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Topic

High-speed in Situ X-ray Imaging to Reveal Process Dynamics in Additive Manufacturing

The quality of AM parts must be consistent from lot size one. It is thus essential to comprehensively understand the formation of defects such as pores, which require advanced methods to reveal underlying mechanisms, as associated phenomena are hidden within parts and exhibit highly dynamic behavior. High-speed synchrotron X-ray imaging reaches high spatial and temporal resolution, giving insights into highly dynamic characteristics of keyhole and melt pool during AM or welding of AM components.

About the Speaker

Graduation in Mechanical Engineering, then research assistant, group leader for laser material processing and senior engineer at the Production Technology Group at Technische Universität Ilmenau. Visiting Professor at the University of Modena and Reggio Emilia in the Department of Engineering "Enzo Ferrari" and since 09/2023 university professor for Joining and Welding Technology at BTU Cottbus.