

Xiongtao Shi

Contact Information

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Research Interests

Reinforcement Learning; K-means; Time-Serial Modeling; Multi-Agent System.

Education Background

September 2018 – July 2021 (Expected Graduation) | Master of Engineering | Central South University (School of Automation) (Ranked 16th in the mainland, China)

- **Major:** Control Science of Engineering.
- **Thesis Title:** Research on Intelligent Obstacle Avoidance Algorithm Based on Machine Learning.

September 2014 – July 2018 | Bachelor of Engineering | Yanshan University (School of Electrical Engineering) (Ranked 92nd in the mainland, China)

- **Major:** Automation.
- **Thesis Title:** Soft sensor and reinforcement learning control of key variables in multi-sampling rate and multi-model industrial processes.

Academic Publications

Journal paper

- **Xiongtao Shi**, Yonggang Li, Bei Sun, Honglei Xu, Chunhua Yang, Hongqiu Zhu, Optimizing zinc electrowinning processes with current switching via deep deterministic policy gradient learning, **Neurocomputing** (Impact Factor: 4.072), November 2019.
- **Xiongtao Shi**, Yonggang Li, Yanhua Yang, Bei Sun. Rotating consensus for double-integrator multi-agent systems with communication delay, **ISA Transactions** (JCR: Q1, IF: 4.305), Major Revision.
- **Xiongtao Shi**, Yonggang Li, Yanhua Yang, Bei Sun. Multi-models and dual-sampling periods quality prediction with time-dimensional K-means and state transition-LSTM network, **Information Sciences** (JCR: Q1, IF: 5.910), Major Revision.

Conference paper

- **Xiongtao Shi**, Yonggang Li, Bei Sun, Event-triggered for rotating consensus with double-integrator multi-agent systems, **21st IFAC World Congress (IFAC)**, July 2020.

Conference Attendances

- Presenter in the **21st IFAC World Congress (IFAC)**, July 2020, Berlin, Germany.
- Participant in the **Chinese Automation Congress (CAC)**, November, 2019, Hangzhou, China.
- Participant in **12th Chinese Nonferrous Metals Society Annual Conference**, September 2019, Chongqing, China.
- Participant in the **‘Artificial Intelligence+’ Academician Summit Forum**, December, 2018, Changsha, China.

Awards and Honors

Master. Central South University

- 1st place of **Huawei Codecraft of Wuchang Division**, 2020-2021.
- **Excellent Student Award**, 2020-2021.
- **GEM Scholarship**, 2020-2021.
- 1st prize of **Academic Scholarship for Graduate Students**, 2020-2021.
- 2nd prize of **Academic Scholarship for Graduate Students**, 2019-2020.
- 1st prize of **Academic Scholarship for Graduate Students**, 2018-2019.
- Project: ‘Control and application of Zinc acid ratio in zinc electrolysis process based on reinforcement learning’, **the Fundamental Research Funds for the Central Universities**, 2019-2020, RMB 10, 000.

Bachelor. Yanshan University

- National 2nd Prize of **the National College Students Electronic Design Competition**, 2017-2018.
- National 3rd Prize of **the National College Students Photoelectric Design Competition**, 2016-2017.
- National 2nd Prize of **the National 10th iCAN International Contest of Innovation**, 2016-2017.
- School Class Scholarship, 2016-2017.
- School Class Scholarship, 2015-2016.
- School Class Scholarship, 2014-2015.
- School Merit Student, 2014-2015.

Second Language

English (Fluent):

- Chinese Mainland’s College English Test Band 6: 465 (passed in June 2017).
- TOFEL: 81 (passed in October 2020).

Computer Skills

- Programming languages: C/C++, Python, Matlab, Latex.
- Deep learning framework: Pytorch, Keras, Tensorflow.