

Special Issue

Advances of HPC for AI Applications

Message from the Guest Editors

Artificial intelligence (AI) is a cross-disciplinary technology based on mathematics, computer science, linguistics, psychology, and many more domains. It allows machines to simulate human behaviour or to solve problems intelligently by training AI models using vast volumes of application data. As more and more AI applications such as personalized shopping, autonomous vehicles, facial recognition, recommendation system, and voice assistant are available in our daily lives, a significant amount of computation and storage space are needed to improve AI applications. To better serve AI applications, there is a significant amount of inter-domain studies in the High-Performance Computing (HPC) and AI communities that aim to 1) improve AI with the help of HPC techniques (i.e., “HPC for AI”) and 2) improve HPC through the use of AI techniques (i.e., “AI for HPC”). In this Special Issue, we would like to see all inter-domain research work between HPC and AI.

Guest Editors

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The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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