Department of Mechanical and Aerospace Engineering
Indian Institute of Technology Hyderabad
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MAE Seminar Series | 06

Title:	Deep learning for mechanical systems
Speaker:	Dr. Manish Agrawal
Affiliation:	Assistant professor, IIT Ropar
Date, Time, and Venue:	14 March, 2024, 1430 – 1530 Hrs., C-LH2, IITH (Note: Online mode is not available)
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Abstract | After the emergence of deep learning (DL) tools such as ChatGPT, the evolving field of DL needs no introduction. In the last few years DL has increasingly become part of our daily life, ranging from our social media interaction to the use of smart speakers such as Alexa. The DL have also been deployed into various scientific endeavors. The development of the AlphaFold for protein folding problem is perhaps being the greatest success till now. Still the deployment of DL in scientific fields including in mechanical engineering is still in the nascent stage. In this talk, we will discuss a few examples from our work at IIT Ropar, where we have deployed deep learning techniques for various mechanical systems. We will take the examples from three domains of the mechanical engineering i.e. solid mechanics, fluid mechanics and thermodynamics field.

About the Speaker | Manish Agrawal is currently working as an assistant professor at IIT Ropar. He has done Ph.D. as well M. Tech. from Indian Institute of Science, Bangalore. Prior to the PhD, he has also worked in general motors technical center, Bangalore for five years. His primary research interests are in the area of development of the finite element strategies and application of machine learning for mechanical systems.