



Centenary Lecture Series-2

Dr. Lucas Lestandi Explores Fast, Inexpensive Modeling Techniques at IIT (ISM) Dhanbad's Centenary Lecture Series.

As part of the Centenary Lecture Series celebrating 100 years of academic excellence, the Department of Mechanical Engineering, IIT (ISM) Dhanbad had the privilege of hosting **Dr. Lucas Lestandi**, Associate Professor at **École Centrale Nantes, France**.

Dr. Lestandi delivered a stimulating lecture on **“From Big Data and HPC to Fast Inexpensive Models”** at the Department of Mechanical Engineering's Seminar Hall. His insightful session delved into the evolving landscape of computational modeling, emphasizing the transition from resource-intensive high-performance computing (HPC) and big data analytics to the development of rapid, cost-effective predictive models. His address highlighted new frontiers in computational efficiency that are set to transform research and industrial applications.

The event was graced by **Prof. S. Chattopadhyaya, Head of the Department (Mechanical Engineering)**, **Prof. Alok Kumar Das, Dean (Innovation, Incubation & Entrepreneurship)**, and **Prof. Nirmal Kumar Singh**, along with senior faculty members. The lecture attracted keen participation from students, researchers, and faculty, generating engaging discussions on the future of data-driven modelling.

The event was coordinated by Prof. Abhijeet Sethi, Coordinator, Centenary Lecture Series, Mechanical Engineering Department.

The Centenary Lecture Series continues to bring leading global experts to IIT (ISM) Dhanbad, inspiring innovation, interdisciplinary collaboration, and academic excellence as the institute steps confidently into its second century.



About Dr. Lucas Lestandi

Lucas Lestandi's primary research interests lie in surrogate modeling, data-driven models, deep learning for PDEs, reduced-order modeling (ROM), and tensor decomposition, with applications in computational fluid dynamics (CFD) and additive manufacturing. His work focuses on cutting edge surrogate modeling technology like Physics Based AI and Machine Learning to established approaches like projection-based ROM techniques to enhance the efficiency and accuracy of complex flow simulations and bifurcation analyses. He has also explored tensor reduction methods and interpolation ROM for high-dimensional parametric PDE systems.

Dr. Lestandi is an Associate Professor (Maître de Conférences) at École Centrale Nantes, France. He was previously a Scientist at the Institute of High-Performance Computing (IHPC), A*STAR Singapore, and a Research Fellow at Nanyang Technological University. His international research experience includes a Raman-Charpak fellowship at IIT Kanpur and continued research collaborations with A*STAR.

Dr. Lestandi's professional contributions include lead authorship of several high-impact journal publications in numerical modeling and machine learning for engineering applications. He has delivered presentations at international conferences such as WCCM and ECCOMAS. He has received competitive research grants including recent ANR-NRF joint funding. He is actively involved in teaching activities at Ecole Centrale de Nantes (Python, databases, algorithmics, data visualization, etc.), as well as supervising post grad students research in computational modeling.