Qin Yang, Ph.D.

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Education Background

01/2019 – 05/2022 **Ph.D., University of Georgia** in Computer Science
Specializing in: *Distributed Artificial Intelligence (DAI), Swarm Intelligence, Multi-Agent/Robot Systems (MAS), Robotics, and Human-Robot Interaction*
Thesis title: *Self-Adaptive Swarm System (SASS)*
Dissertation: https://github.com/RickYang2016/PhD-Dissertation-SASS

08/2017 – 12/2018 **M.Sc. Colorado School of Mines** in Computer Science.
Speciality: *Multi-Agent Systems (MAS) and Multi-Robot Systems (MRS).*

09/2008 – 07/2011 **M.Eng. Peking University** in Software Engineering.

09/2000 – 07/2004 **B.Eng. Harbin Institute of Technology** in Mechatronics.

Academic Positions and Working Experiences

01/2019 – 05/2022 **Research & Teaching Assistant/Instructor,** Computer Science Department, University of Georgia.

08/2017 – 12/2018 **Teaching Assistant,** Computer Science Department, Colorado School of Mines.

06/2017 – 08/2017 **Assistant Research Engineer,** Robotics and Artificial Intelligence Laboratory, The Chinese University of Hong Kong - Shenzhen.

05/2014 – 10/2016 **Senior Engineer & Project Manager,** Intelligent Engineering Department, China Architecture Design & Research Group.

06/2010 – 04/2014 **Electrical Engineer & Project Manager,** China Electronics Eng Design Institute.

07/2004 – 05/2010 **Electrical Engineer & Project Manager,** China Aerospace Science and Industry Corporation.

Research Publications

Conference Proceedings

1. **Yang**, **Q.**, & Parasuraman, R. (2022c). Game-theoretic utility tree for multi-robot cooperative pursuit strategy. In *2022 the 54th international symposium on robotics (isr europe)*. IEEE.
2. **Yang**, **Q.** (2021). Self-adaptive swarm system (sass). In *Proceedings of the thirtieth international joint conference on artificial intelligence, IJCAI-21* (pp. 5040–5041). Doctoral Consortium.

3. **Yang**, **Q.**, & Parasuraman, R. (2021). How can robots trust each other for better cooperation? a relative needs entropy based robot-robot trust assessment model. In *2021 ieee international conference on systems, man, and cybernetics (smc)*. IEEE.
4. **Yang**, **Q.**, & Parasuraman, R. (2020a). Hierarchical needs based self-adaptive framework for cooperative multi-robot system. In *2020 ieee international conference on systems, man, and cybernetics (smc)* (pp. 2991–2998). IEEE.
5. **Yang**, **Q.**, & Parasuraman, R. (2020b). Needs-driven heterogeneous multi-robot cooperation in rescue missions. In *2020 ieee international symposium on safety, security, and rescue robotics (ssrr)* (pp. 252–259). IEEE.
6. **Yang**, **Q.**, Luo, Z., Song, W., & Parasuraman, R. (2019). Self-reactive planning of multi-robots with dynamic task assignments. In *2019 international symposium on multi-robot and multi-agent systems (mrs)* (pp. 89–91). IEEE.

Submitted Papers

1. **Yang**, **Q.**, & Parasuraman, R. (2022a). A hierarchical game-theoretic decision- making for cooperative multi-agent systems under the presence of adversarial agents.
2. **Yang**, **Q.**, & Parasuraman, R. (2022b). Bayesian strategy network based soft actor critic in deep reinforcement learning.

Peer Review Service

Reviewer for the follows:

Journal — IEEE Robotics and Automation Letters (**RA-L**)

Conference — IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS2020**)

The 3rd IEEE International Symposium on Multi-Robot and Multi-Agent Systems (**MRS2021**)

The 2021/2022 IEEE International Conference on Systems, Man, and Cybernetics (**SMC2021/2022**)

Skills

Languages — Strong reading, writing and speaking competencies for English and Mandarin Chinese.

Coding — Python, C#, C++, C, SQL, XML/XSL, MatLab, ROS, LaTeX.

Misc. — Academic research, Teaching, Hiking, Traveling, Reading, Cooking, Watching Movies, Classic & Jazz Lover, Exploring, Thinking and Dreaming.

Miscellaneous Experience

Certification

2015 — **Certified Senior Engineer** in Electric Automatic Control System. Awarded by China Architecture Design Institute.

2009 — **Certified Engineer**. Awarded by China Aerospace Architectural Design Research Institute.