

SCIENTIFIC MACHINE LEARNING FOR THE NUMERICAL ANALYSIS OF LARGE-SCALE, COMPLEX AND MULTISCALE DYNAMICAL SYSTEMS

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ABSTRACT

The minisymposium is focused on mathematical/numerical analysis foundations, and applications of scientific machine learning for large-scale, complex and multiscale dynamical systems.

Topics of interest include but not limited to:

- Numerical methods for large-scale systems
- Inverse and Forward problems for ODEs and PDEs,
- Numerical Bifurcation Analysis
- Neural Operators
- Reduced Order Models
- Explainable Machine Learning
- Deep Learning
- Manifold Learning algorithms
- Control
- Uncertainty Quantification