Guangliang Li

Sansha Road 1299, Qingdao, China
https://www.guangliangli.net
guangliangli@ouc.edu.cn

Research Interests

I am primarily interested in deep reinforcement learning (including interactive and inverse reinforcement learning, imitation learning, transfer learning) and its application in robotics (including social robot, mobile robot, manipulator, autonomous underwater robot etc.), machine learning and human-robot interaction.

Education

2011-2016 **Ph.D.** Informatics Institute, University of Amsterdam
Thesis Title: Socially intelligent autonomous agents that learn from human reward
Advisors: Prof. **Shimon Whiteson and Hayley Hung**

2008-2011 **MSc.** (**Enter into master study with exemption**)
School of Control Science and Engineering, Shandong University
Advisor: Prof. Sile Ma

2004-2008 **B.A.** in Automation
School of Control Science and Engineering, Shandong University

Research and Work Experience

2022-present Associate Professor, Ocean University of China
2016-2021 Assistant Professor, Ocean University of China
2017 Visiting Scholar, Honda Research Institute, Japan
2015-2016 Research Intern, Honda Research Institute, Japan
2014-2015 Visiting Student, Delft University of Technology

Honors and Awards

2024 Young Taishan Scholar Program in Shandong Province
2024 Teaching Excellence Award at Ocean University of China
2018 UBTech Prize, IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)
2018 Nanjing City Prize, IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)

2018 Excellent teacher in Ocean University of China
2016 Student Scholarship at the 15th Autonomous Agents and Multi-Agent Systems (AAMAS)
2013 Student Scholarship at the 12th Autonomous Agents and Multi-Agent Systems (AAMAS)
2007 Excellent student scholarship, Shandong University
2006 Excellent student scholarship, Shandong University
2006 National scholarship, Shandong University
2005 Excellent student scholarship, Shandong University

Grants Awarded

As Principle Investigator

2024 Robot Learning for Hybrid Intelligence, *Young Taishan Scholar*, total budget 750k Chinese Yuan (3 years)
2023 Sim-to-real Reinforcement Learning for Autonomous Underwater Robot, *Qingdao Municipal Natural Science Foundation*, total budget 200k Chinese Yuan (2 years)
2022 Pro-Social Adaptation and Personalization for Effective Mediator, *Honda Research Institute Japan (*5 years)
2018 Interactive Reinforcement Learning for Autonomous Underwater Robot, *National Natural Science Foundation of China*, total budget 298k Chinese Yuan (3 years)
2018 Autonomous Underwater Robot Obstacle Avoidance, total budget 1 million Chinese Yuan (2 years)
2018 Deep Learning for Intelligent Social Robot, *Shandong Provincial Natural Science Foundation,* total budget 140k Chinese Yuan (3 years)
2017 A Study on Social Reinforcement Learning in Multi-modal Setting, *Honda Research Institute Japan* (5 years)
2017 Human-Centered Deep Reinforcement Learning, *China Postdoctoral Science Foundation*, total budget 50k Chinese Yuan
2016 Reinforcement Learning for Persistent Autonomy of Underwater Robot, *Fundamental Research Funds for the Central Universities*, total budget 100k Chinese Yuan (2 years)

As Co-Investigator

2019 Research on the Network Integration and Quick Deployment Technology of Dragged Sensor Arrays Based on Electromagnetic Coupling, *National Key Research and Development Program of China*, total budget 3.38 million Chinese Yuan (3 years)
2018 Temporal-Spatial Modelling for Multi-Scale Dynamic Evolution of Ocean Currents, *National Natural Science Foundation of China*, total budget 750k Chinese Yuan (4 years)

