

Special Issue

Application of Parallel and Distributed Computing

Message from the Guest Editor

Recent advances in Big Data, AI, ML, Generative AI, and High-Performance Computing (HPC) are reshaping computational science and its applications. Together with parallel and distributed systems, cloud and edge computing, and scalable algorithms, these technologies provide powerful tools to address complex, large-scale, and data-intensive challenges. Applications span diverse domains, including scientific simulations, weather forecasting, financial modeling, operations, and smart cities, where intelligent and generative approaches enable data-driven decision-making, efficiency, and creativity. This Special Issue seeks to bring together cutting-edge research on foundational methods, novel algorithms, innovative architectures, frameworks, and practical implementations in parallel and distributed computing. Application-oriented contributions are encouraged, particularly those that demonstrate how advances in computational science and generative AI can be translated into impactful real-world outcomes. By bridging theory and practice, this collection aims to advance the state of the art and provide insights broadly applicable across multiple domains.

Guest Editor

Dr. Xiaorong Li

Department of Advanced Computing, Singapore Institute of Technology, ICT, 13 New Punggol Rd., Singapore 829979, Singapore

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
mathematics@mdpi.com

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