# Pengyuan Zhou

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| **RESEARCH INTERESTS** | *Edge Computing, Vehicular Network, Content Delivery Network, Information Centric Networks* |

**EDUCATION**

**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, LATEX

**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)*

| **PROJEDTS** | **Where's My Data** | |

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**

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] Edge-facilitated Augmented Vision in Vehicle-to-Everything Network  RTSS'19
  **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  ICIN'19
  **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  ICDCS'19
  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  SmartEdge'19
  **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  MECOMM'18
  **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  MECOMM'18
  N. Mohan, A. Zavodovski, **P. Zhou** and J. Kangasharju
  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

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| **ACADEMIC SERVICES** | **China Europe Association for Computer Science** | Co-founder & Chair |
| | http://ceacs.eu/ | 2017 - now |

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

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| **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.

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| **Edge Hackathon** (link) | Chair |

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

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| **3rd International CleanSky Conference** | Organizer |
| **2nd International CleanSky Summer School** | Organizer |
| **IEEE ICC'18 CQRM** | Reviewer |

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| **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)

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| **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)
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