Publications

Journal Articles

1) Fang Zheng, Tianhao Chen, Tian Shen, Dong Jiang, Zheng Zhang, **Guangliang Li**. Multi-Agent Generative Adversarial Interactive Self-Imitation Learning for AUV Formation Control and Obstacle Avoidance. ***IEEE Robotics and Automation Letters***, 2025.
2) Shilong Niu, Xingwei Pan, Jun Wang, **Guangliang Li**. Deep Reinforcement Learning from Human Preferences for ROV Path Tracking. ***Ocean Engineering,*** 2025.
3) **Guangliang Li** and Randy Gomez. Embodied Intelligence: Realizing Full Body Control of Humanoid Robots, ***Nature Machine Intelligence*****,** 2024.
4) Tianhao Chen, Zheng Zhang, Zheng Fang, Dong Jiang, **Guangliang Li**. Imitation learning from imperfect demonstrations for AUV path tracking and obstacle avoidance. ***Ocean Engineering***, 2024
5) Wei Meng, Hao Ju, Tongxu Ai, Randy Gomez, Eric Nichols, **Guangliang L**i. Transferring Meta-Policy from Simulation to Reality via Progressive Neural Network. ***IEEE Robotics and Automation Letters***, 2024
6) Hao Ju, Rongshun Juan, Randy Gomez, Keisuke Nakamura, **Guangliang Li**. Transferring Policy of Deep Reinforcement Learning from Simulation to Reality for Robotics**.** ***Nature Machine Intelligence*****,** 2022, 4:1077-1087
7) Zheng Fang, Dong Jiang, Jie Huang, Chunxi Cheng, Qixin Sha, Bo He, **Guangliang Li**. Autonomous Underwater Vehicle Formation Control and Obstacle Avoidance Using Multi-Agent Generative Adversarial Imitation Learning. ***Ocean Engineering***. 2022, 262(6):112182
8) Dong Jiang, Jie Huang, Zheng Fang, Chunxi Cheng, Qixin Sha, Bo He, **Guangliang Li**. Generative Adversarial Interactive Imitation Learning for Path Following of Autonomous Underwater Vehicle. ***Ocean Engineering***. 2022, 260(1):111971
9) Dianrui Wang, Yue Shen, Junhe Wan, Qixin Sha, **Guangliang Li**, Bo He. Sliding Mode Heading Control for AUV Based on Continuous Hybrid Model-free and Model-Based Reinforcement Learning. ***Applied Ocean Research***, 2022, 118(4): 102960
10) Dianrui Wang, Bo He, Yue Shen, **Guangliang Li**, Guanzhong Chen. A Modified ALOS Method of Path Tracking for AUVs with Reinforcement Learning Accelerated by Dynamic Data-Driven AUV Model. ***Journal of Intelligent and Robotic Systems****, 2022, 104(3)*
11) Jianjun Wang, Chen Feng, Lingyu Wang, **Guangliang Li**, Bo He. Detection of Weak and Small Targets in Forward-Looking Sonar Image Using Multi-Branch Shuttle Neural Network. ***IEEE Sensors Journal***, 22(7):1-1, 2022
12) Chunxi Cheng, Qixin Sha, Bo He, **Guangliang Li**. Path Panning and Obstacle Avoidance for AUV: A Review. ***Ocean Engineering***. 2021, 235:109355

13) **Guangliang Li**, Hamdi Dibeklioğlu, Shimon Whiteson and Hayley Hung. Facial Feedback for Reinforcement Learning: A Case Study and Offline Analysis Using the TAMER Framework. ***Autonomous Agents and Multi-Agent Systems (AAMAS)***, 2020, 34:1-29.
14) **Guangliang Li**, Randy Gomez, Keisuke Nakamura, Bo He. Human-Centered Reinforcement Learning: A Survey. ***IEEE Transactions on Human-Machine Systems***. 2019, 49(4):337-349.
15) Yan Song, Bo He, Ying Zhao, **Guangliang Li**, Qixin Sha, Yue Shen, Tianhong Yan, Rui Nian, Amaury Lendasse. Segmentation of Sidescan Sonar Imagery Using Markov Random Fields and Extreme Learning Machine. ***IEEE Journal of Oceanic Engineering***, 2019. 44(2): 502-513.
16) **Guangliang Li**, Shimon Whiteson, W. Bradley Knox and Hayley Hung. Social Interaction for Effective Agent Learning from Human Reward. ***Autonomous Agents and Multi-Agent Systems***. 2018, 32:1-25.
17) **Guangliang Li**, Shimon Whiteson, W. Bradley Knox and Hayley Hung. Using Informative Behavior to Increase Engagement While Learning from Human Reward. ***Autonomous Agents and Multi-Agent Systems***, 2016, 30:826-848.
18) Christos Dimitrakakis, **Guangliang Li** and Nikoalos Tziortziotis. The Reinforcement Learning Competition 2014. ***Artificial Intelligence (AI) Magazine****, AAAI press*. 2014 Fall, 35(3): 61-65. (SCI).

