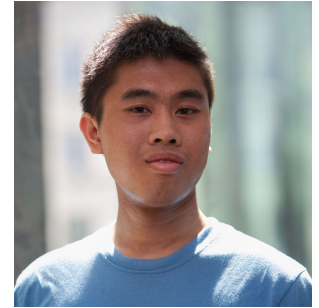


COMPUTING@PNNL SEMINAR SERIES
PRESENTS

DR. JULIAN SHUN



High-Performance Frameworks for Static and Streaming Graph Processing

Learn about MIT's recent work on high-level frameworks for parallel graph processing, for both static graphs and streaming graphs. Prof. Julian Shun will present on GraphIt, a domain-specific language that separates algorithm logic from performance optimizations to achieve high performance across different static graph algorithms and datasets, as well as Aspen, a framework for processing streaming graphs that introduces a new purely-functional compressed tree data structure to enable graph queries and updates to be performed concurrently with low latency. MIT's solutions provide high-level programming interfaces that simplify the task of writing parallel graph programs, while achieving high performance at the same time.

Julian Shun is the Douglas T. Ross Career Development Assistant Professor of Software Technology in EECS and CSAIL at Massachusetts Institute of Technology (MIT). Prior to coming to MIT, he was a Miller Research Fellow at the University of California (UC) Berkeley. He received his Ph.D. from Carnegie Mellon University and his B.A. from UC Berkeley. His research focuses on the theory and practice of parallel algorithms and programming frameworks. He has received the NSF CAREER Award, DOE Early Career Award, ACM Doctoral Dissertation Award, CMU School of Computer Science Doctoral Dissertation Award, Facebook Graduate Fellowship, Google Faculty Research Award, and best paper awards at PLDI and SPAA, and best student paper award at DCC.

Wednesday, August 26

10:00 – 11:00

Zoom Webinar