Department of Electrical Engineering
香港城市大學
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CityU Architecture Lab for Arithmetic and Security (CALAS) Seminar Series

Solving Extreme-Scale Problems on Sunway Supercomputers

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Abstract:

Defined as the fastest computers in the world by the name, supercomputers have been important tools for making scientific discoveries and technology breakthroughs. In this talk, we will introduce a series of Sunway Supercomputers, which demonstrate a superb example of integrating tens of millions of cores into a specific scientific or engineering problem, and bringing chances for widening our knowledge boundary. We would also provide examples on solving extreme-scale problems on Sunway supercomputers, in the domain of climate modeling, earthquake simulation, quantum simulation, understanding of satellite images, etc. Through these examples, we discuss the key issues and important efforts required for bridging the computing power and the major challenges that we face.

Biography:

Haohuan Fu is a Professor in the Department of Earth System Science, Tsinghua University, and the deputy director of the National Supercomputing Center in Wuxi. Fu has a PhD in computing from Imperial College London. His research work focuses supercomputing software, leading to three ACM Gordon Bell Prizes (non-hydrostatic atmospheric dynamic solver in 2016, nonlinear earthquake simulation in 2017, and random quantum circuit simulation in 2021).

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