MS 5-6: Model reduction and scientific machine learning

Organisers
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The purpose of this mini-symposium is to explore machine learning algorithms and related numerical method that can help engineers with a variety of tasks. As a result, data flowing via computer systems for model-based engineering gains value. Our objective is to use artificial intelligence to enhance engineers' capabilities while taking into account the knowledge that is already available to engineers across computational mechanics. We believe that there will be more growth in the collaboration between data scientists and engineers. One of the goals of this mini-symposium is to speed up engineering tasks, but another is to address engineering tasks that are unaffordable in the absence of machine learning. This is particularly true for high dimensional or structured data, image-based digital twining of complex systems, uncertainty quantification… Robust, reliable or interpretable machine learning algorithms will be most welcome contributions.