

**INTERNATIONAL CONFERENCE ON COMPUTATIONAL MODELING,
SIMULATION AND OPTIMIZATION (ICCMO-2022)**
Asian Institute of Technology Conference Center Bangkok, Thailand
December 23-25, 2022

**CALL FOR PAPERS IN THE SPECIAL SESSION
“APPLICATION OF MACHINE LEARNING IN STRUCTURAL
MECHANICS”**

SESSION CHAIR(S):

Dr. Susmita Naskar

Faculty of Engineering & Physical Sciences
University of Southampton, UK

Dr. Nitesh P. Yelve

Dept of Mechanical Engineering
IIT Bombay, India

Abstract: This session's objective is to discuss current developments in machine learning approaches applied to materials, structures, and mechanics. Machine learning (ML) has become the most successful branch of artificial intelligence (AI). It provides a unique opportunity to make structural mechanics more predictable due to its ability in handling complex structural systems under extreme conditions. Materials of interest include but are not limited to composite materials, glasses, rubber, metals, polymers, ceramics, biomaterials, metamaterials, hydrogel, granular materials, etc.

Topics of Interest:

The topics of interest include, but not limited to, **Machine Learning for**

- Engineering systems under uncertainty
- Microstructural characterization and analysis
- Interpreting experimental data and formulating models
- Approaches to accelerating the discovery of novel materials
- Structural analysis and design
- Predicting structural response and performance
- Probabilistic data-driven approaches
- Material model calibration
- High-dimensional physics-based systems
- Multi-material 3D printing
- Material imaging/pattern recognition
- Phase field modeling of fracture
- Earthquake ground motion analysis
- Predictive modeling and optimization

Keywords: machine learning, materials, structures, mechanics, big data

Note: All the papers will be handled through easychair conference management system through [Electronic Submission System](#). It is a mandatory requirement that all papers submitted for this session must also be e-mailed to conference.sec.2022@gmail.com along with the easychair Paper id.

Important Deadlines

Round 1 (Early Bird)

Submission: 30th September 2022

Notification 20th October 2022

Final paper submission: 27th
October 2022

Registration: 01 November 2022

Round 2 (Regular)

Submission: 30th October 2022

Notification: 20th November 2022

Final paper submission: 27th
November 2022

Registration: 01 December, 2022

Registration

Please visit conference webpage for registration and other details:

<http://iccmso.com/registration/>

Publication(s)

All the accepted, registered, and presented papers will be published as book chapters in a SCOPUS indexed book, which will be published by CRC Press / Nova Science Publishers.

For details, Please visit <http://iccmso.com/>.

Contact

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