Name：Leng Xue (冷 雪)
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Email：lengxue_2015@outlook.com

Work Experience

2020.08 – present	**Research Engineer**	**CloudBU, Huawei**

Education

2015.09 – 2020.06	**Ph.D**	**CS, Zhejiang University (ZJU)**	**Supervisor**：Prof. Yan Chen
	Research Interests： the security and reliability of SDN, microservices, resource management		
2018.10 – 2019.06	**Visiting Scholar**	**EECS, Northwestern University (NU), USA.**	
	Research Interests： the reliability of microservices	**Supervisor**：Prof. Hai Zhou	
2011.08 – 2015.06	**Bachelor**	**CS, Harbin Engineering University (HEU)**	
	Ranking：2/159	**GPA**：91.19	**CET-6**：483

Professional Experience

Academic Activity:

2019.08	**ACM SIGCOMM 2019**	Beijing, China	Poster Presentation
2018.06	**IEEE/ACM IWQoS 2018**	Banff, Canada	Paper Presentation

Peer Review:

2016, 2018, 2019	ACM Conference on Computer and Communications Security (CCS)
2018, 2019	IEEE International Conference on Distributed Computing Systems (ICDCS)
2019	European Symposium on Research in Computer Security (ESORICS)
2017, 2018	IEEE/ACM Transactions on Networking (ToN)
2016	Security and Privacy in Communication Networks (SecureCOMM)
2016	IEEE International Conference on High Performance Computing and Communications (HPCC)

Intern:

2016.05 – 2016.09	**Internship at Cisco**
	Developed an SDN controller, used for deploying and managing network for Enterprise Data Center (Alibaba)
2014.06 – 2014.08	**Internship at Dalian Neusoft**
	Developed a LAN Messaging APP, realizing multiuser instant messaging in LAN

Social:

2015.09 – 2016.06	**Minister of Postgraduate Association in CS. ZJU**
2013.09 – 2014.06	**Vice-President of Student Union in CS. HEU**

Publication

Conference:

1. **Xue Leng**, Tzung-Han Juang, Yan Chen, Han Liu. AOMO: an AI-aided Optimizer for Microservices Orchestration. In Proceedings of **SIGCOMM Posters and Demos**, Beijing, China, August 19–23, 2019

2. **Xue Leng**, Kaiyu Hou, Yan Chen, Kai Bu, Libin Song. "SDNKeeper: Lightweight Resource Protection and Management System for SDN-based Cloud." in *2018 IEEE/ACM 26th International Symposium on Quality of Service* (*IWQoS*), pp. 1-10, Banff, Alberta, Canada, June 4-6, 2018.

Journal:

1. **Xue Leng**, Kaiyu Hou, Yan Chen, Kai Bu, Libin Song, You Li. "A Lightweight Policy Enforcement System for Resource Protection and Management in the SDN-based Cloud", *Computer Networks (CN)***,** Volume 161, Issue: C, 9 October, (2019): 68-81. DOI: 10.1016/j.comnet.2019.05.022

2. Yinbo Yu, Xing Li, **Xue Leng**, Libin Song, Kai Bu, Yan Chen, Jianfeng Yang, Liang Zhang, Kang Cheng, and Xin Xiao. "Fault Management in Software-Defined Networking: A Survey", IEEE *Communications Surveys & Tutorials (COMST)*, Volume 25, Issue 4, (2019): 349-392.

3. Xiaochun Wu, Kaiyu Hou, Xue Leng, Xing Li, YinBo Yu, Bo Wu, Yan Chen, "State of the Art and Research Challenges in the Security Technologies of Network Function Virtualization", IEEE Internet Computing, Volume: 24, Issue: 1, 5 December, (2020):25-35. DOI: 10.1109/MIC.2019.2956712

4. Yan Chen, Xitao Wen, **Xue Leng**, Bo Yang, Li Erran Li, Peng Zheng, Chengchen Hu. "Optimization Framework for Minimizing Rule Update Latency in SDN Switches", *ZTE Communications*, 2018(4).

5. Xitao Wen, Kai Bu, Bo Yang, Yan Chen, Li Erran Li, Xiaolin Chen, Jianfeng Yang, and **Xue Leng**. "RuleScope: Inspecting Forwarding Faults for Software-Defined Networking", in *ACM/IEEE Transaction on Networking (ToN),* Volume 25, Issue 4, Aug. 2017: 2347-2360.