Journal Articles Under Review

19) Xingwei Pan, Shilong Niu, Zheng Zhang, Jun Wang, Dong Jiang, **Guangliang Li**. Multi-task Learning via Progressive Neural Network for Path Following of Autonomous Underwater Vehicle. ***Robot Learning***, under review.

Conference Papers

1) Hongqi Yu, Fei Tang, Lei Zhang, Randy Gomez, Eric Nichols, **Guangliang Li*.** Improving Perceived Emotional Intelligence of Embodied Chatbot Haru via Multi-Modal Interaction. ***The 2024 IEEE International Conference on Robotics and Biomimetics (IEEE ROBIO 2024).***
2) Lei Zhang, Chuanxiong Zheng, Hui Wang, Randy Gomez, Eric Nichols, **Guangliang Li**. Autonomous Storytelling with Social Robot Haru with Human-Centered Reinforcement Learning. ***IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024***
3) Zheng Zhang, Xingwei Pan, Tianhao Chen, Dong Jiang, Zheng Fang, **Guangliang Li**. Deep Reinforcement Learning with Model Predictive Control for Path Following of Autonomous Underwater Vehicle. ***The 43rd Chinese Control Conference (CCC)***, 2024
4) Chuanxiong Zheng, Lei Zhang, Hui Wang, Randy Gomez, Eric Nichols, **Guangliang Li**.

Shaping Social Robot to Play Games with Human Demonstrations and Evaluative Feedback. ***International Conference on Robotics and Automation (ICRA), 2024***

5) Fei Tang, Chuanxiong Zheng, Hongqi Yu, Lei Zhang, Eric Nichols, Randy Gomez, **Guangliang Li**. Assisting Group Discussions Using Desktop Robot Haru. ***International Conference on Robotics and Automation (ICRA), 2024***
6) Lei Zhang, Chuanxiong Zheng, Hui Wang, Eric Nichols, Randy Gomez, **Guangliang Li**. Emotional Understanding for Social Robot Haru via Human-Centered Reinforcement Learning. ***In Proceedings of the 15th International Conference on Social Robotics,*** pp.1-12, 2023
7) Jie Huang, Jiangshan Hao, Rongshun Juan, Randy Gomez, Keisuke Nakamura, **Guangliang Li**. Model-based Adversarial Imitation Learning from Demonstrations and Human Reward. ***In Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS*****)**, IEEE***, 2023.***
8) Rongshun Juan, Hao Ju, Jie Huang, Randy Gomez, Keisuke Nakamura, **Guangliang Li**. Sim-to-Real Policy and Reward Transfer with Adaptive Forward Dynamics Model. ***In Proceedings of the 2023 International Conference on Robotics and Automation (ICRA*****),** pp. 7212-7218, IEEE, 2023
9) Jie Huang, Jiangshan Hao, Rongshun Juan, Randy Gomez, Keisuke Nakamura, **Guangliang Li**. GAN-Based Interactive Reinforcement Learning from Demonstration and Human Evaluative Feedback. ***In Proceedings of the 2023 International Conference on Robotics and Automation (ICRA*****),** pp. 4991-4998, IEEE, 2023
10) Hui Wang, Jinying Lin, Zhen Ma, Yurii Vasylkiv, Heike Brock, Keisuke Nakamura, Randy Gomez, Bo He, **Guangliang Li**. Affective Behavior Learning for Social Robot Haru with Implicit Evaluative Feedback. ***In Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),*** pp.3881-3888, 2022
11) Hui Wang, Guodong Chen, Randy Gomez, Keisuke Nakamura, Bo He, **Guangliang Li**. Shaping Haru's Affective Behavior with Valence and Arousal Based Implicit Facial Feedback. ***In Proceedings of the 31st IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)***, pp. 769-776, 2022
12) Chuanxiong Zheng, Hui Wang, Lei Zhang, Jiang Shan Hao, Randy Gomez, Keisuke Nakamura, **Guangliang Li**. Imitating Human Strategy for Social Robot in Real-Time Two-Player Games. ***In Proceedings of the 14th International Conference on Social Robotics,*** pp.1-12, 2022
13) Hui Wang, Lei Zhang, Chuanxiong Zheng, Randy Gomez, Keisuke Nakamura, **Guangliang Li**. Personalized Storytelling with Social Robot Haru. ***In Proceedings of the 14th International Conference on Social Robotics*****,** pp. 1-12, 2022
14) Qilei Zhang, Chunxi Cheng, Zheng Fang, Dong Jiang, Bo He, **Guangliang Li**. Continuous Control for Autonomous Underwater Vehicle Path Following Using Deep Interactive Reinforcement Learning. ***In Proceedings of the 2022 International Conference on Machine Learning, Control, and Robotics***, pp. 1-8, 2022

