

WEICHANG WANG

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EDUCATION

Arizona State University *Aug. 2018 till now*
Ph.D candidate in Electrical Engineering *GPA: 3.84*

Arizona State University *Aug. 2016 - May. 2018*
M.S in Electrical Engineering *GPA: 3.96*

Huazhong University of Science and Technology *Aug. 2012 - Jun. 2016*
B.E. in Electronic Information and Information Engineering.

RESEARCH INTERESTS

My research draws on tools and concepts from **control theory**, which is broadly used to guarantee the behavior of dynamical systems, **machine learning**, which analyse the component's interaction with the dynamic environment effectively using data. I have studied decentralised system problems, which can be broadly categorized into: **Efficient resource allocation in communication networks** and **Collision avoidance resolution in robotic systems**.

PROJECTS

Information fusion for real-time national air transportation system prognostics under uncertainty

Supervisor: Prof. Lei Ying, Prof. Yongming Liu

Funded by NASA's Aeronautics University Leadership Initiative, the objectives of the proposed study are to develop an integrated real-time systemwide information fusion methodology for prognostics and safety assurance of the NAS.

PUBLICATIONS

Wang, W., Liu, Y., Srikant, R., Ying, L., 3M-RL: multi-resolution, multi-agent, mean-field reinforcement learning for autonomous UAV routing. *IEEE Transactions on Intelligent Transportation Systems* (In Press)

Wang, W., & Ying, L. (2020, March). Learning parallel markov chains over unreliable wireless channels. In *2020 54th Annual Conference on Information Sciences and Systems (CISS)* (pp. 1-6). IEEE.

Zhao, P., **Wang, W.**, Ying, L., Sridhar, B., & Liu, Y. (2020). Online Multiple-Aircraft Collision Avoidance Method. *Journal of Guidance, Control, and Dynamics*, *43(8)*, 1456-1472.

Hu, J., Yang, X., **Wang, W.**, Wei, P., Ying, L., & Liu, Y. (2020). UAS Conflict Resolution in Continuous Action Space Using Deep Reinforcement Learning. In *AIAA AVIATION 2020 FORUM* (p. 2909).

Liu, X., **Wang, W.**, & Ying, L. (2019). Spatiotemporal routing for supporting end-to-end hard deadlines in multi-hop networks. *Performance Evaluation*, *135*, 102007.

Zhao, P., Liu, Y., Ying, L., & **Wang, W.** (2019). Multiple Aircraft Collision Avoidance Method Based on ADS-B System. In *AIAA Aviation 2019 Forum* (p. 3417).

Wang, W., & Ying, L. (2018, August). Dynamic data communications for real-time information fusion. In *10th Annual Conference of the Prognostics and Health Management Society, PHM 2018*. Prognostics and Health Management Society.

SKILLS

Python Matlab CUDA C\C++ \LaTeX