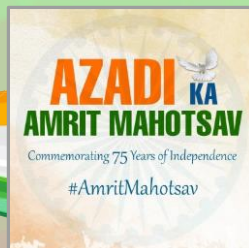


Online Workshop on ICME READINESS OF DIGITAL PLATFORMS

An Invited Technical Presentation Series: July-August, 2021



Organized by
ICME National Hub
in association with
Indian National Academy of Engineering



DIGITAL PLATFORMS FOR SIMULATION DRIVEN DESIGN FOR MANUFACTURABILITY

By

Dr. Subir Roy

Vice President, Manufacturing Solutions, Altair

Date and Time

July 23, 2021 (Friday), 06:00 PM IST

Zoom link for the event

<https://iitk-ac-in.zoom.us/j/99274377711?pwd=ZStBVlJlNz05ZWkVTEFR6a2pCOFdoZz09>

Meeting ID: 992 7437 7711

Passcode: 524637

◆◆ About the Workshop ◆◆

Integrated Computational Materials Engineering (ICME) is an emerging and transformative discipline with a huge potential to accelerate materials discovery, product design and process optimization. The Indian National Academy of Engineering (INAE) is engaged in developing a technology roadmap for "Accelerated Materials Discovery, Scale-up and Exploitation Strategy for Strategic Materials Needs of India". The compilation and integration capabilities of various digital platforms that can assist the ICME community is one of the essential parts of this effort. Therefore, the ICME National Hub at IIT Kanpur, in association with INAE, is organizing a "Workshop on ICME Readiness of Digital Platforms" - a technical presentation series about the capabilities of important digital platforms vis-à-vis accelerated development, production and exploitation of materials and products.

For more details please visit: <https://www.iitk.ac.in/ICME/INAE-Workshop/>

ICME National Hub Website: <https://www.iitk.ac.in/ICME/>

INAE Website: <https://www.inae.in/>

Abstract

The modern innovator faces challenges such as, multiple application providers with various license restrictions, multiple cloud providers with varying complexity and cost, digital data silos and globally spread-out teams requiring 24/7 collaboration. Altair One™ provides a single cloud-based platform for dynamic, collaborative access to simulation and data analytics technology along with scalable computing resources to power it. Altair Material Data Center™ (AMDC) built for Altair One provides access to multi-domain material properties to create sustainable, efficient, minimum weight designs. The first part of the presentation will provide an overview of Altair One.

The rest of the presentation will focus on Altair Inspire™, a platform for simulation driven design for manufacturability. Inspire includes end-to-end solutions for industrial design, structures, motion, additive manufacturing, casting, injection molding, polyurethane foam, sheet metal forming and metal and polymer extrusion. It is fully integrated with Altair One and provides easy access to AMDC. The workflow in Inspire is tailored for designers for accelerated material and product development while taking care of manufacturability as will be illustrated through several case studies.

About the Speaker



Dr. Subir Roy has been working in the area of manufacturing process simulation for the last thirty years. Currently, as Vice President of Manufacturing Solutions, Dr. Roy's focus is to determine the technical content and coordinate the development of multi-disciplinary CAE software products

related to simulation of manufacturing processes such as stamping, 3D printing, casting, injection molding and forging.

One of Dr. Roy's main career objectives is to work towards the advancement and transfer of manufacturing simulation technology to benefit a wide spectrum of users involved with product development and process optimization. Towards this objective, aside from software, Dr. Roy has been developing and delivering technology training courses, seminars, and workshops globally for over twenty years.

During his Ph.D. at the Ohio State University, Dr. Roy developed a unique methodology for optimization of multi-stage metal forming processes by coupling non-linear finite element analysis with Micro Genetic Algorithms. Dr. Roy has been an invited lecturer at different universities, has published numerous papers in refereed journals and chaired technical sessions at reputed international conferences.

◆◆ Conveners ◆◆

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