侯璐 ♂
个人简历

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🖥 | https://www.houlu.me
🔗 | https://github.com/houluy
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💬 | guaguade
🔴 | astrooooooo

博士论文

"面向车联网的移动云网络资源管理与优化研究"，来自 "国家自然科学基金项目"

针对车联网相关业务，利用凸优化、机器学习等工具，研究在分层云计算网络支持下的资源管理问题。

主要研究方向

物联网云平台	架构设计、实现、性能优化
LORAWAN™ 系统	协议分析、架构设计、实现、性能优化
车联网	分层车云网络资源管理与优化算法研究

核心项目经历

DSRC 协议栈与应用开发 (Sep. 2014 – June 2015)
开发

参与开发了车联网 IEEE 802.11p 通信协议的协议栈，并在 ARM 开发板上实现了碰撞预警等应用。主要开发语言——C。

物联网云平台设计与实现 (Sep. 2016 – Now)
副团队领导人

主要负责团队人员、项目进度管理，服务端鉴权认证、亚马逊 ⓐAlexa 服务接入、Elasticsearch 搜索服务构建等方面开发工作及后期部署、运维、性能测试等事宜。主要开发语言——Node.js。

LoRaWAN™ 系统设计与实现 (Oct. 2017 – Now)
团队领导人

领导团队设计实现了基于 LoRaWAN™ 协议的整套云服务系统，包括自适应数据速率 (ADR) 算法设计等。作为团队领导人，我需要负责管理项目进度、任务分配及汇总。此外，我需要把控技术方向，保证项目处于正确的轨道上。我还需要保证文档紧跟着开发进度在完善。我也负责着一部分服务的开发工作。主要开发语言——Node.js。

车联网资源分配算法研究 (Sep. 2015 – Now)
个人研究

研究性工作，通过凸优化、大数据、机器学习等理论解决车联网业务在云计算网络架构中的资源管理问题。参与了多个自然基金项目及横向项目等。主要研究语言：Python，工具：IPython，TensorFlow 等。

预期职位

1. 物联网相关 (智慧城市等) 工程或研究性岗位

2. Python 相关研发或项目管理岗位

教育经历

2014 – 2019	工学博士	专业：通信工程 北京邮电大学-智能计算与通信实验室
2010 – 2014	工学学士	专业：通信工程 北京邮电大学-信息与通信工程学院
JUNE 2019	毕业	北京邮电大学

获奖情况

2017	国家奖学金	北京邮电大学智能计算与通信实验室
2018	北京邮电大学博士生创新基金资助项目	北京邮电大学智能计算与通信实验室
2018	第二届良飞奖	北京邮电大学智能计算与通信实验室

编程技能

精通	Python🐍, Node.js⬢
熟悉	C, C++, MATLAB, LaTeX, SQL, shell, HTML
了解	Go, Rust, lisp, Javascript, Java

工作技能

服务架构设计
理解架构设计原理性知识。具有一定实践经验。

Python 开发能力
具有多年 Python 经验，运营着一个 Python 技术公众号：它不只是 Python。

机器学习
熟悉机器学习各类算法。

研究能力
具有较强的独立或协作研究能力，善于发现问题，并利用合适的工具解决问题。

团队领导力
具有一定的团队领导能力。

写作能力
具有极强的文档、报告、记录、PPT 写作和排版能力。

已发表论文

1. **Lu Hou**, Shaohang Zhao, Xiong Xiong, Kan Zheng, Periklis Chatzimisios, M. Shamim Hossain, Wei Xiang, "Internet of things cloud: architecture and implementation," *IEEE Communications Magazine*, vol. 54, no. 12, Dec. 2016, pp. 32-39. (IF = 10.435)

2. **Lu Hou**, Shaohang Zhao, Xing Li, Periklis Chatzimisios, Kan Zheng, "Design and implementation of application programming interface for Internet of things cloud," *International Journal of Network Management*, vol. 27, no. 3, June 2016. (IF = 1.118)

3. **Lu Hou**, Kan Zheng, Periklis Chatzimisios, Yi Feng, "A continuous-time Markov decision process-based resource allocation scheme in vehicular cloud for mobile video services," *Computer Communications*, vol. 118, Mar. 2018, pp. 140-147. (IF = 3.338)

4. **Lu Hou**, Lei Lei, Kan Zheng, "Design on publish/subscribe message dissemination for vehicular networks with mobile edge computing," *2017 IEEE GLOBECOM*, Dec. 2017

5. **Lu Hou**, Lei Lei, Kan Zheng, Xianbin Wang, "A Q-learning based Proactive Caching Strategy for Non-safety Related Services in Vehicular Networks," *IEEE Internet of Things Journal*, **Under review**

6. Kan Zheng, **Lu Hou**, Hanling Meng, Qiang Zheng, Ning Lu, Lei Lei, "Soft-defined heterogeneous vehicular network: architecture and challenges," *IEEE Network*, vol. 30, no. 4, July 2016, pp. 72-80.(IF = 7.23)

7. Xiong Xiong, **Lu Hou**, Kan Zheng, Wei Xiang, M. Shamim Hossain, and Sk Md Mizanur Rahman, "SMDP-based radio resource allocation scheme in software-defined internet of things networks," *IEEE Sensors Journal* vol. 16, no. 20, June 2016, pp. 7304-7314. (IF = 2.512)

8. Xiong Xiong, **Lu Hou**, Long Zhao, "A Group-Based Massive Multiple Access Scheme in Cellular M2M Networks," *Computer Communications*, vol. 121, May. 2018, pp. 44-49. (IF = 3.338)

计算机技能

精通	Microsoft Office, Git, reStructuredText, Markdown, Linux, vim HTTP, MQTT, kafka, ProtocolBuffer, gRPC, TLS, Locust Github, StackOverflow, Readthedocs ...
熟悉	Elasticsearch, Nginx, HAProxy, Redis, MySQL, MongoDB, ...

