



Introduction to Parallel Algorithms

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Abstract: Parallel processors are ubiquitous nowadays and it is almost impossible to find a single-core processor, probably other than a toaster. However, very few courses and online materials cover the basic knowledge for designing parallel algorithms. This talk consists of two parts. The first part will overview the key idea for parallel computing and programming, such as the computational and programming models for parallel algorithms, and the key concept of the scheduler. The second half of this talk will overview some of the most exciting advancements in parallel algorithm research in recent years, and introduce promising research topics in this scope.

Speaker Bio: Yan Gu is an Assistant Professor in the Computer Science and Engineering (CSE) Department at the University of California, Riverside (UCR), since 2020. Prior to that, he was a postdoc associate at MIT CSAIL in 2019. Before that, he received Ph.D. degree and Bachelor's degree from Carnegie Mellon University in 2018 and Tsinghua University in 2012, respectively, both in computer science. His research interest is algorithm design, broadly on both the most canonical problems, and applications in databases, machine learning, graphics, architecture, etc. He has received the Outstanding Paper Award from SPAA and Memorable Paper Award Finalist at NVMW. He is also looking for self-motivated Ph.D. students with solid math and programming background.

Chengdu Algorithms and Logic Seminar is a series of online seminars organized by School of Computer Science and Engineering, University of Electronic Science and Technology of China, and School of Computer Science, University of Auckland that aims to promote collaborations in a broad range of topics in algorithms and logic.

Organizers: Bakhodyr Khoussainov, Jiamou Liu, and Mingyu Xiao

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