

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 : Java, C++, C, BASH, python, HTML5, L^AT_EX

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)*

DEMO

ARHUD

The demo shows a road test in Helsinki city center, for sharing augmented vehicular vision facilitated by edge computing.

Link: [Video](#)

Role: Major developer

SemanticSLAM

The demo shows a real test to realize SLAM and object detection simultaneously in real time via offloading to edge server.

Link: [Video](#)

Role: Sole developer

PAPER

- [In Review] Analyzing Multipath Computation Offloading for Mobile Augmented Reality: Latency, Scheduling and Optimizations
T. Braud, **P. Zhou**, J. Kangasharju and P. Hui
IEEE INFOCOM 2020
- [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
- 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
- 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
- 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
- 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
- Anveshak: Placing Edge Servers In The Wild
N. Mohan, A. Zavodovski, **P. Zhou** and J. Kangasharju

INFOCOM'20

RTSS'19

ICIN'19

ICDCS'19

SmartEdge'19

MECOMM'18

MECOMM'18

2nd ACM SIGCOMM Workshop on Mobile Edge Communications Networking

- Managing Data in Computational Edge Clouds MECOMM'17
N. Mohan, **P. Zhou**, K. Govindaraj, and J. Kangasharju
1st ACM SIGCOMM Workshop on Mobile Edge Communications Networking
- Grouping Computational Data in Resource Caches of Edge-Fog Cloud CrossCloud'17
N. Mohan, **P. Zhou**, K. Govindaraj, and J. Kangasharju
ACM EuroSys Workshop on CrossCloud Infrastructures and Platforms
- Profiling and Grouping Users to Edge Resources According to User Interest Similarity CAN'16
P. Zhou and J. Kangasharju
ACM CoNEXT Workshop on Cloud-Assisted Networking

ACADEMIC SERVICES

China Europe Association for Computer Science Co-founder & Chair
2017 - now
<http://ceacs.eu/>
Aims at promoting Industry-University-Research Collaboration in computer science between China and Europe.

Smart City Security Workshop (link) Chair
To promote the communication and collaboration between Shanghai City ICT expert team and Univ. of Helsinki, Univ. of Aalto and Univ. of Turku.

Edge Hackathon (link) Chair
The first hackathon focusing on Edge Computing with 2000 EUR as winner prize.

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

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

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