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Using phase-field models to coarse-grain data sets from scanning transmission electron microscopy (12 min talk + 3 min discussion)

Wednesday, 14 April 2021 17:00 (15 minutes)

To extract transferable insights from scanning transmission electron microscopy (STEM), one must deal with noise arising from electron scattering and of the investigated sample. This noise hinders a quantitative analysis of the observation, notably when the features of interest lie in the gradients of the raw data. Physics-informed neural networks have been proposed as a means to incorporate compliance with physical equations that are chosen a priori. We show here that phase field models can help to efficiently coarse-grain STEM video sequences of phase transformations.

Poster title

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