Pengyuan Zhou

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

EDUCATION

University of Helsinki, Finland 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, 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

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 **Academy of Finland**

The project investigates distributed data management in edge computing environments, targeting Industrial Internet applications. 2018-2019
PI:*Prof.Dr.Jussi Kangasharju (Univ. of Helsinki)*

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

PAPERS

- [In Review] Edge-facilitated Augmented Vision in Vehicle-to-Everything Network TVT
  P. Zhou, T. Braud, A. Zavodovski, Z. Liu, F. Xian, W. Zhang, P. Hui and J. Kangasharju
  Transactions on Vehicular Technology

- [In Review] Computation Handover on 5G: Algorithm and Experimentation PERCOM'20
  X. Su, **P. Zhou**, J. Kangasharju and P. Hui
  IEEE International Conference on Pervasive Computing and Communications

- Multipath Computation Offloading for Mobile Augmented Reality PERCOM'20
  T. Braud, **P. Zhou**, J. Kangasharju and P. Hui
  IEEE International Conference on Pervasive Computing and Communications
  Acceptance rate: 14.2%, CCF B

- 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
  Acceptance rate: 31.3%

- 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 — Co-founder & Chair
http://ceacs.eu/ — 2017 - now
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
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