Objective

The Innovation 2 Infrastructure (I2I) workshop series aims to provide a learning platform to tune and turn next generation engineers, researchers & practitioners to implement research-based transitional technologies into real world civil engineering applications.

Theme

In the modern age of infrastructure, utility lifelines such as roadways, bridges and powerlines have become indispensable. Any threat to these infrastructures, no matter the extent, can lead to a catastrophic failure which potentially leads to economic and human loss. Avoiding these threats involves detecting the existing damages and predicting future failures. Structural Health monitoring (SHM) as such is the most advanced approach towards a damage detection strategy. This entails continuous monitoring of the structure using multiple sensors and performing analysis on the data acquired from these sensors. This has increased the demand for not only the developed sensor technology and smart monitoring procedures, but also providing innovative solutions and intelligent digital tools for analysing, evaluating and utilizing the results.

The emergence of Internet of Things (IoT) is a shot in the arm for existing SHM system to improve the efficiency and reliability in predicting the damage. IoT represents an ecosystem of networked sensor nodes which aggregate data in centralized/decentralized cloud storage, thus leveraging the near-infinite computing power and storage that the internet provides. IoT, a new frontier, together with smart monitoring systems can provide drastic improvement in preserving and maintaining these infrastructures. It is anticipated that as more ubiquitous linked devices are created, difficulties like scalability and interoperability will arise to which creative solutions should be developed.

In the inaugural edition of our workshop series, you will be introduced to developments in SHM, followed by issues and solution approaches and culminating in developing IoT solutions for SHM. We will also look at real-world application of the above IoT solution.

SESSION	TOPIC	SPEAKER
9:00 AM -10:30 AM	An Insight into next generation SHM potentials	**Prof. Venkata Dilip Kumar Pasupuleti** Head CSIS, MU
10:30 AM -11:30 AM	Evolution of Internet of Things (IoT): Past, present and future	**Prof. Prafulla Kalapatapu** Head CSIS, Co-ordinator AI, MU
11:30 AM -12:30 PM	Smart Infrastructure Monitoring, the bigger picture	**Ajay Kumar Sreerama** Founder, Mantis Infra Solutions Pvt Ltd
02:00 PM - 3:30 PM	Panel discussion	**Industrialists & Academicians**
03:30 PM - 5:30 PM	Prototype Showcase	**CSIS Team**

* Includes tea and Lunch break

About CSIS

Center for Sustainable Infrastructure and Systems (CSIS) is a fusion of Civil and Computer Science Engineering, aiming to provide sustainable solutions for better Infrastructure by using latest technologies like Artificial Intelligence, Cloud computing, Augmented Reality and Virtual reality. It works towards achieving these goals by reducing the impact on environment, economy and life loss through formulating new academic courses, conducting cutting edge research and transferring the same to real world applications.

CSIS targets to reach excellence by undertaking research consultation and collaboration with national and international organizations. The major research areas include Digital conservation and preservation of Heritage Structures, Indian Traditional Houses, Structural Health Assessment & Monitoring, Repair & Retrofitting and Smart Structures.

About MAHINDRA UNIVERSITY

Mahindra University was established in May 2020 as an academic institution with the objective of producing global thinkers and engaged leaders. The professionals who think how the world is for them and others and how to make it a better place through positive engagement and leadership in innovation and research. With a global outlook to match the international standards of education, Mahindra University comes up with innovative ideas to keep up the learning spirit of the students. The University has in collaboration with overseas campuses developed a well-designed curriculum for each program that shows light towards a bright future of its students. The interactive curriculum and high quality education offered by MU has created an impact of being a well-honoured educational institute amongst its peers.

Contact

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