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## Combining CFD, HPC and ML: Towards the next Generation of Flow Simulators

*Monday, November 28, 2022 9:45 AM (45 minutes)*

Andrea Beck obtained a M.Sc. degree in aerospace engineering with a focus on fluid dynamics from the Georgia Institute of Technology in Atlanta (USA) and a doctoral degree from the University of Stuttgart (Germany) in computational fluid dynamics (CFD). She held the Dorothea-Erxleben professorship at the Institute of Fluid Dynamics and Thermodynamics of the Otto-von-Guericke University in Magdeburg (Germany) from 2020 to 2022 and is currently a professor for numerical methods in fluid dynamics at the faculty of aerospace engineering and geodesy at the University of Stuttgart. Her areas of interest include numerical discretization schemes for multiscale-multiphysics problems, in particular high order methods, high performance computing and visualization, Large Eddy Simulation methods and models, shock capturing schemes, uncertainty quantification methods and machine learning. She is a co-developer of the open-source high order Discontinuous Galerkin CFD framework FLEXI. Recent fields of application include uncertainty quantification of feedback loops in acoustics, particle-laden flow in turbomachines, wake-boundary layer interaction for transport aircraft at realistic flight conditions, shock-droplet interactions and data-driven models for LES closures.

**Presenter:** PROF. DR. A. BECK

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