CURRICULUM VITAE

Jiang Mingrui

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Educations

M. Sc., Nanjing Tech University (NTU), Nanjing, Jiangsu *2020.09 ~ till now*

- Major : Heating, Ventilation, and Air Conditioning (HVAC), College of Urban Construction
- **Advisor** : Prof. Hao Cai
- **Average Score** : 87.8/100

B. Sc., Nanjing Tech University (NTU), Nanjing, Jiangsu *2018.09 ~ 2020.06*

- Major : Building Environment and Energy Application Engineering, College of Urban Construction
- **GPA** : 3.2/4.0

Army Engineering University, Nanjing, Jiangsu *2015.09 ~ 2018.08*

- Major : National Defense Engineering, College of National Defense Engineering

Research Projects

[1] Research on robot source localization in indoor environment with natural ventilation based on particulate matter source feature

Project Leader; the Postgraduate Research & Practice Innovation Program of Jiangsu Province, No.KYCX22_1331.

[2] A multi-robot localization method for time-varying sources in indoor environment with mechanical ventilation

Project Leader; the National Students' platform for innovation and entrepreneurship training program, No.201910291029.

Publications

[1] **Jiang, M.**, Liao, Y., Guo, X., Cai, H.*, Jiang, W., Yang, Z., ... & Liu, F. (2022). A comparative experimental study of two multi-robot olfaction methods: Towards locating time-varying indoor pollutant sources. ***Building and Environment***, *207*, 108560. **[JCR Q1]**

[2] **Jiang, M.**, Liao, Y., Jiang, W., Yang, Z., Cai, H.*, Feng, Q., ... & Yang, Y. (2020). Experimental study on locating periodic indoor contaminant source by using multiple robots. ***Building Science*** (04),46－52+85. **[CSDN]**

[3] Feng, Q., Cai, H.*, Yang, Y., Xu, J., **Jiang, M.**, Li, F., ... & Yan, C. (2020). An experimental and numerical study on a multi-robot source localization method independent of airflow information in dynamic indoor environments. ***Sustainable Cities and Society***, *53*, 101897. **[JCR Q2]**

[4] Yang, Y., Zhang, B., Feng, Q., Cai, H.*, **Jiang, M.**, Zhou, K., ... & Li, X. (2019). Towards locating time-varying indoor particle sources: Development of two multi-robot olfaction methods based on whale optimization algorithm. ***Building and Environment***, *166*, 106413. **[JCR Q1]**

[5] Feng, Q., Yang, Y., Deng, Y., Cai, H.*, **Jiang, M.**, Lu, J., ... & Zhang, B. (2021). Experimental and numerical validation on a multi-robot source localization method for dynamic indoor environment. ***Environmental***

Engineering (02),73－81. **[CSDN]**

Patents

[1] The Mobile robot for indoor 3D multi-environmental parameter field reconstruction
Dechang Li, Hao Cai, Suwan Zhou, **Mingrui Jiang**, Gaogui Bao, Yu Wang, Biao Zhang;
China Utility Model Patent; Publication Patent Number: CN216410255U.

[2] A mobile robot for indoor 3D multi-environmental parameter field reconstruction
Dechang Li, Hao Cai, Suwan Zhou, **Mingrui Jiang**, Gaogui Bao, Yu Wang, Biao Zhang;
China Invention Patent; Publication Patent Number: CN113295214A.

[3] A distribution map construction method based on improved two-dimensional steady-state kernel DM+V/W
Hao Cai, Suwan Zhou, Dechang Li, Gaogui Bao, **Mingrui Jiang**, Yu Wang, Biao Zhang;
China Invention Patent; Publication Patent Number: CN113240804A.

[4] A mobile robot detection system and method for a clean room
Xun Guo, **Mingrui Jiang**; Hao Cai, Axiang Chen, Yu Liao, Biao Zhang, Yu Wang;
China Invention Patent, Publication Patent Number: CN113190016A.

[5] A traceability robot that collects gas concentration and integrates airflow information for optimization
Zongxin Li, Qilin Feng, Zheli Xing, **Mingrui Jiang**, Yangbo Long, Fei Liu, Zhou Yang, Hao Cai;
China Utility Model Patent; Publication Patent Number: CN213674139U.

[6] A steady-state environment parameter field reconstruction optimization algorithm based on the two-dimensional kernel DM+V algorithm
Hao Cai, Dechang Li, Suwan Zhou, Gaogui Bao, Yu Wang, **Mingrui Jiang**, Biao Zhang;
China Invention Patent; Publication Patent Number: CN112989636A.

[7] A device for simulating human breathing gas source
Wenqing Jiang, **Mingrui Jiang**, Yu Liao, Zhou Yang, Yibin Yang, Hao Cai, Yu Wang;
China Utility Model Patent; Publication Patent Number: CN211124654U.

[8] A generation device for simulating the leakage of a container for storing dangerous gases
Zhou Yang, Yu Liao, **Mingrui Jiang**, Wenqing Jiang, Qilin Feng, Hao Cai, Yu Wang;
China Utility Model Patent; Publication Patent Number: CN210719534U.

Honors and Awards

[1] **National scholarship for Postgraduates** (2022.10)
[2] **Special-Class Academic Scholarship** (2022.10)
[3] **Merit Postgraduate** (2021.12)
[4] **Special-Class Academic Scholarship** (2021.10)
[5] **Second-Class Academic Scholarship** (2020.09)
[6] **Third Prize**, China-US Young Maker Competition, 2021 (**The National Competition**)
Mingrui Jiang, Xun Guo, Yu Liao, Axiang Chen, Biao Zhang
[7] **Third Prize**, International Contest of Innovation (iCAN), 2021 (**The National Competition**)
Mingrui Jiang, Xun Guo, Yu Liao, Biao Zhang, Axiang Chen
[8] **Third Prize**, The 7th Jiangsu "Internet +" College Student Innovation & Entrepreneurship Competition (Main

Track), 2021

Xun Guo, **Mingrui Jiang**, Yu Liao, Axiang Chen, Biao Zhang, Dingyou Hu, Xiaoyu Feng, Xiaoqian Gao

[9] **First Prize**, The 4th Jiangsu Association of Refrigeration Youth Menber Innovation & Entrepreneurship Competition, 2021

Xun Guo, **Mingrui Jiang**, Yu Liao, Axiang Chen, Biao Zhang, Xiaoqian Gao, Dingyou Hu, Xiaoyu Feng

[10] **First Prize**, Nanjing Tech University Undergraduate Science and Technology Forum, 2019

Mingrui Jiang, Yu Liao, Wenqing Jiang, Zhou Yang

[11] **Second Prize**, China-US Young Maker Competition, 2019 (**The SchoolCompetition**)

Mingrui Jiang, Yu Liao, Wenqing Jiang, Zhou Yang

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