Contribution ID: **31** Type: **Lecture (2x45min)**

Finite Element Methods for Fluids and Dewetting

Tuesday, 29 June 2021 14:45 (1h 30m)

This lecture gives a compact introduction to the use of energetic variational methods for modeling and simulation of wetting flows. Therefore, in the first lecture, I will introduce GENERIC structures for the evolution of thermomechanical systems and motivate the use of weak formulations and finite element methods for the description and discretization of these equations. In the second lecture, I will present examples relevant for "Dynamic Wetting of Flexible, Adaptive, and Switchable Substrates" and their explicit discretization will be discussed interactively using the finite element framework FEniCS and presented using Jupyter notebooks.

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