



## ICAMS Seminar

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Monday, November 21, 4:30 p.m. ICAMS Seminar room UHW 11/1102

Mechanics of interfaces - Thermodynamically and variationally consistent approaches

Interfaces play an important role in several areas of material science. Representative examples are given by grain boundaries, twins in metals, slip planes, cracks and interfaces between coatings and substrates. Within the talk, different models suitable for the analysis of the aforementioned examples are discussed. All of them are rigorously derived from thermodynamical principles and thus, they fulfill in particular the second law of thermodynamics. Equally importantly, the approaches are naturally driven by energy minimization. More explicitly, all state variables, together with the evolution equations, are governed by this variational principle. Accordingly, the equilibrium states predicted by the models can be interpreted as stable energy minimizers.

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