15) Dong Jiang, Zheng Fang, Chunxi Cheng, Bo He, **Guangliang Li**. Action Guidance-Based Deep Interactive Reinforcement Learning for AUV Path Planning. ***In Proceedings of the 2022 International Conference on Machine Learning, Control, and Robotics***, pp. 1-8, 2022
16) Yurii Vasylkiv, Zhen Ma, **Guangliang Li**, Eleanor Sandry, Heike Brock, Keisuke Nakamura, Irani Pourang and Randy Gomez. Automating Behavior Selection for Affective Telepresence Robot. ***In Proceedings of the 2021 International Conference on Robotics and Automation (ICRA*)**, pp. 2026-2032, IEEE, 2021
17) Rongshun Juan, Jie Huang, Randy Gomez, Keisuke Nakamura, Qixin Sha, Bo He, **Guangliang Li**. Shaping Progressive Net of Reinforcement Learning for Policy Transfer with Human Evaluative Feedback. ***In Proceedings of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS*)**, pp. 1281-1288, IEEE, 2021
18) **Guangliang Li**, Hamdi Dibeklioğlu, Shimon Whiteson, Hayley Hung. Facial Feedback for Reinforcement Learning: A Case Study and Offline Analysis Using the TAMER Framework. ***In Proceedings of the 20th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS),*** pp. 1735-1737, 2021(Extended abstract)
19) Yurii Vasylkiv, Zhen Ma, **Guangliang Li**, Heike Brock, Keisuke Nakamura, Irani Pourang and Randy Gomez. Shaping Affective Robot Haru's Reactive Response. ***In Proceedings of the 30th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)***, pp. 989-996, IEEE, 2021
20) Chao Yu, Tianpei Yang, Wenxuan Zhu, Dongyu Wang, **Guangliang Li**. Interactive RL via Online Human Demonstrations. ***In Proceedings of the 19th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)***, pp. 2065-2067, 2020. (Extended abstract)
21) Jinying Lin, Qilei Zhang, Randy Gomez, Keisuke Nakamura, Bo He, **Guangliang Li**. Human Social Feedback for Efficient Interactive Reinforcement Agent Learning. ***In Proceedings of the 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)***, pp.706-712, 2020
22) **Guangliang Li**, Randy Gomez, Keisuke Nakamura, Bo He. Interactive Reinforcement Learning from Demonstration and Human Evaluative Feedback**.** ***In Proceedings of 27th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)***, 2018, pp. 1156-1162. (**Nanjing City Prize, UBTech Prize**)
23) **Guangliang Li**, Hamdi Dibeklioğlu, Shimon Whiteson and Hayley Hung. Towards Learning from Implicit Human Reward. **In** ***Proceedings of the 15th International Conference on Autonomous Agents and Multi-Agent Systems (*AAMAS)**, pp. 1353-1354, 2016 (Extended abstract)
24) **Guangliang Li**, Hayley Hung and Shimon Whiteson. A Large-Scale Study of Agents Learning from Human Reward. ***In Proceedings of the 14th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)***, pp. 1771-1772, 2015 (Extended abstract)

