Yihan **Pang**

pyihan1@vt.edu

Education

Virginia Tech (Virginia Polytechnic Institute and State University) — *Blacksburg, Virginia*

M.S. in Computer Engineering — *Aug. 2016 - Sept. 2019*

Thesis: *Leveraging Processor-Affinity for Improved Performance in Heterogeneous-ISA Systems*

GPA: 3.8

Virginia Tech (Virginia Polytechnic Institute and State University) — *Blacksburg, Virginia*

B.S. in Computer Engineering; Minor: Math & Cybersecurity — *Aug. 2011 - Dec. 2015*

GPA: 3.8 Rank: 7

Honors & Awards

2011-2014 **Dean's List**, Virginia Tech — *Blacksburg, VA*

2016-2019 **Full Tuition Scholarship**, Virginia Tech — *Blacksburg, VA*

Peer-Reviewed Publications

Quantifying Memory Underutilization in HPC Systems and Using it to Improve Performance via Architecture Support — *MICRO 2019*

Gagandeep Panwar*, Da Zhang*, Yihan Pang*, Mai Dahshan, Nathan DeBardeleben, Binoy Ravindran, Xun Jian — *Oct. 2019*

*Co-first Author

Cross-ISA Execution of SIMD Regions for Improved Performance — *SYSTOR 2019*

Yihan Pang, Robert Lyerly, Binoy Ravindran — *June,2019*

Working Experience

System Software Research Group (SSRG), ECE Dept@Virginia Tech — *Blacksburg, VA*

Graduate Research Assistant, Supervised by Dr. Binoy Ravindran — *Aug. 2016 - Oct. 2019*

- Designed operating systems extension for Instruction Set Architecture (ISA)-diverse multi/many-core architectures
- Developed compiler, system, and scheduler support to improve system performance
- Funded by ONR Grants: N00014-13-1-0317, N00014-16-1-2711, and N00014-18-1-2022
  NAVSEA/NEEC Grants: 3003279297, and N00174-16-C-0018

High-performance, Energy-efficient, Assured Processing (HEAP) Lab, CS Dept@Virginia Tech — *Blacksburg, VA*

Graduate Research Assistant, Supervised by Dr. Xun (Steve) Jian and Dr. Binoy Ravindran — *July. 2018 - Sept. 2019*

- Investigated memory underutilization problem in HPC Systems
- Designed and developed architectural and OS support to boost microarchitecture performance
- Funded by ONR Grant: N00014-16-1-2711

ECE Dept@Virginia Tech — *Blacksburg, VA*

Graduate Teaching Assistant, ECE 4534 Embedded System Design — *Aug. 2016 - May. 2017*

- Supervised over 100 students in their senior capstone class over two semesters

Investment Banking and Asset Management Dept@Bank of China Head Office — *Beijing, China*

Summer Intern — *Jun. 2016 - Aug. 2016*

- Developed program that analyzes investor location patterns
- Assisted in developing a mathematical model that predicts primary market return based on regress analysis

ECE Dept@Virginia Tech & Lockheed-Martin — *Blacksburg, VA*

Undergraduate Research Assistant, Supervised by Dr. Richard N. Pedersen — *Aug. 2015 - May. 2016*

- Analyzed advanced switching circuits implemented in FPGAs
- Investigated techniques for optimizing Benes-Clos Networks
- Designed and implemented three variations of Benes-Clos Network
- Evaluated theoretical and empirical results

ECE Dept@Virginia Tech *Blacksburg, VA*

Undergraduate Teaching Assistant, ECE 4534 Embedded System Design *Aug. 2015 - Dec. 2015*

- Designed milestone modules for future students

ECE Dept@Virginia Tech *Blacksburg, VA*

Undergraduate Research Assistant, Supervised by Dr. Cameron D. Patterson and William T. Baumann *Aug. 2015 - Dec. 2015*

- Designed and developed lab modules that exploited vulnerabilities in embedded system's camera module
- Designed and developed lab modules that exploited vulnerabilities in embedded system's configuration channel
- Funded by NSF Grant Number: CNS-1222656

Skills

Software Frameworks LLVM, Gem5, DRAMSim2, Ramulator
Programming Languages C, C++, Bash, Python
Linux Kernel Subsystems Memory Management, Scheduler

Professional Activities

Professional Membership IEEE