



International Society of Automation

*Adi Shankara Institute of Engineering and
Technology Student Section*

ISA ASIET STUDENT SECTION REPORT 2023-2024

This report outlines all the activities carried out by the ISA Adi Shankara Institute of Engineering and Technology Student Section during the 2023-2024 academic year. It covers various events such as workshops, seminars, talk sessions, and other events. The subsequent sections provide detailed information about these projects and events.

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ROBOTICS BOOTCAMP AND HACKATHON

Date:22/09/2023-24/09/2023

Venue:College Auditorium,ASIET

Participants:52

Resource Persons:Mr.Indrajith V.S-Founder of Monai FPV,Student of Adi Shankara Institute of Engineering and Technology,Mr.SunilPaul-Co-Founderand CEO of Srishti Robotics Technologies Pvt.Ltd,Mr.Arun,ROS Engineers from Sinro Robotics

Topics: Aerial Robotics,Robotics and Robot Operating Systems,Mobile Robotics,Underwater Robotics

The **Robotics Boot-camp** along with **Hackathon** was organized by ISA at Adi Shankara Institute of Engineering and Technology from 22/09/2023 to 24/09/2023. The program comprised a diverse range of workshops, talks, and activities that served as a source of inspiration for young minds and encouraged the unlocking of their authentic potential.A total of 52 students from various colleges participated in the event.

Day 1

On September 22nd, 2023, the first day of the Robotics Boot Camp featured a session led by Indrajith V. S., a third-semester student from ASIET's Robotics and Automation department. He discussed First Person View (FPV) drones, covering essential concepts, safety precautions, and offering guidance on building drones. Participants also had access to a beginner-friendly drone simulation game. The session concluded with a comprehensive program summary. The second part of the day, conducted by Sinro Robotics Pvt Ltd, centered on "Robotics and Robot Operating Systems (ROS)." This interactive segment aimed to deepen participants' knowledge of Raspberry Pi and other relevant tools.

Day 2

On September 23, 2023, the Robotics Boot Camp continued with a Robo Soccer Bot building workshop organized by Qudratech. Instructors led students in groups through the bot construction process, ensuring they learned essential skills and techniques. After the workshop, a friendly competition enabled students to demonstrate their creativity and new skills. An inspiring speech highlighted the importance of collaboration and dedication in robotics, and future competitions were discussed. The day ended with an enlightening lecture on underwater robotics by Sunil Paul,

CEO of Srishti Robotics, providing valuable insights and educational experiences.

Day 3

On the third day of a thrilling hackathon hosted by the Robotics department as part of the Robotics Boot-camp, student teams competed in a day-long challenge. They had to create a working mechanism based on either Traffic Management System or Industrial Water Tank Control System. With just five days to prepare and a five-hour time limit on the event day, participants brought their own materials, with only a computer provided for programming and simulation support. The winning team, composed of second-year students from Robotics and Automation, tackled the Industrial Water Tank Control System project, showcasing exceptional problem-solving skills, technical expertise, and teamwork to complete their prototype within the given time frame.



RSI **Adi Shankara** **INSTITUTE OF ENGINEERING AND TECHNOLOGY** **ISA**

ROBOTICS BOOTCAMP

DAY 1 WORKSHOP : **AERIAL ROBOTICS - Drone Piloting**
TALK SESSION : **ROBOTICS AND ROBOT OPERATING SYSTEM (ROS)**
Sponsored by : Sinrorobotics

DAY 2 WORKSHOP : **MOBILE ROBOTICS - Robo Soccer Bot building**
TALK SESSION : **UNDERWATER ROBOTICS**
Speaker : Sunil Paul, CEO Srishti Robotics

DAY 3 HACKATHON

VISIT US AT : www.roboticsbootcamp.live

QUIZ COMPETITION

Date: 21st November 2023

Mode: Online

Participants: 183

Topic: World Television Day

On November 21, 2023, the ISA ASIET Student Section organized **TELEKNOWLE**, an online quiz competition centered on World Television Day. The event saw participation from 183 students, who demonstrated significant interest in the cultural impact of television on global society. The quiz consisted of multiple-choice questions. Despite the fierce competition, Pooja V K, a sixth-semester student from the EBE Department, emerged as the champion with her confident and composed responses. Adarsh V S, a second-semester student from the RA Department, secured the second prize, while Pavan P Biju, a fourth-semester student from the RA Department, claimed the third prize. Congratulations to all the winners for their impressive performances; their victories were well-deserved and highlight their expertise in television trivia.