25) **Guangliang Li**, Hayley Hung, Shimon Whiteson and W. Bradley Knox. Learning from Human Reward Benefits from Socio-competitive Feedback. ***In Proceedings of the 4th Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics (ICDL-EpiRob)***, pp. 93-100, 2014.
26) **Guangliang Li**, Hayley Hung, Shimon Whiteson and W. Bradley Knox. Leveraging Social Networks to Motivate Humans to Train Agents. ***In Proceedings of the 13th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)***, pp. 1571-1572, 2014. (Extended abstract)
27) **Guangliang Li**, Hayley Hung, Shimon Whiteson and W. Bradley Knox. Using Informative Behavior to Increase Engagement in the TAMER Framework. ***In Proceedings of the 12th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)***, pp. 909-916, 2013.
28) Sander Bakkes, Shimon Whiteson, **Guangliang Li**, George Viorel Visniuc, Efstathios Charitos, Norbert Heijne and Arjen Swellengrebel. Challenge Balancing for Personalised Game Spaces. ***In Proceedings of the 6th IEEE Consumer Electronics Society Games, Entertainment, Media Conference (IEEE GEM).*** 2014.
29) Eugenio Bargiacchi, Camiel Verschoor, **Guangliang Li** and Diederik Roijers. Decentralized Solutions and Tactics for RTS. ***In Proceedings of the 25th Benelux Conference on Artificial Intelligence (BNAIC 2013)***. (Demo Paper)
30) Sile Ma, Qingmei Chen, **Guangliang Li** and Xiaohu he. Label Checking System of Flat Bottles Based on Siemens PLC. ***In Proceedings of the 8th World Congress on Intelligent Control and Automation (WCICA).*** 2010.
31) Dianrui Wang, Yue Shen, Qixin Sha, **Guangliang Li**, Xiangrui Kong, Guanzhong Chen, Bo He. Adaptive DDPG Design-Based Sliding-Mode Control for Autonomous Underwater Vehicles at Different Speeds. ***IEEE OES International Symposium on Underwater Technology***. 2019.
32) Fei Yu, Yuemei Zhu, Qi Wang, Kaige Li, Meihan Wu, **Guangliang Li**, Tianhong Yan, Bo He. Segmentation of Side Scan Sonar Images on AUV. ***IEEE OES International Symposium on Underwater Technology***. 2019.
33) Kaige Li, Fei Yu, Qi Wang, Meihan Wu, **Guangliang Li**, Tianhong Yan, Bo He. Real-Time Segmentation of Side Scan Sonar Images for AUVs. ***IEEE OES International Symposium on Underwater Technology***. 2019.
34) Yuemei Zhu, Yan Song, Xin Zhang, Pengfei Lv, **Guangliang Li**, Bo He and Tianhong Yan. Segmentation of Underwater Object in Videos. ***In Proceedings of OCEANS***. 2018.
35) Qixin Sha, Yan Song, Jia Guo, Chen Feng, **Guangliang Li**, Bo He and Tianhong Yan. Classification and Mosaicking of Side Scan Sonar Image. ***In Proceedings of OCEANS 2017-Aberdeen***.
36) Mingcui Zhu, Yan Song, Jia Guo, Chen Feng, **Guangliang Li**, Bo He and Tianhong Yan. Side-scan Sonar Image Segmentation Based on Gray Level Co-occurrence Matrices and Unsupervised Extreme Learning Machine. ***In Proceedings of OCEANS 2017-Aberdeen***.

