







Lothar-Collatz-Seminar

Wed, 29. January $\,\cdot\,$ 16:15 $\,\cdot\,$ online

Dr. Marius Zeinhofer (Simula Research Laboratory, Oslo)

Infinite Dimensional Optimization for Scientific Machine Learning

Abstract:

This talk provides an infinite-dimensional viewpoint on optimization problems encountered in scientific machine learning and discusses the paradigm first optimize, then discretize for their solution. This amounts to first choosing an appropriate infinite-dimensional algorithm which is subsequently discretized in the tangent space of the neural network ansatz. To illustrate this point, we show that recently proposed state-of-the-art algorithms for scientific machine learning applications can be derived within this framework. Finally, we discuss the crucial aspect of scalability of the resulting algorithms.

For further information please contact

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