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## Hysteresis Design of Magnetic Materials for Efficient Energy Conversion

**Tuesday, 22 Sept. 2020, 09:00 s.t., TU Darmstadt, Zoom (s. below)**



**Prof. Dr.-Ing. Thomas Niendorf**

*Institute of Materials Engineering,  
Metallic Materials,  
University of Kassel, Germany*

## Additive manufacturing of shape memory Heusler alloys

### About the speaker:

Dr.-Ing. Thomas Niendorf is Full Professor at the Institute of Materials Engineering at University of Kassel (Germany) since October 2015. Dr. Niendorf studied Mechanical Engineering at University of Paderborn (Germany). In 2010 he did his doctorate.

Dr. Niendorf's research interests are in the interrelationships of process, microstructure, mechanical properties and reliability of metallic materials. Analysis of residual stresses, microstructure evolution and fatigue performance are key aspects of research projects conducted. Materials in focus are steels, aluminum alloys, high-temperature materials, shape memory alloys as well as hybrid materials.

Research activities in the field of additive manufacturing (AM) comprise powder bed techniques (L-PBF and E-PBF) as well as laser metal deposition. Realization of microstructurally graded samples for improved functionality as well as thorough characterization of integrity and reliability of AM components are Dr. Niendorf's actual fields of research in AM.

Dr. Niendorf published more than 150 peer-reviewed papers in renowned journals. Furthermore, he holds several patents and has been invited speaker in many conferences. He has been scientific board member and session organizer in several European conferences focusing on AM. For his young career achievements he received several distinguished awards, e.g. the Heinz Maier-Leibnitz-Award by German Research Foundation.