

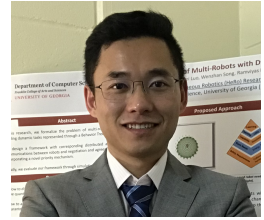
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🏠 <https://rickyang2016.github.io/>

🐙 <https://github.com/RickYang2016>

🎓 https://scholar.google.com/citations?user=t6e_A9kAAAAJ&hl=en



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://exploro.libs.uga.edu/esploro/outputs/9949451030302959>
- 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

- 10/2022 – Present 📖 **Research Scientist in Automated Driving Systems**, Automotive Products Research Laboratory, Hitachi America, Ltd.
- 01/2019 – 09/2022 📖 **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 – 05/2017 📖 **Senior Engineer & Project Manager**, Intelligent Engineering Department, China Architecture Design & Research Group.
- 06/2010 – 04/2014 📖 **Electrical Engineer & Project Manager**, China Electronics Engineering Design Institute.
- 07/2004 – 05/2010 📖 **Electrical Engineer & Project Manager**, China Aerospace Science and Industry Corporation.

Research Publications

Conference Proceedings



- 1 **Yang, Q.** (2023). Hierarchical needs-driven agent learning systems: From deep reinforcement learning to diverse strategies. In *The 37th aaaa conference on artificial intelligence and robotics bridge program*. AAAI.
- 2 **Yang, Q.**, & Parasuraman, R. (2023a). A hierarchical game-theoretic decision-making for cooperative multi-agent systems under the presence of adversarial agents. In *The 38th acm/sigapp symposium on applied computing (sac) on intelligent robotics and multi-agent systems (irmas) track*. ACM.
- 3 **Yang, Q.**, & Parasuraman, R. (2023b). A strategy-oriented bayesian soft actor-critic model. In *The 14th international conference on ambient systems, networks and technologies (ant)*. Elsevier.
- 4 **Yang, Q.**, & Parasuraman, R. (2022a). A game-theoretic utility network for cooperative multi-agent decisions in adversarial environments. In *Iros22 workshop on decision making in multi-agent systems*. IEEE.
- 5 **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.
- 6 **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.
- 7 **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.
- 8 **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.
- 9 **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.
- 10 **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. (2022b). Bayesian strategy network based soft actor critic in deep reinforcement learning.

Peer Review Service

Review Editor:

- Journal  Frontiers in Robotics and AI
-  IEEE Robotics and Automation Letters (**RA-L**)

Reviewer for the follows:

- Conference  The 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS 2020**)
-  The 3rd IEEE International Symposium on Multi-Robot and Multi-Agent Systems (**MRS 2021**)

Peer Review Service (continued)

- The 2021/2022 IEEE International Conference on Systems, Man, and Cybernetics (**SMC 2021/2022**)
- The 2023 IEEE International Conference on Robotics and Automation (ICRA) (**ICRA 2023**)
- The 22nd International Conference on Autonomous Agents and Multiagent Systems (AAMAS) Blue Sky committee member (**AAMAS 2023**)

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.