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PHYSICS INFORMED MACHINE LEARNING FOR SCIENTIFIC COMPUTING

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ABSTRACT

Scientific machine learning is a core component of artificial intelligence (AI) and a computational technology that can be trained, with scientific data, to augment or automate scientific applications. Scientific machine learning has the potential to transform science. Breakthroughs and major progress are enabled by investments in massive data from scientific user facilities, software for predictive models and algorithms, and high-performance computing platforms. The crosscutting nature of machine learning and artificial intelligence provides a strong incentive for formulating new research plans to maximize the capabilities and scientific benefits of research institutes. This session gathers scientific researchers who apply state-of-the-art machine learning techniques to their research to automatize, better scale, or improve the final attainable accuracy of their applications.

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