英语技能

具有熟练地听、说、读、写英语的能力

Lu Hou ♂
Curriculum Vitae

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�	https://github.com/houluy
🔗	https://www.linkedin.com/in/houlu
💬	guaguade
🔴	astrooooo

DOCTORAL RESEARCH

"Research on Resource Management and Optimization of Mobile Cloud Networks for Internet of Vehicles" from *The National Natural Science Foundation of China*

My research mainly focuses on the resource management issues in multi-layer cloud based Internet of Vehicles (IoV). Aiming at the features of IoV traffic, I proposed some key algorithms for resources optimization of communications, computing and storage with the help convex optimization, machine learning, etc.

MAJOR RESEARCH DIRECTIONS

INTERNET OF THINGS CLOUD	Architecture designs, implementations and performance optimizations.
LORAWAN™ SYSTEMS	Protocol analysis, Architecture designs implementations and performance optimizations.
VEHICULAR NETWORKS	Resource management of cloud based vehicular networks

EDUCATION

2014 – 2019	**Doctor of Philosophy**	COMMUNICATIONS ENGINEERING Intell. Comput. and Commun. Lab *Beijing Univ. of Posts and Telecom.*
2010 – 2014	**Bachelor of Engineering**	COMMUNICATIONS ENGINEERING School of Inform. and Commun. Eng. *Beijing Univ. of Posts and Telecom.*
JUNE 2019	**Graduation**	*Beijing Univ. of Posts and Telecom.*

EXPECTED POSITION

1. Engineering or researching position on IoT(such as Smart City).
2. Python related Development or project management position.

AWARDS

2017	**China National Scholarship** *Intell. Comput. and Commun. Lab* *Beijing Univ. of Posts and Telecom.*
2018	**BUPT Excellent Ph.D. Students Foundation** *Intell. Comput. and Commun. Lab* *Beijing Univ. of Posts and Telecom.*

MAJOR PROJECT EXPERIENCES

SEP. 2014 – JUNE 2015

DSRC protocol stack and applications
Developer

Participate in the development of *IEEE 802.11p* protocol stack, and implements some applications such as collision warning on ARM development board. **Major developing language: C.**

SEP. 2016 – NOW

IoT cloud
Deputy Team Leader

Responsible for the management of teammates and project schedule, the development of authentication and authorization for servers, access for Amazon **a** Alexa, searching services with Elasticsearch, and the deployment, operations and performance evaluations. **Major developing language: Node.js**.

OCT. 2017 – NOW

LoRaWAN™system
Team Leader

Leading the team to design and implement the whole LoRaWAN™system for IoT applications, including key algorithms such as Adaptive Data Rate (ADR) controls. As a team leader, I need to manage the whole project schedule, assign tasks to members and make summaries. Besides, I have to handle the technical problems and directions, making sure the project runs on the correct rail. I also need to control the documents, keeping it stick to the projects. I'm responsible for some development in this project. **Major developing language: Node.js**.

SEP. 2015 – NOW

Research on Vehicular Networks
Individual

My doctoral research throughout my Ph.D. By using convex optimization, data analyze, machine learning, etc. I tried to study the resource management issues in cloud based IoV. During the study, I've taken part in several NSFC or horizontal projects. **Major researching language: Python, major tools: IPython, TensorFlow, etc.**

PROGRAMMING SKILLS

EXPERT	Python 🐍, Node.js 🟢
INTERMEDIATE	C, C++, MATLAB, LaTeX, SQL shell, HTML, Javascript, CSS
BEGINNER	Go, Rust, lisp, Java

ENGLISH SKILLS

Able to *Listen*, *Speak*, *Read* and *Write* English skillfully.

PUBLICATIONS

1. **Lu Hou**, Shaohang Zhao, Xiong Xiong, Kan Zheng, Periklis Chatzimisios, M. Shamim Hossain, Wei Xiang, "Internet of things cloud: architecture and implementation," *IEEE Communications Magazine*, vol. 54, no. 12, Dec. 2016, pp. 32-39. (IF = 10.435)

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4. **Lu Hou**, Lei Lei, Kan Zheng, "Design on publish/subscribe message dissemination for vehicular networks with mobile edge computing," *2017 IEEE GLOBECOM*, Dec. 2017

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8. Xiong Xiong, **Lu Hou**, Long Zhao, "A Group-Based Massive Multiple Access Scheme in Cellular M2M Networks," *Computer Communications*, vol. 121, May. 2018, pp. 44-49. (IF = 3.338)

COMPUTER SKILLS

EXPERT	Microsoft Office, Git, reStructuredText, Markdown, Linux, vim, HTTP, MQTT, kafka, ProtocolBuffer, gRPC, TLS, Locust, Github, StackOverflow, Readthedocs ...
INTERMEDIATE	Elasticsearch, Nginx, HAProxy, Redis, MySQL, MongoDB, ...

WORKING SKILLS

Design on service architecture
Has knowledge on architecture design and practical experience.

Developing ability with Python
Strong ability of Python developing. Running an open techblog on WeChat.

Machine learning
Has knowledge on algorithms of machine learning.

Research
Has the ability of doing researches. Good at discovering and solving problems.

Leadership
Has the ability of leaders.

Writing
Very strong ability of writing documents, reports, records and PPTs.