37) Shaomin Wang, Yue Shen, Qixin Sha, **Guangliang Li**, Jingtao Jiang, Junhe Wan, Tianhong Yan, Bo He. Nonlinear Path Following of Autonomous Underwater Vehicle Considering Uncertainty. ***IEEE OES International Symposium on Underwater Technology*.** 2017.
38) Dianrui Wang, Yue Shen, Qixin Sha, **Guangliang Li**, Jingtao Jiang, Tianhong Yan, Junhe Wan, Bo He. Heading Control for an Autonomous Underwater Vehicle Using ELM-based Q-Learning. ***IEEE OES International Symposium on Underwater Technology***. 2017.
39) Mingcui Zhu, Yan Song, Jia Guo, Chen Feng, **Guangliang Li**, Tianhong Yan and Bo He. PCA and Kernel-based Extreme Learning Machine for Side-Scan Sonar Image Classification. ***IEEE OES International Symposium on Underwater Technology***. 2017.
40) Xun Li, Yan Song, Jia Guo, Chen Feng, **Guangliang Li**, Tianhong Yan, Bo He. Sensor Fault Diagnosis of Autonomous Underwater Vehicle Based on Extreme Learning Machine. ***IEEE OES International Symposium on Underwater Technology***. 2017.
41) Guoqing Ding, Yan Song, Jia Guo, Chen Feng, **Guangliang Li**, Tianhong Yan, Bo He. Side-scan Sonar Image Segmentation Using Kernel-based Extreme Learning Machine. ***IEEE OES International Symposium on Underwater Technology***. 2017.
42) Yan Song, Yuemei Zhu, **Guangliang Li**, Chen Feng, Bo He, Tianhong Yan. Side Scan Sonar Segmentation Using Deep Convolutional Neural Network. ***In Proceedings of OCEANS 2017-Anchorage***.
43) Guoqing Ding, Yan Song, Jia Guo, Chen Feng, **Guangliang Li**, Bo He, Tianhong Yan. Fish Recognition Using Convolutional Neural Network. ***In Proceedings of OCEANS 2017-Anchorage***.
44) Dianrui Wang, Yue Shen, Qixin Sha, **Guangliang Li**, Jingtao Jiang, Bo He, Tianhong Yan. Controller Design of An Autonomous Underwater Vehicle Using ELM-based Sliding Mode Control. ***In Proceedings of OCEANS 2017-Anchorage***.

Conference Paper Under Review

45) Enqi Zhao, Zicheng Sun, Ke Zhang, Eric Nichols, Randy Gomez, **Guangliang Li**. Safe Reinforcement Learning for Mobile Robot Path Planning with Natural Language Constraints via Large Language Models. ***IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),* 2025**
46) Hongqi Yu, Liu Tian, Yang Chen, Eric Nichols, Randy Gomez, **Guangliang Li.** Shaping Embodied Chatbot Haru Comforting and Emotional Behavior with Human Implicit Feedback. ***IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),* 2025**
47) Fei Tang, Mingyang Hu, Yu Fang, Eric Nichols, Randy Gomez, **Guangliang Li.** Social Robot Haru Assisting Dynamic Group Discussion with Autonomous Eye Gaze Beahavior. ***IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),* 2025**

Workshop Papers

48) Lei Zhang, Chuanxiong Zheng, Hui Wang, Eric Nichols, Randy Gomez, **Guangliang Li**. Emotional Understanding for Social Robot Haru via Human-Centered Reinforcement Learning. ***The 2023 International Conference on Robotics and Automation (ICRA) Workshop: Balanced Cyberphysical Society, 2023***
49) Fei Tang, Chuanxiong Zheng, Hao Ju, Hui Wang, Lei Zhang, Eric Nichols, Randy Gomez, **Guangliang Li**. Where to Look during Conversation: Autonomous Attentive Behavior Learning for Social Robot via Deep Reinforcement Learning. ***The 2023 International Conference on Robotics and Automation (ICRA) Workshop: Balanced Cyberphysical Society, 2023***
50) **Guangliang Li**, Bo He. Reinforcement Learning from Demonstration and Human Reward. ***In Proceedings of 15th workshop on Adaptive Learning Agents at AAMAS 2016***