ROBOTRONICS WORKSHOP

Date: March 1st 2024

Venue: Robotics Lab, ASIET

Participants: 35

Resource Persons: Mr. Arjun M, Joint Secretary of TRS, Student Of Adi Shankara Institute of Engineering and Technology, Mr. Cliff Andrew Oliver, Secretary of TRS, Student of Adi Shankara Institute of Engineering and Technology

Topic: Industrial Manipulators

The **Robotronix Workshop**, organized by the ISA Student Section ASIET in collaboration with the Robotics Society, was a prominent feature of the national techno-cultural fest Brahma 2024 on March 1, 2024. The workshop aimed to acquaint participants with fundamental principles of robotics, explore advanced concepts in automation, and provide practical exposure to industrial manipulators. Arjun M., Joint Secretary of TRS, commenced the session with an insightful discourse on robotics, covering its fundamental principles, and crucial software such as CProg and the programming language KRL. Cliff Andrew Oliver, Secretary of TRS, then smoothly transitioned into discussions on various configurations and coordinate systems. The workshop included immersive hands-on training sessions, enabling participants to

operate and control Kuka Technologies' robotic arm. With enthusiastic participation from 35 students, including five external participants, the workshop successfully fulfilled its objectives of imparting knowledge and nurturing practical skills in robotics and automation. Both TRS and ISA eagerly anticipate organizing more impactful workshops in the future to further empower individuals with the latest advancements in robotics and automation.



SEMINAR

Date: March 22nd 2024

Venue: Seminar Hall, ASIET

Participants: 40

Resource Person: Dr. Jayesh Barve, Principal Engineer-Digital, Control & Optimisation, GE Global Research Center, Bangalore

Topic: SolarPV Hybrid Distributed PowerGen System for Rural and Urban Microgrid Applications

The ISA Student Section ASIET conducted a seminar on "**SolarPV Hybrid Distributed PowerGen System for Rural and Urban Microgrid Applications**" on March 22, 2024. The primary objective of the seminar was to explore the practical applications of SolarPV Hybrid Distributed Power Generation Systems in addressing energy challenges in rural and urban areas. Dr. Jayesh Barve chaired the session, demonstrating his expertise and delivering an engaging presentation that significantly enhanced the audience's understanding of the subject matter. His presentation facilitated a constructive exchange of ideas and inspired attendees to explore opportunities for implementing renewable energy solutions within their respective communities. SolarPV Hybrid Distributed Power Generation Systems are widely regarded as a versatile and sustainable

approach to meeting energy demands in various environments, offering benefits such as reduced energy costs, increased energy independence, and environmental preservation. The seminar garnered participation from both students and faculty members across departments.



TALK SESSION

Date: April 2nd 2024

Venue: Seminar Hall, ASIET

Participants: 45

Resource Person: Dr. Anand VS, the Robot Systems Research Group Lead at the Laboratory for Product Development and Lightweight Design, Technical University of Munich, Munich, Germany

The Department of Robotics and Automation, in collaboration with ISA ASIET Student Section, organized an engaging **Tech Talk and Interaction session** featuring Dr. Anand VS, who leads the Robot Systems Research Group at the Laboratory for Product Development and Lightweight Design, Technical University of Munich, Germany. Dr. Anand VS is a renowned expert in robotics, focusing on the design, development, and deployment of advanced robot systems across industrial and societal domains. His leadership at the Technical University of Munich has spearheaded pioneering research efforts and innovative solutions in robotics. During the session, Dr. Anand VS shared his extensive knowledge and insights on the latest developments, challenges, and opportunities in robot systems research. Participants benefited from

an interactive discussion with Dr. Anand, covering topics from autonomous systems to lightweight design principles in robotics.

HEARTY WELCOME

Dr. Anand V S
Robot System Research Group Lead,
Laboratory for Product Development
and Lightweight Design
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Adi Shankara
INSTITUTE OF ENGINEERING AND TECHNOLOGY

IASE Robotics & Automation Society
ISI
ISA
INSTITUTE FOR INNOVATION COUNCIL

DEPT. ROBOTICS & AUTOMATION,
COMPUTER SCIENCE & ENGINEERING (ARTIFICIAL INTELLIGENCE)



iAct

Date:19/4/2024-20/4/2024

Venue:Federal Institute of Science and Technology

Participants:36

iAct is a prestigious two-day event held on the Automation and Control Technology Day organized by ISA Bangalore. This year, iAct is being hosted by the Federal Institute of Science and Technology (FISAT) on April 19th and 20th, 2024. A total of 36 students from ASIET enthusiastically participated in the program.

Day 1

The first day of iAct was filled with insightful activities, starting with a thought-provoking Technical Talk titled "Creative Problem Solving and Design Thinking." This session aimed to inspire innovative approaches among attendees. An engaging Ideathon followed, encouraging participants to brainstorm and develop inventive solutions to contemporary challenges.

Additionally, the day featured Project Presentations that highlighted various innovative projects. A significant focus was placed on the Cobot project, a noteworthy endeavor under the Pine Fiper projects. This presentation provided a platform for students to showcase their

ingenuity and technical prowess in the field of automation and robotics.

Day 2

The second day of iAct unfolded with a dynamic lineup of events, featuring immersive hands-on workshops in Machine Learning (ML) and Augmented Reality/Virtual Reality (AR/VR). Students faced the exciting choice between delving into the intricacies of ML or exploring the captivating realms of AR/VR, each workshop running concurrently. Enthusiastic participants eagerly engaged in practical sessions, guided by experts, where they honed their skills and expanded their understanding of these cutting-edge technologies.

As the workshops concluded, the event culminated in a grand valedictory function, a celebration to honor the brilliant minds behind the Ideathon. This ceremony served as a platform to commend the winners for their visionary ideas and exemplary execution. The stage illuminated with applause and admiration as participants and organizers alike reflected on the transformative potential showcased throughout iAct.



