# Yifan Yuan

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## Educational Backgrounds

- MS/PhD, Department of Electrical and Computer Engineering, UIUC     *August 2017 – Present*
  - Major: Computer Architecture and System
  - Advisor: Prof. Nam Sung Kim
- Bachelor, Institute of VLSI Design, Zhejiang University     *September 2014 – June 2018*
  - Major: Electronic Information Engineering

## Research Interest

- In-Network Computing, High-Performance Network Platform
- FPGA and Accelerator Design

## Publications

- **Y. Yuan**, Y. Wang, R. Wang, J. Huang. HALO: Accelerating Flow Classification for Scalable Packet Processing in NFV, *ISCA'19*
- Y. Li*, **Y. Yuan**\*, I. Liu, D. Chen, A. Schwing, J. Huang. Accelerating Distributed Reinforcement Learning with In-Switch Computing, *NSDI'19 poster, ISCA'19 paper* (∗: Equal contribution)
- X. Wang, **Y. Yuan**, Y. Zhou, C. C. Coats, J. Huang. Project Almanac: A Time-Traveling Solid-State Drive, *EuroSys'19*
- Y. Li, J. Park, M. Alian, **Y. Yuan**, Q. Zheng, P. Pan, R. Wang, A. Schwing, H. Esmaeilzadeh, N. S. Kim. A Network-Centric Hardware/Algorithm Co-Design to Accelerate Distributed Training of Deep Neural Networks, *MICRO'18*

## Patents

- R. Wang, **Y. Yuan**, Y. Wang, T.-Y. C. Tai. Techniques for Data Consistency and Durability over Distributed Persistent Memory System, *US Patent App. 62/884,095, filed Aug. 2019*
- R. Wang, A. J. Herdrich, T.-Y. C. Tai, Y. Wang, R. Kondapalli, A. Bachmutsky, **Y. Yuan**. Offload of Data Lookup Operations, *US Patent App. 16/207,065, filed Nov. 2018*

## Internships

- Intel Labs     *May 2019 – August 2019*
     *May 2018 – August 2018*
  - Networking Performance Lab, Hillsboro, OR
  - Conducted research on next generation high-performance network platform and I/O system.

## Selected Course Projects

- Eavesdrop User Activities over Encrypted Network Traffic with Deep Learning     *March 2019 – May 2019*
- Near-Storage Accelerator for Vertex-Centric Graph Computing     *March 2018 – May 2018*
- Profiling and Acceleration of Embedded System's Networking     *October 2017 – December 2017*
- FLANN Extension of High-Performance Approximate Search     *April 2017 – June 2017*
- FPGA-Based Visible Dual-Track Air-Guitar     *September 2016 – November 2016*

## Skills and Techniques

- *Programming languages:* C/C++, Verilog HDL, VHDL, Shell script, Matlab, Python, LaTeX, etc.
- *Development skills:* FPGA, Unix/Linux, CUDA, gem5 simulator, sniper simulator, etc.

## Selected Courses

- Computer Architecture; Advanced Memory and Storage System; Distributed System; Advanced Computer Networks; Applied Parallel Programming; System-on-Chip Design; Introduction to VLSI Design; Digital System Design; Embedded System; Artificial Intelligence

## Awards and Honors

- OSDI'18 Student Travel Grant                                              *2018*
- Scholarship for Academic Excellence                                       *2016*
- Third Prize in University Robot Contest                                    *2016*
- Scholarship for Academic Excellence                                       *2015*