Einladung zum Oberseminar Mathematik des Maschinellen Lernens und Angewandte Analysis

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Learning a Neural Operator for Inverse Parameter Estimation of an Electric Arc Furnace Simulation

Understanding the melting process of a constructed Electric Arc Furnace is crucial in today´s steel industry. To obtain that understanding, we utilize a controlled ODE system capable of simulating said process. Unknown parameters of the underlying furnace, that serve as input data to the ODE system, are needed to accurately simulate the melting process. Due to the complexity of the system, Inverse Parameter Estimation is not feasible. We therefore train a Neural Operator on simulation data which will then serve as a surrogate of the Forward Operator and thus make Parameter Estimation feasible.

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Zu diesem Vortrag laden wir Sie herzlich ein.

gez. Leon Bungert