

Shuwen (Jethro) Sun

CONTACT INFORMATION	270 Babcock St, 7-C Boston, MA, 02215	+1-617-816-1771 shwsun[at]cs.bu.edu shsun[at]redhat.com
RESEARCH INTERESTS	Systems and Networking	
EDUCATION	Boston University , Boston, MA <i>M.S., Computer Science,</i> <i>Sept. 2015 - May 2017</i> <ul style="list-style-type: none"> • Selected Courses: <i>Grad Computer Networks, Cloud Computing, Operating Systems, Advanced Algorithms, Distributed Systems, Data Science Tools, Advanced Networking</i>¹ Sun Yat-sen University , Guangzhou, China <i>B.Eng., Software Engineering,</i> <i>Sept. 2011 - July 2015</i> <ul style="list-style-type: none"> • Selected Courses: <i>Compilers, Database Management Systems, Data Structure, Object-Oriented Software Principles</i> 	
RESEARCH EXPERIENCE	Red Hat Engineering <i>June 2017 - Sept. 2017</i> <i>BU MOC Research Internship</i> Invited research intern position as a part of the BU MOC Research group. Belonging to Tracing and Monitoring research group, I am trying to understand the casual behaviors of distributed applications, and creating tools or frameworks to help people understand the cloud services. Host: <i>Jan Mark Holzer</i> Supervisor: <i>Prof. Orran Krieger & Dr. Raja R. Sambasivan</i> Massachusetts Open Cloud, Boston University <i>Sept. 2016 - May 2017</i> <i>Direct Study</i> Worked with Prof. Rodrigo Fonseca, Da Yu, Dr. Raja R. Sambasivan and Dr. Jason Hennessey on Network Exchange project. This is a continuing work of a HotCloud'16 paper. I am also serving as a core contributor to the HIL project. Supervisor: <i>Prof. Orran Krieger & Prof. Rodrigo Fonseca</i> Massachusetts Open Cloud, Boston University <i>May 2016 - Aug. 2016</i> <i>Research Internship</i> Worked with Prof. Krieger, Prof. Peter Desnoyers, and Dr. Jason Hennessey on various topics related to Hardware Isolation Layer project. Supervisor: <i>Prof. Orran Krieger</i> Computer Network and Information Security Lab, Sun Yat-sen University <i>Feb. 2014 - June 2015</i> <i>Research Assistant</i> Research on applications of networking, especially Software Defined Networking and OpenStack. Also, assisted in deployment and development of cloud desktop application. Supervisor: <i>Prof. Wushao Wen</i>	
WORKING PAPERS	NetEx: Enabling Diversity in Cloud Networks <i>Sept. 2016 - Now</i> <i>Da Yu, Luo Mai, Shuwen Sun, Raja Sambasivan, Jason Hennessey, Piyanai Saowarattitada, Rodrigo Fonseca, Orran Krieger</i> Pythia: Just-in time instrumentation to help diagnose performance problems <i>Jan. 2017 - Now</i> <i>Raja Sambasivan, Shuwen Sun, et al.</i>	

¹It is a phd level course taught by Prof. Rodrigo Fonseca at Brown University. I am not officially enrolled.

SELECTED
PROJECTS

AWS EC2 Spot Instance Price Analysis

Sept. 2016 - Dec. 2016

CS 505, Boston University

Description: Use Data Science methods to understand Amazon EC2 Spot Instances marketplace. Specifically, we applied Pearson's Statistical Correlation, and Hierarchical clustering with Dynamic Time Warping to analyze the co-relations between various parameters while the bidding process.

(This is a joint work with Konstantino Sparakis)

DISCOS over FIFOS over MEMOS

Jan. 2016 - Apr. 2016

CS 552, Boston University

Description: A full operating system built from the ground includes: a bootloader that probes the system BIOS and reports the amount of physical memory, a non-preemptive or preemptive kernel, virtual memory, and abstraction of files and directories on top of ram disk.

Cloud vSwitch

Jan. 2016 - Apr. 2016

CS 591, Boston University

Description: A cross-platform virtual switch in cloud providing a virtual LAN between widely separated machines.

Splay Tree - Self-adjusting BST

Sept. 2015 - Dec. 2015

CS 520, Boston University

Description: Using ATS to implement a self-adjusting BST-based splay tree. Functional programming language features like dependent types and type-checking are adopted.

SKILLS

Platforms: Linux/UNIX, Mac OS X

Programming languages:

- Python 2/3
- Go: golang programming in distributed systems
- C: Linux kernel programming
- C++
- Bash

Tools: Mininet, Wireshark, Unix CLI, L^AT_EX, Data Science/ML Toolchains (in Python)

AWARDS

Travel Grant Awards

- Awarded NSF Student Travel Grant for ACM SIGCOMM'17, UCLA, Los Angeles, CA *Aug. 2017*
- Awarded Student Grant to attend USENIX ATC'16 and HotCloud'16, Denver, CO *July 2016*

Student Awards - SYSU

- Second-class Scholarship for Outstanding Students (Top 10%) *Sept. 2014*
- Certificate of Advanced Level in the Application Development of Corporate Server (IBM University Program) *May 2014*
- Award of Excellence in the 9th Software Innovation and Application Competition *Jan. 2014*

Other Awards

- Third Prize in Mathematical Contest in Modeling *Apr. 2014*

TEACHING
EXPERIENCE

Teaching Assistant

Spring 2014

Probability and Statistics

School of Software,
Sun Yat-sen University

Undergraduate student Tutor

Summer 2014

In Probability and Statistics, Operating Systems, and Database Management System

School of Software,
Sun Yat-sen University