CURRICULUM VITAE

Guangyang Zeng

School of Data Science
The Chinese University of Hong Kong, Shenzhen, Shenzhen, China
Email: zengguangyang@cuhk.edu.cn
Tel: +86 18868107119
Homepage: https://guangyangzeng.github.io

EDUCATION

- **Ph.D.**, (Sep. 2017 – Jun. 2022)
  College of Control Science and Engineering, Zhejiang University, Hangzhou, P.R.China
  Advisor: Prof. Peng Cheng.
  Co-advisor: Prof. Jiming Chen, Prof. Junfeng Wu.
  Thesis: Distributed Detection and Accurate Localization in Sensor Networks

- **B.Eng.**, (Sep. 2013 – Jun. 2017)
  College of Control Science and Engineering, Zhejiang University, Hangzhou, P.R.China
  Outstanding Graduate

WORK EXPERIENCE

- **Postdoctoral Researcher**, (Aug. 2022 – present)
  School of Data Science, The Chinese University of Hong Kong, Shenzhen, Shenzhen, P.R.China
  Advisor: Prof. Haizhou Li, Prof. Jiahu Qin, Prof. Junfeng Wu.

RESEARCH INTERESTS

Statistical inference; State estimation; Wireless sensor networks.

AWARDS AND HONORS

- Third Prize of the 16th "Challenge Cup" Extracurricular Academic and Technological Works Competition of College Students in Zhejiang Province, Zhejiang Province, China   2019
- Outstanding Graduate, Zhejiang University, China   2017
- Second Prize of Mathematical Modeling Competition of Zhejiang University, Zhejiang University, China   2016
- Third-class Scholarship for Outstanding Students, Zhejiang University, China   2014, 2015
- First Prize of Physics Innovation Competition for College Students in Zhejiang Province, Zhejiang Province, China   2014

PROJECTS

- Research on High-precision Localization Algorithm for Industrial Site Level Inspection Robots, Open Research Project of the State Key Laboratory of Industrial Control Technology, No. ICT2023 B45, Jul. 2023–Dec. 2023 (head).
- Small UAV Intrusion Detection Based on Swarm Intelligence Perception, National Natural Science Foundation of China, No. 61772467, Jan. 2018–Dec. 2021 (participant).
- Cross-Media Intelligent Monitoring for "Low-Slow-Small" Aircraft, The Fundamental Research Funds for the Central Universities, No. 2018FZA5008, Jan. 2018–Dec. 2018 (participant).

JOURNAL PAPERS

[1] **Guangyang Zeng**, Biqiang Mu, Ling Shi, Jiming Chen, and Junfeng Wu, "Consistent and Asymptotically Efficient Localization from Range-Difference Measurements", *IEEE Transactions on Information Theory*, Dec. 2023, DOI: 10.1109/TIT.2023.3343347.

[2] **Guangyang Zeng**, Biqiang Mu, Jiming Chen, Zhiguo Shi, and Junfeng Wu, "Global and Asymptotically Efficient Localization from Range Measurements", *IEEE Transactions on Signal Processing*, vol. 70, pp. 5041–5057, Aug. 2022.

[3] **Guangyang Zeng**, Biqiang Mu, Jieqiang Wei, Wing Shing Wong, and Junfeng Wu, "Localizability with Range-Difference Measurements: Numerical Computation and Error Bound Analysis", *IEEE/ACM Transactions on Networking*, vol. 30, no. 5, pp. 2117–2130, Apr. 2022.

[4] **Guangyang Zeng**, Xiaoqiang Ren, and Junfeng Wu, "Low-complexity Distributed Detection with One-bit Memory Under Neyman-Pearson Criterion", *IEEE Transactions on Control of Network Systems*, vol. 9, no. 1, pp. 2–13, Mar. 2022.

CONFERENCE PAPERS

[1] **Guangyang Zeng**, Shiyu Chen, Biqiang Mu, Guodong Shi, and Junfeng Wu, "CPnP: Consistent Pose Estimator for Perspective-n-Point Problem with Bias Elimination", *IEEE International Conference on Robotics and Automation (ICRA)*, London, UK, May 2023, pp. 1940-1946.

[2] **Guangyang Zeng**, Junfeng Wu, Xiufang Shi, and Zhiguo Shi, "A Novel Decision Fusion Scheme with Feedback in Neyman-Pearson Detection Systems", *The 56th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, Urbana-Champaign, USA, Oct. 2018, pp. 647–653.

SUBMITTED PAPERS

[1] **Guangyang Zeng**, Qingcheng Zeng, Xinghan Li, Biqiang Mu, Jiming Chen, Ling Shi, and Junfeng Wu, "Consistent and Asymptotically Statistically-Efficient Solution to Camera Motion Estimation", 2024, arXiv:2403.01174, submitted to *IEEE Transactions on Pattern Analysis and Machine Intelligence*.

[2] Xinghan Li, Haoying Li, **Guangyang Zeng**, Qingcheng Zeng, Xiaoqiang Ren, Chao Yang, and Junfeng Wu, "Efficient Invariant Kalman Filter for Inertial-based Odometry with Large-sample Environmental Measurements", 2024, arXiv:2402.05003, submitted to *IEEE Transactions on Robotics*.

[3] Wenliang Sheng, **Guangyang Zeng**, Jingxing Gao, Wen Yang, Junfeng Wu, and Chao Yang, "A Two-Step Method for Acoustic-n-Point Problem", 2024, submitted to *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*.

[4] **Guangyang Zeng**, Hongxu Zhao, Biqiang Mu, and Junfeng Wu, "Consistent TOA Localization Considering Sensor Position Uncertainties", 2024, submitted to *Journal of Signal Processing* (in Chinese).

PATENTS

[1] Junfeng Wu, Jiming Chen, Jieqiang Wei, and **Guangyang Zeng**, "Localizing a Target Device Based on Measurements from a Measurement Device Array", US patent, US11353541B2.

[2] Miao Li, Xingjian Wang, **Guangyang Zeng**, Zhiguo Shi, and Jiming Chen, "A Spatial Small Object Detection Method Based on Deep Learning Semantic Feature Separation", Chinese invention patent, CN116206219A (in Chinese).

[3] Junfeng Wu, Haodong Jiang, and **Guangyang Zeng**, "A Robot Pose Estimation Method Based on Ultra-wideband Wireless Range Measurement", Chinese invention patent, CN116953608A (in Chinese).

PROFESSIONAL ACTIVITIES

- IEEE Transactions on Pattern Analysis and Machine Intelligence (Reviewer)

- IEEE Transactions on Robotics (Reviewer)

- IEEE Transactions on Industrial Informatics (Reviewer)

- IEEE Transactions on Wireless Communications (Reviewer)

- IEEE/ASME Transactions on Mechatronics (Reviewer)

- IEEE Transactions on Vehicular Technology (Reviewer)

- IEEE Signal Processing Letters (Reviewer)

- IEEE Robotics and Automation Letters (Reviewer)

- 2023 IEEE International Conference on Robotics and Automation (Reviewer)