

# ICE ASSOCIATION NEWSLETTER



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## EDITOR'S NOTE:

Dear Readers,

I am delighted to present the latest issue of Sensors newsletter as the editor of the 2022 edition. This edition features articles and features that showcase the latest research and advancements in our department and the field of Instrumentation and Control Engineering.

The articles in this issue cover a variety of topics, such as the department's published papers, applied patents, and attended conferences. Additionally, we explore the current trends and developments in Instrumentation and Control Engineering. Our aim is to provide informative and insightful articles that inspire you to learn more about this field and encourage your participation in future editions of Sensors.

We are continuously looking for ways to improve our newsletter and deliver relevant and useful content to our readers. So, if you have any feedback or suggestions for future topics, please do not hesitate to contact us.

Thank you for your ongoing support and interest in Sensors.

Best regards,

-Sreenidhi





## VISION AND MISSION:

The department of Instrumentation and Control has always strived for perfection, and this is achieved by following our departments Vision and Mission

### Vision:

- To become a world-class centre of excellence in Instrumentation and Control Engineering.

### Mission:

- To inspire our students to realise their aspirations and potential through quality education in Instrumentation and Control Engineering.
- To enhance knowledge, create passion for learning, foster innovation, and nurture talents towards serving the society and the country.
- To encourage our faculty and students to keep in pace with the latest technological developments and to pursue research in those areas.
- To enable our students to engage themselves in entrepreneurship and product development for the benefit of the global community.

We believe that our vision and mission statement will provide a clear direction and purpose for our department, as well as inspire our faculty and students to strive towards excellence

## **LIST OF CONFERENCE PUBLICATIONS FROM DEPARTMENT:**

The Department of Instrumentation and Control has garnered a number of breakthroughs in numerous fields related to its domain this semester. Listed below is a gist of a few of the papers published by our department:

1. Output Voltage Regulation of Step-Up Converters Using Predictive Control for PV Systems.
2. Security Enhanced IoT Based Wireless Sensor Network Using Heuristic Algorithm and Advanced Encryption Standard.
3. Design of an Integrated Data Acquisition System for Aero Engine Testing Using LabVIEW Virtual Instrumentation.

## **LIST OF JOURNAL PUBLICATIONS FROM THE DEPARTMENT**

1. Design and implementation of combined liquid pump and active–passive mixer for a drug delivery system utilizing two 1-DOF piezoelectric actuated cantilever beam.
2. Macroscopic mixer for disparate property liquid–liquid mixing in aqueous sanitizer preparation.
3. A state-of-the-art survey of model order reduction techniques for large-scale coupled dynamical systems.
4. Event based optimal filter for a networked system with multiplicative and auto/cross correlated process and measurement noise.

# INDUSTRIAL LECTURES

1. Instrumentation and control engineering in power plant and automobiles by Dr. S. Dharmalingam from BHEL .

## TECH CORNER:

### Nanotech startup shows off tiny paper-based capacitive sensors

Carbon nanotubes built into the structure of paper form the basis of a sensor technology that could transform the interaction between people and digital devices.

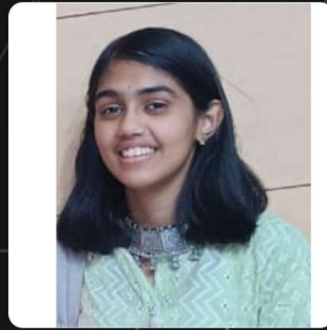
Somalytics, a startup launched in November 2021 to commercialise technology developed by researchers at the University of Washington (in collaboration with CoMotion), is showing off two innovative sensor-driven devices at CES 2022.

SomaControl is a 3D gesture monitor that allows users to interact with and control digital devices via no-contact hand movements, while SomaSense is a flexible 3D sensing floor mat that detects and analyses human presence, gait and foot pressure.

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