About Workshop

Beyond the Surface: Navigating Internal Landscapes Non-Destructively with 3D X-ray Microscopy

- X-ray microscopy is a technique that utilizes X-rays to image the internal structures of objects at micron and sub-micron level in a non-destructive manner.
- This method finds diverse applications across industries by enabling detailed inspections of internal components, aiding in design optimization, defect analysis, quality control and ensuring structural integrity.
- Non-destructive imaging facilitates understanding of microstructures and assisting in formulation studies and delivery system analysis.
- Advanced image-based analysis methods provide a powerful tool to measure properties such as global and local pore, structure thickness, feature shape and orientation.
- Integrated heating/cooling platforms
- Mechanical testing stages are additional plug-ins to simulate, capture and study materials behavior and strength.

Program Schedule

Date: 22-03-2024

Session I	Introduction to the Micro-CT system, Capability and Software
Session II	Demonstration of CT scan of different materials

Registration

Prospective participants are requested to register through the following link.

https://forms.gle/Knx8ZguVHvFAsbcq7

Registration Fee: Nil

Last date for registration: **March 21, 2023**

Eligibility criteria

- Professors/Scientists/Post-Doctoral Fellows/Ph.D. Fellows
- Industry persons who are actively involved in R&D and inspection.

Resource Person

Dr. Mostafa Borji
Application Scientist,
3D X-ray Microscopy
Bruker Micro-CT N.V.
Belgium

Acknowledgment

विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

BRUKER

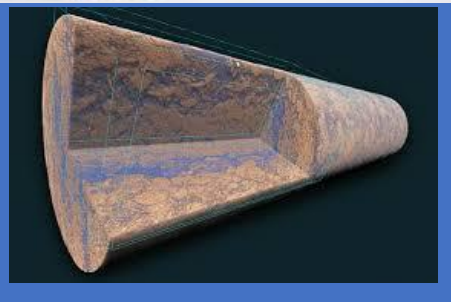
VIT®
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

One day Workshop on

Computed Tomography Applications

March 22, 2024

Organized by
School of Mechanical Engineering
VIT, Vellore –632 014



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About the Vellore Institute of Technology

Vellore Institute of Technology was founded in 1984 as Vellore Engineering College by the Founder and Chancellor Dr. G. Viswanathan. University status was conferred in 2001 by MHRD Govt. of India in recognition of its excellence in academics, research and extracurricular initiatives.

Ranking & Accreditation

Vellore Institute of Technology (VIT) has emerged as one of the best institutes of India and is aspiring to become a global leader. Quality in teaching learning, research and innovation makes VIT unique.

- Engineering and Technology subject areas of VIT are the 240th best in the World and the 9th best in India, 8 subjects of VIT are within the top 500 in the world (as per QS World University Rankings by Subject 2023).
- NAAC Accreditation with A++ grade in the 4th cycle.
- Ranked among the top 601 - 700 Universities of the world and one among the Top 3 institutions in India (Shanghai ARWU Ranking 2022).
- The 8th best University, the 11th best Research institution and the 11th best Engineering institution in India (NIRF Ranking, Govt. of India 2023).
- Ranked within the top 200 in Asia (QS - Asia University Rankings 2023).

School of Mechanical Engineering (SMEC)

The School of Mechanical Engineering is one of the oldest and most prestigious schools of VIT. This school started functioning right from 1984, the year in which our institution began. The School of Mechanical Engineering offers 3 undergraduate and 6 post-graduate programs. The school has a team of highly qualified faculty members, many holding PhDs from elite institutes across the globe, to teach and train this country's best minds. The pride of the school lies in the significant research funding received from several National and International agencies such as DST, DRDO, MNRE, CSIT, CVRDE, CPDO, IE, AR&DB, BRNS, ISRO, UGC, NRB, Royal Academy of Engineering etc.

The Department of Science and Technology, Govt. of India has recognized the school for its research activities and supported it in 2003, 2010 and 2022 under the FIST scheme. The school has modern facilities, enabling cutting-edge research in a wide spectrum of niche technological areas. Mechanical and Manufacturing Engineering is ranked within the top 10 in India and top 251-300 in the world as per QS World University Rankings by Subject 2023.