

# Pengyuan Zhou

Page: <https://zpymyyn.github.io/>  
Github : <https://github.com/zpymyyn>

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## RESEARCH INTERESTS EDUCATION

*AIoT, Edge Computing, Connected Vehicules, Mobile AR*

**University of Helsinki, Finland (world ranking: 63)**

Defense planning in Feb, 2020

*PhD, Computer Science*

Supervisor: *Prof.Dr.Jussi Kangasharju ([link](#)), Prof.Dr.Pan Hui, IEEE FELLOW ([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,  $\text{\LaTeX}$

**Tools/Framework :**

- Edgex Foundry (*Edge Computing*),
- Tensorflow, Keras, Tensorflow Federated (*Machine Learning*),
- Veins, SUMO (*Connected Vehicules*),
- Darknet (*Object detection*),
- Icarus (*Information Centric Networking*)

**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	<b>Marie Curie ITN Funding for PhD study</b> 2015-2018 <i>CleanSky ITN, funded by the Marie-Curie-Actions within the 7th Framework Programme of the European Union (EU FP7)</i>	
	<b>Master program full scholarship</b> 2012-2015 <i>Rank #1 in entrance examination</i> <i>Dept. of Electrical Engineer, University of Science and Technology Beijing (USTB)</i>	
PROJEDTS	<b>Where's My Data</b> <b>Academy of Finland</b>  The project investigates distributed data management in edge computing environments, targeting Industrial Internet applications. PI: <i>Prof.Dr.Jussi Kangasharju (Univ. of Helsinki)</i> 2018-2019	
	<b>CleanSky ITN</b> <b>Europe Union</b>  <a href="http://www.cleansky-itn.org/">http://www.cleansky-itn.org/</a> 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: <i>Prof.Dr.Xiaoming Fu (Univ. of Gottingen)</i>	
DEMO	<b>ARHUD</b>  The demo shows a road test in Helsinki city center, for sharing augmented vehicular vision facilitated by edge computing. Link: <a href="#">Video</a> Role: Major developer	
	<b>SemanticSLAM</b>  The demo shows a real test to realize SLAM and object detection simultaneously in real time via offloading to edge server. Link: <a href="#">Video</a> Role: Sole developer	
PAPERS	<ul style="list-style-type: none"> <li>• [In Revision] Edge-facilitated Augmented Vision in Vehicle-to-Everything Network <b>P. Zhou</b>, T. Braud, A. Zavodovski, Z. Liu, F. Xian, W. Zhang, P. Hui and J. Kangasharju Transactions on Vehicular Technology <b>TVT</b></li> </ul>	
	<ul style="list-style-type: none"> <li>• Multipath Computation Offloading for Mobile Augmented Reality T. Braud, <b>P. Zhou</b>, J. Kangasharju and P. Hui IEEE International Conference on Pervasive Computing and Communications Acceptance rate: 14.2%, CCF B <b>PERCOM'20</b></li> </ul>	
	<ul style="list-style-type: none"> <li>• Enhanced Augmented Reality Applications in Vehicle-to-Edge Networks <b>P. Zhou</b>, W. Zhang, T. Braud, P. Hui and J. Kangasharju 22nd Conference on Innovation in Clouds, Internet and Networks Acceptance rate: 31.3% <b>ICIN'19</b></li> </ul>	

- DeCloud: Truthful Decentralized Double Auction for Edge Clouds ICDCS'19  
A. Zavodovski, S. Bayhan, N. Mohan, **P. Zhou**, W. Wong, J. Kangasharju  
39th International Conference on Distributed Computing Systems  
Acceptance rate: 19.6%, CCF B
- ERL: Edge Based Reinforcement Learning for Optimized Urban Traffic Light Control SmartEdge'19  
**P. Zhou**, T. Braud, A. Alhilal, P. Hui and J. Kangasharju  
2019 PERCOM @ SmartEdge Workshop
- Augmented Reality Applications in Vehicle to Edge Networks MECOMM'18  
**P. Zhou**, W. Zhang, T. Braud, P. Hui and J. Kangasharju  
2018 SIGCOMM @ MECOMM Workshop
- Anveshak: Placing Edge Servers In The Wild MECOMM'18  
N. Mohan, A. Zavodovski, **P. Zhou** and J. Kangasharju  
2018 SIGCOMM @ MECOMM Workshop
- Managing Data in Computational Edge Clouds MECOMM'17  
N. Mohan, **P. Zhou**, K. Govindaraj, and J. Kangasharju  
2017 SIGCOMM @ MECOMM Workshop
- Grouping Computational Data in Resource Caches of Edge-Fog Cloud CrossCloud'17  
N. Mohan, **P. Zhou**, K. Govindaraj, and J. Kangasharju  
2017 EuroSys @ CrossCloud Workshop
- Profiling and Grouping Users to Edge Resources According to User Interest Similarity CAN'16  
**P. Zhou** and J. Kangasharju  
2016 CoNEXT @ CAN Workshop

## 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

## 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  
Paper Presentation at CAN 2016 (CoNEXT)

Irvine, California 2016

## TEACHING

Networked Systems and Services  
Univ. of Helsinki

TA, 2018

Networked Systems and Services  
Univ. of Helsinki

TA, 2017

C++  
USTB

TA, 2014

## 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)