

## Pengyuan Zhou

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### RESEARCH INTERESTS EDUCATION

*Edge Computing, Vehicular Network, Content Delivery Network, Information Centric Networks*

#### University of Helsinki, Finland

Expected November, 2019

PhD, Computer Science

Supervisor: *Prof.Dr.Jussi Kangasharju ([link](#)), Prof.Dr.Pan Hui ([link](#))*

#### University of Science and Technology Beijing, China

January 2015

M.Sc, Electrical Engineering

Supervisor: *Prof.Dr.Siquan Hu*

#### University of Science and Technology Beijing, China

July 2011

B.Sc, Electrical Engineering

### TECHNICAL SKILLS

**Programming :** Python, C++, Java, C, BASH, HTML5, L<sup>A</sup>T<sub>E</sub>X

**Tools/Framework :**

- Edgex Foundry (*Edge Computing*),
- Icarus (*Information Centric Networking*),
- Veins (*Vehicular Networking*),
- SUMO (*Vehicular traffic*),
- Darknet (*Object detection*)

**Develop :** Linux Kernel, Raspberry pi, IEEE 802.11p, Android application

**Language :** Chinese (*native*), English (*business, GRE(320/340)*)

### EXPERIENCE

#### Hong Kong University of Science and Technology, Hong Kong

2018.02-06

*Visiting Researcher*

Collaborated with HKUST-DT System and Media Laboratory for Edge Computing powered Vehicle Network.

Host: *Prof.Dr.Pan Hui*

#### UNINETT, Norway

2017.02-06

*Visiting Researcher*

Collaborated with UNINETT for clustering user request upon similarity to optimize CDN performance.

Host: *Prof.Dr.Otto J Wittner*

#### Ruijie Networks, China

2013-2014

*Network Engineer Intern*

Participated in National 863 subproject on SDN.

### SCHOLARSHIP

#### Marie Curie ITN Funding for PhD study

2015-2018

*CleanSky ITN, funded by the Marie-Curie-Actions within the 7th Framework Programme of the European Union (EU FP7)*

#### Master program full scholarship

2012-2015

*Rank #1 in entrance examination*

*Dept. of Electrical Engineer, University of Science and Technology Beijing (USTB)*

## PROJECTS

### Where's My Data

Academy of Finland

The project investigates distributed data management in edge computing environments, targeting Industrial Internet applications.  
PI: *Prof. Dr. Jussi Kangasharju (Univ. of Helsinki)*

2018-2019

### CleanSky ITN

Europe Union

<http://www.cleansky-itn.org/>

2014-2018

CleanSky aims to develop innovative ideas in the emerging areas within the eco-system of cloud computing.

Collaboration: Nine university of industrial institutes in Europe, China and USA. PI: *Prof. Dr. Xiaoming Fu (Univ. of Gottingen)*

## PAPER

- [In Review] Edge-facilitated Augmented Vision in Vehicle-to-Everything Network  
**P. Zhou**, T. Braud, W. Zhang, P. Hui and J. Kangasharju  
40th IEEE Real-Time Systems Symposium

RTSS'19
- [In Review] Container Scheduling Strategy for Edge Networking  
W. Wong, A. Zavodovski, **P. Zhou**, O. Waltari, and J. Kangasharju  
IEEE Global Communications Conference 2019

Globecom'19
- Enhanced Augmented Reality Applications in Vehicle-to-Edge Networks  
**P. Zhou**, W. Zhang, T. Braud, P. Hui and J. Kangasharju  
22nd Conference on Innovation in Clouds, Internet and Networks

ICIN'19
- DeCloud: Truthful Decentralized Double Auction for Edge Clouds  
A. Zavodovski, S. Bayhan, N. Mohan, **P. Zhou**, W. Wong, J. Kangasharju  
39th International Conference on Distributed Computing Systems

ICDCS'19
- ERL: Edge Based Reinforcement Learning for Optimized Urban Traffic Light Control  
**P. Zhou**, T. Braud, A. Alhilal, P. Hui and J. Kangasharju  
2019 Percom Workshop on Smart Edge Computing and Networking

SmartEdge'19
- Augmented Reality Applications in Vehicle to Edge Networks  
**P. Zhou**, W. Zhang, T. Braud, P. Hui and J. Kangasharju  
2nd ACM SIGCOMM Workshop on Mobile Edge Communications Networking

MECOMM'18
- Anveshak: Placing Edge Servers In The Wild  
N. Mohan, A. Zavodovski, **P. Zhou** and J. Kangasharju  
2nd ACM SIGCOMM Workshop on Mobile Edge Communications Networking

MECOMM'18
- Managing Data in Computational Edge Clouds  
N. Mohan, **P. Zhou**, K. Govindaraj, and J. Kangasharju  
1st ACM SIGCOMM Workshop on Mobile Edge Communications Networking

MECOMM'17
- Grouping Computational Data in Resource Caches of Edge-Fog Cloud  
N. Mohan, **P. Zhou**, K. Govindaraj, and J. Kangasharju  
ACM EuroSys Workshop on CrossCloud Infrastructures and Platforms

CrossCloud'17
- Profiling and Grouping Users to Edge Resources According to User Interest Similarity  
**P. Zhou** and J. Kangasharju  
ACM CoNEXT Workshop on Cloud-Assisted Networking

CAN'16

## ACADEMIC SERVICES

### China Europe Association for Computer Science

<http://ceacs.eu/>

Aims at promoting Industry-University-Research Collaboration in computer science between China and Europe.

Co-founder & Chair  
2017 - now

### Smart City Security Workshop (link)

To promote the communication and collaboration between Shanghai City ICT expert team and Univ. of Helsinki, Univ. of Aalto and Univ. of Turku.

Chair

### Edge Hackathon (link)

The first hackathon focusing on Edge Computing with 2000 EUR as winner prize.

Chair

### 3rd International CleanSky Conference

Organizer

### 2nd International CleanSky Summer School

Organizer

### IEEE ICC'18 CQRM

Reviewer

## TALKS

- Enhanced Augmented Reality Applications in Vehicle-to-Edge Networks  
Paper Presentation at ICIN 2019 Paris, 2019
- ERL: Edge Based Reinforcement Learning for Traffic Light Control  
Paper Presentation at SmartEdge 2019 (Percom) Kyoto, 2019
- Augmented Reality Applications in Vehicle to Edge Networks  
Paper Presentation at MECOMM 2018 (SIGCOMM) Budapest, 2018
- The era of Edge  
Introduction at Edge Hackathon Helsinki, 2017
- User Interest Profiling  
Invited talk at GI-Dagstuhl Seminar 16353 Dagstuhl, 2016
- Profiling and Grouping Users to Edge Resources  
Paper Presentation at CAN 2016 (CoNEXT) Irvine, California 2016

## TEACHING

Networked Systems and Services TA, 2018  
Univ. of Helsinki

Networked Systems and Services TA, 2017  
Univ. of Helsinki

C++ TA, 2014  
USTB

## REFERENCES

Prof.Dr.Jussi Kangasharju (link)  
University of Helsinki  
[jussi.kangasharju@helsinki.fi](mailto:jussi.kangasharju@helsinki.fi)

Prof.Dr.Pan Hui (link)  
Hong Kong University of Science and Technology, University of Helsinki  
[pan.hui@helsinki.fi](mailto:pan.hui@helsinki.fi)

Prof.Dr.Xiaoming Fu (link)  
Georg-August-University of Goettingen  
[fu@cs.uni-goettingen.de](mailto:fu@cs.uni-goettingen.de)