.
2. Kurapalli Shivareddy Madhu, Ramareddy Shankarareddy , Shantappa Gurubasappa Sangashetty “Experimental Study on the Effect of TiO₂–Water Nanofluid on Heat Transfer and Pressure Drop in Heat Exchanger with Varying Helical Coil Diameter” *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*, 107, Issue 2 (2023), pp 50-67, ISSN: 2289-7879,
Link: <https://doi.org/10.37934/arfmts.107.2.5067>

International Conference

1. Pramodkumar S Kataraki, Harsha kusnoorkar, Ahmad Baharuddin Abdullah, Satheesha V, Ahmad Farrahnour and Ahmad Faiz Zubair “Optimization of EDM Process Parameters for Inconel 718 by Machine Learning Techniques” – *Industrial Engineering and Operations Management World Congress Detroit, Michigan, October 9-11, 202*
2. Vishwanath K C, N. Sreenivasalu Reddy, Chandrashekar A, Abdul Razak “Evaluation of Mechanical Properties and Characteristic of bamboo fibers reinforced with polymer matrix composite” *International Conclave on Engineering Sciences and Technology, P A College of Engineering, Mangalore on 23rd & 24th April 2024.*
3. 1)Prem Chand R, Vishwanath K C, N. Sreenivasalu Reddy, Chandrashekar A, Abdul Razak “Evaluation of physical and mechanical properties of chicken feathers and wood apple shell powder reinforced bio-degradable hybrid composites” *International Conclave on Engineering Sciences and Technology, P A College of Engineering, Mangalore on 23rd & 24th April 2024.*

Editorial Board

Edited by

Sub. Lt. Dr. Thanuj Kumar M.

Associate Professor / ANO -1 Kar Naval Unit NCC

Dept. of Robotics and Automation, RRCE.

Supported by

- | | |
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| 4. Dr. Srinivasalu Reddy N. | Associate Professor |
| 5. Dr. Satheesha V. | Associate Professor |
| 6. Dr. Vishwanth K. C. | Associate Professor |
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Rajarajeswari College of Engineering



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