

Yuduo Wu

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EDUCATION

University of California, Davis Master of Science, Electrical and Computer Engineering Advisor: Professor John D. Owens Research: Parallel Computing (GPGPU), Graph Analytics Thesis: "Performance Characterization of High-Level Programming Models for GPU Graph Analytics"	Davis, CA 2013 - 2015
Macau University of Science and Technology Bachelor of Science, Electronic Information Technology	Taipa, Macau 2009 - 2013

EMPLOYMENT

Software Engineer IBM, Cloud Division, San Jose, CA - Build robust server and client side code for IBM Bluemix platform based cloud applications - Design and implement REST APIs, command line interface Microservices in Python and Golang - Develop OpenStack-powered DNS, security groups, and private network peering services	Sept 2015 -
Graduate Student Researcher Department of Electrical and Computer Engineering, University of California, Davis, CA - Implemented Boruvka's parallel minimum spanning tree algorithm on GPU with C++/CUDA - Achieved up to 120X speedup against a popular serial implementation (Boost graph library) - Developed and maintained an open source library (Gunrock) for large-scale graph analytics - Characterized and analyzed GPU graph analytics' high-level parallel programming models	Dec 2013 - Sept 2015
Summer Internship (xDATA Workshop) Defense Advanced Research Projects Agency (DARPA), Arlington, VA - Built high-level pure C and Python interfaces for Gunrock to facilitate external developers - Implemented graph algorithms to compute attributes and generated JSON for visualization	Jun - Sept 2014, 2015

AWARDS & HONORS

IBM Manager's Choice Award , IBM	May 2016
Distinguished Paper Award , Principles and Practice of Parallel Programming (PPoPP'16)	Mar 2016
IBM Solutions Excellence Award (EA) , IBM	Dec 2015
Best Paper Finalist , IEEE International Symposium on Workload Characterization (IISWC'15)	Oct 2015
Nam Kwong Academic Year Scholarship , Nam Kwong (Group) Co., Ltd, Macau	Sept 2012
Crystal Cup Award , Top 3 in GPA, Macau University of Science and Technology	Sept 2011, 2012, 2013
Dean's Honor List Scholarship , Macau University of Science and Technology	Sept 2011, 2012, 2013

SKILLS

Familiar: Python, C/C++, Golang, Git, L^AT_EX, Shell/Bash scripting, JavaScript, Unix/Linux
Prior Experience: CUDA, R, Java, Haskell, MATLAB, MySQL, Caffe, Spark, Node.js, Scala

CERTIFICATIONS

Big Data Spark Foundations , IBM	Jun 2016
API Management Concepts , IBM	May 2016
edX Verified Certificate for Scalable Machine Learning , edX	July 2015

PUBLICATIONS

Refereed Publications

Yangzihao Wang, Andrew Davidson, Yuechao Pan, Yuduo Wu, Andy Riffel, and John D. Owens. "Gunrock: A High-Performance Graph Processing Library on the GPU". In *Proceedings of the 21st ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming*, PPOPP 2016, pages 11:1-11:12. March 2016. Distinguished Paper.

Yuduo Wu, Yangzihao Wang, Yuechao Pan, Carl Yang, and John D. Owens. "Performance Characterization of High-Level Programming Models for GPU Graph Analytics". In *IEEE International Symposium on Workload Characterization*, IISWC 2015, pages 66-75. October 2015. Best Paper finalist.

Other Publications

Yuechao Pan, Yangzihao Wang, Yuduo Wu, Carl Yang, and John D. Owens. "Multi-GPU Graph Analytics". CoRR, abs/1504.04804(1504.04804v2), April 2016.

Yuduo Wu. "Performance Characterization of High-Level Programming Models for GPU Graph Analytics". *ProQuest (Master's thesis at University of California, Davis)*, September 2015.

LEADERSHIP & SERVICE

Vice President	2012 - 2013
IEEE Student Branch of Macau University of Science and Technology Managed IEEE student members and organized academic activities.	
Coordinator	2011 - 2012
Macau Volunteer Group Volunteered to teach rural elementary students and organized voluntary work.	