Patent:

1. **Xue Leng**, Yan Chen, Kaiyu Hou, Kai Bu, Xing Li. "一种软件定义网络下基于策略语言的云端网络资源管理控制系统" (CN108366068A) 实质审查

2. Yan Chen, Yinbo Yu, Xing Li, Kai Bu, Jianfeng Yang, **Xue Leng**. "基于差分检测的控制平面故障诊断系统及其实现方法" (CN109936479A) 已授权

Project

2018.09 – 2020.06	**Optimization of Microservices Orchestration**
	✦ A ranking-based p-batch scheduling mechanism of microservices on Kubernetes
	✦ A proactive prediction-based scaling mechanism of microservices on Kubernetes
2017.07 – 2020.12	**The 13th Five-year, National Key R&D Program of China, Special of Cyberspace Security**
	✦ Responsible for project application and implementation as a core member
	✦ Responsible for the design and implementation of active defense mechanism in SDN/NFV
2017.07 – 2020.06	**Key Research and Development Plan of Zhejiang Province**
	✦ Responsible for project application and implementation as a core member
	✦ Responsible for the design and implementation of active defense mechanism in SDN-based Cloud
2017.03 – 2019.05	**SDNKeeper**
	✦ A lightweight access control system for protecting and managing resources for SDN-based Cloud
	✦ Controlling network deployment and accessing requests to defense unauthorized attack
2015.03 – 2017.04	**RuleScope**
	✦ A detetion and troubleshoot method for Priority fault and Missing fault in SDN flow tables
	✦ **Develop Environment**：Ryu Controller, Mininet, Python
2014.08 – 2014.09	**LAN Instant Messaging Software**
	✦ Realize function of register, login, chat and record storage.
	✦ **Key Technology**：SOCKET, Multithreading Concurrency, File Storage
2014.06 – 2014.07	**Hotel Guestroom Management System**
	✦ Realize management of rooms, including UI and backstage
	✦ **Key Technology**：struts2 Framework、MVC architecture、MySQL、JAVA

Skills

Basic course:	Algorithm, Data Structure, Discrete Mathematics, OS
Language:	Python, Go, Java, HTML, MySQL
Platform:	Kubernetes, Istio, OpenDaylight, Mininet

Honors

2019.12	Award of Honor for Graduate (ZJU)
2018.12	Award of Honor for Graduate (ZJU)
2017.12	Award of Honor for Graduate (ZJU)
2016.12	Outstanding Graduate Leader Award (ZJU)
2015.12	Excellent Athlete (CS. ZJU)
2015.06	Excellent Graduate (HEU)
2014.06	Triple-A Student of Heilongjiang Province
2014.01	Excellent Volunteer of the 6th International Snow Sculpture Competition of College Students
2013.10	Pacemaker to Merit Student of HEU (10/12000)
2012, 2013.10	Advanced Individual of Summer Social Practice in HEU (2 times)
2013.05	Outstanding Youth League Cadre (HEU)
2012, 2013, 2015.05	Outstanding Youth League Member in HEU (3 times)

Awards

2019.12	Scholarship for outstanding doctoral students (ZJU)
2012.12	National Scholarship
2015.05	BaoLongDa Scholarship
2011-2015	First-Class Scholarship of HEU (7 times)
2014.10	National Innovation Research Project for College Student
2014.06	**Second-class Award** in Heilongjiang Province of the 9th "BoChuang Cap" National College Students' Embedded IoT Design Competition
2014.06	**Excellence Award** of the 5th "LanQiao Cap" National Competition for Software and Information Technology
2013.11	**First-class Award** of the 19th Science and Technology Innovation Competition of HEU
2013.09	**Third-class Award** of the 7th National College Students' IoT Innovation and Entrepreneurship Competition
2013.08	**Third-class Award** of the 3rd "SaiBaiTe Cap" National College Students' IoT Design Competition

Activity

2015.10	Javelin and 4x100 Relay in School Sports Meeting of ZJU
2015.12	Open dance performance in New Year Party of CS. ZJU
2014.01	Volunteer of the 6th International Snow Sculpture Competition of College Students
2012.07	Three-dimension Social Practice of HEU----Linxi County, Chifeng, Inner Mongolia
2013.07	Three-dimension Social Practice of HEU----Tailai County, Qiqihar, Heilongjiang
2011.12	Art Show of HEU