

# Guyue (Grace) Liu

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## CONTACT INFORMATION

PhD Student  
George Washington University  
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## RESEARCH INTERESTS

**Networking and Cloud Computing** : Software-Defined Networking (SDN), Network Function Virtualization (NFV) and Cloud Platform

## EDUCATION

**George Washington University**  
Ph.D., Computer Science, GPA: 3.9 / 4.0  
Advisor: [Timothy Wood](#)

Sept 2013 - Present

**Beijing University of Posts and Telecommunications**  
B.S., Electrical Engineering, GPA: 89.75 / 100, Rank: 4 / 145  
Thesis: *Optimizing live migration of virtual machines*

Sept 2008 - July 2012

## CONFERENCE & WORKSHOP PUBLICATIONS

**NetAlytics: Cloud-Scale Application Performance Monitoring with SDN and NFV**  
**Guyue Liu**, Michael Trotter, Yuxin Ren, Timothy Wood, Under Submission.

**Protocols to Support Autonomy and Control for NFV in Software Defined Networks**  
Ali Mohammadkhan, **Guyue Liu**, Wei Zhang, K.K. Ramakrishnan, Timothy Wood, *IEEE Conference on Network Function Virtualization & Software Defined Networks (IEEE NFV-SDN)*, Nov 2015.

**NetDefense: Scalable, Flexible and Efficient DDoS Prevention with SDN and NFV**  
**Guyue Liu**, Timothy Wood, *Workshop on Supporting Diversity in Systems Researches (Diversity'15 co-located with SOSR'15)*, Oct 2015.

**NetAlytics: Flexible and Dynamic Network Analysis Framework**  
**Guyue Liu**, Timothy Wood, *Poster in Symposium on Networked System Design and Implementation (NSDI'15 Poster)*, May 2015.

**SDNFV: Towards a Flexible and Dynamic Smart Data Plane**  
Wei Zhang, **Guyue Liu**, Ali Mohammadkhan, Jinho Hwang, K.K. Ramakrishnan, Timothy Wood. *Poster in Symposium on Networked System Design and Implementation (NSDI'15 Poster)*, May 2015.

**Virtual Function Placement and Traffic Steering in Flexible and Dynamic Software Defined Networks**  
Ali Mohammadkhan, Sheida Ghapani, **Guyue Liu**, Wei Zhang, K.K. Ramakrishnan, Timothy Wood, *IEEE International Workshop on Local and Metropolitan Area Networks (LANMAN)*, April 2015.

**Cloud-Scale Application Performance Monitoring with SDN and NFV**  
**Guyue Liu**, Timothy Wood, *IEEE International Workshop on Cloud Analytics (IWCA'15)*, March 2015.

**Topology Discovery & Service Classification for Distributed-Aware Clouds**  
Jinho Hwang, **Guyue Liu**, Sai Zeng, Frederick y Wu, Timothy Wood, *IEEE International Workshop on Cloud Analytics (IWCA'14)*, March 2014.

JOURNAL ARTICLES	<b>CloudNet: Dynamic Pooling of Cloud Resources by Live WAN Migration of Virtual Machines.</b> Timothy Wood, K.K. Ramakrishnan, Prashant Shenoy, Jacobus Van der Merwe, Jinho Hwang, <b>Guyue Liu</b> , Lucas Chaufournier, <i>IEEE/ACM Transactions on Networking</i> , Oct 2015.	
	<b>Towards a Software-Based Network: Integrating Software Defined Networking and Network Function Virtualization.</b> Timothy Wood, K.K. Ramakrishnan, Jinho Hwang, <b>Guyue Liu</b> , Wei Zhang, <i>IEEE Network</i> , May 2015.	
	<b>An Adaptive Bandwidth Allocation Algorithm for Live Migration Based on Service Features.</b> Liu Shihai, Sun Yuqing, <b>Liu Guyue</b> , <i>Chinese Journal of Computers</i> , Sept 2013.	
PROFESSIONAL EXPERIENCE	<i>Research Intern, BBN Technologies</i> • Project: Real Time Network and Application Performance Monitoring Framework • Mentor: Niky Riga	Summer 2015
	<i>Research Intern, Chinese Academy of Sciences</i> • Project: Optimizing Network Performance of Virtual Machine Live Migration • Mentors: Yuzhong Sun and Ying Song	Sept 2011 - May 2012
	<i>Summer Intern, Queen Mary, University of London</i> • Project: Elastic Message-oriented Middleware System on Top of Cloud Platform • Mentors: Yasir Alfadh1 and John Bigham	Summer 2011
TEACHING EXPERIENCE	<i>Guest Lecturer, George Washington University</i> • Global Environment for Network Innovations (GENI) Tutorial	Fall 2015
	<i>Teaching Assistant, George Washington University</i> • CSCI 2113 Software Engineering	Fall 2013 - Spring 2015
	<i>Teaching Assistant, Stony Brook University</i> • ESE 123 Introduction to Electrical and Computer Engineering • ESE 124 Computer Techniques for Electronic Design I	Fall 2012 - Spring 2013
AWARDS & HONORS	ACM Travel Grant for attending Diversity’15 and SOSP’15 USENIX NSDI Travel Grant for attending NSDI’15 First Place in 22nd GENI Engineering Conference Competition GWU 2015 SEAS R&D Showcase Finalists HP Helion OpenStack Scholarship (4 / 200) GWU Women Scholarship for attending Grace Hopper’14 ACM SIGCOMM Travel Grant for attending SIGCOMM’14 NSF Student Scholarship for GENI Summer Camp’14 First Class Academic Scholarship of BUPT Winner of Summer Research Project in London (4 / 511)	Oct 2015 May 2015 Mar 2015 Feb 2015 Dec 2014 Oct 2014 Aug 2014 July 2014 Sept 2011 July 2011
TECHNICAL SKILLS	Language: C, Python, Java, Matlab, Linux Shell Script, OpenFlow Cloud & Virtualization Platform: OpenStack, Eucalyptus, Xen, KVM, OpenvSwitch, Mininet SDN Controller & Packet Processing Library: Ryu, POX, DPDK, PR_RING	

## REFERENCES

### **Timothy Wood**

Assistant Professor, Computer Science  
George Washington University  
[timwood@gwu.edu](mailto:timwood@gwu.edu)

### **K. K. Ramakrishnan**

Professor, Computer Science and Engineering  
University of California, Riverside  
[kk@cs.ucr.edu](mailto:kk@cs.ucr.edu)

### **Niky Riga**

Network Scientist  
BBN Technologies  
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