Gefei Zuo

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Education

University of Michigan   *Sep.2018 – present*
    Ph.D. student in Computer Science and Engineering
- GPA 3.89/4.00

University of Science and Technology of China (USTC)   *Sep.2014 – Jun.2018*
    B.E. in Computer Science, in the Special Class for the Gifted Young (SCGY)
- Cumulative GPA 3.75/4.30, Rank 15/140
- Enrolled in the Talent Program in Computer and Information Science and Technology

Research Experience

Graduate Student Research Assistant, advised by Prof. Baris Kasikci   University of Michigan
    Hardware-assisted Debugging   *May.2019 – present*
Find the tradeoff between record & replay (online, heavyweight) and symbolic execution (offline, computation intensive)
    NVM File-Indexing Structures Analysis   *Dec.2018 – present*
Analyse the impact of file-indexing structures on current NVM filesystems.
    Hypervisor for Shared-Memory FPGA Platforms   *Oct.2018 – present*
A virtualization solution for emerging FPGA platforms. It enables processes in guest VM share the same view of virtual memory to circuits on FPGA.

System Group Intern, instructed by Lintao Zhang   Microsoft Research Asia
    Efficient and Scalable Total-Order Message Scattering in Datacenter Network[1]   *Jul.2017 – Oct.2017*
- Offload reordering and buffering to endhost: separate control plane from data plane.
- Readily deployable: applicable to programmable switches, commodity switches or endhosts only.
- Accelerate distributed transactional processing by 10X with little overhead.

Soft Robot Lab, instructed by Xiaoping Chen   Univ. of Science and Tech. of China
    Whole manipulator control in constrained environments[2]   *Dec.2016 – Mar.2017*
- Extend traditional Jacobians method with new constraints, take obstacle's information into account.
- Enable our softrobot work in environments with obstacles.

Publications

[1]**Near-Optimal Total Order Message Scattering in Data Center Networks**
Gefei Zuo
SOSP'17 Student Research Competition
[2]**Whole manipulator control in constrained environments**
*Dengyuan Wang, Xiaotong Chen, **Gefei Zuo**, Xinghua Liu, Zhanchi Wang, Hao Jiang and Xiaoping Chen*
RiTA 2017

Project Experience

USTC Freeshell   Univ. of Science and Tech. of China
    Maintainer   *Sep.2014 – Jul.2017*
- An IaaS service for students to learn and use Linux, supporting various Linux distributions.
- Utilize OS level virtualization (OpenVZ), distributed storage (Ceph), dynamic routing (RIP).

USTC Open Source Software Mirror   Univ. of Science and Tech. of China
    Maintainer   *Jul.2015 – Mar.2017*
- It is one of the largest open-source software mirrors in China.
- It hosts 25 TiB+ content and generates 10 TiB+ network traffic per day.
- Deal with many kinds of performance or software/hardware issues.

Honors and Awards

SOSP'17 Student Research Competition (Undergraduate Category), the Second Place   *Oct.2017*
USTC Outstanding Student Scholarship (Grade 2)   *2016, 2017*

Skills

Programming: C/C++, Python, Matlab, Bash, Verilog
Github: https://github.com/Alkaid-Benetnash