Magazine Articles/Press

1) **Kun je een computer leren om Super Mario te spelen? (Can you teach a computer to play Super Mario).** Science Live, NEMO science center, Amsterdam. 2014.
Introduction to our project "Towards Learning from Implicit Human Reward—Facial Expressions" at NEMO science center in the Netherlands. Link: http://www.sciencelive.nl/onderzoeken/kun-je-een-computer-leren-om-super-mario-te-spelen

2) **Help the Facebook scientists: be a Tetris teacher.** *CS4FN (Computer Science For Fun) Magazine***,** Queen Mary University of London. 2013.
Introduction to our project "Learning from Human Reward Benefits from Socio-competitive Feedback" at CS4FN, a magazine hosted by Queen Mary University of London. Link: http://www.cs4fn.org/machinelearning/tetrisfacebookscientist.php

Talks

2024 Sim-to-Real Transfer Reinforcement Learning for Robot Control, Nanjing University-Ocean University of China "AI for Science" Forum

2024 Autonomous Storytelling for Social Robot, Invited talk at IROS 2024 Workshop

2024 Embodied Social Intelligence, Invited talk at Haru Fest 2024, Honda Research Institute Japan

2023 Transfer Reinforcement Learning for Robotics, Invited talk at Ocean University of China

2022 Robot Control via Deep Reinforcement Learning, Invited talk at Haru Fest 2022, Honda Research Institute Japan

2021 "Facial Feedback for Reinforcement Learning: A Case Study and Offline Analysis Using the TAMER Framework", AAMAS, Online

2019 Persistent Autonomy of Underwater Robot, Invited talk at Ministry of Science and Technology of China Workshop, Beijing, China

2019 Social Reinforcement Learning, Invited talk at Socially Intelligent Robotics Consortium Meeting on, Tokyo, Japan

2018 Social Reinforcement Learning, Socially Intelligent Robotics Consortium Workshop, Servile, Spain

2018 Agents Interactively Learning from a Human Teacher, Invited talk at ICRA Workshop, Brisbane, Australia

2016 Reinforcement Learning from Demonstration and Human Reward, AAMAS Workshop, Singapore

2014 ICDL-EpiRob Conference Talk, "Learning from Human Reward Benefits from Socio-competitive Feedback", 4th ICDL-EpiRob, Genoa, Italy

2014 Interactive Intelligence Workshop at Lorentz, Leiden, The Netherlands

2013 TU-Delft on Using Informative Behavior to Increase Engagement in TAMER Framework, Technical University of Delft, Delft, The Netherlands

2013 AAMAS on Using Informative Behavior to Increase Engagement in TAMER Framework", Saint Paul, USA

2012 Lecture at Intelligent Interactive System Course (Invited by the course organizer), "Using Informative Behavior to Increase Engagement in TAMER Framework", University of Amsterdam, Amsterdam, The Netherlands

Reviewing

2024 Nature Machine Intelligence
2024 Nature Communications
2024 IEEE Robotics and Automation Letters
`23-`24 Robotic and Autonomous Systems
2023 IEEE Transactions on Intelligent Vehicles
`23-`24 Applied Ocean Research
`22-`24 Ocean Engineering
2022 ACM Computing Surveys
`22-`24 IEEE Transactions on Robotics
`21-`22 Adaptive and Learning Workshop at AAMAS
`21-`24 Inter. Conference on Robotics and Automation (ICRA)

`20,`22-`24	IEEE RO-MAN
`20-`22	Inter. Journal of Machine Learning and Cybernetics
2020	Inter. Journal of Advanced Robotics Systems
2019	Autonomous Robots
2019	IEEE Transactions on Neural Network and Learning Systems
`19,`22	IEEE Transactions on Cybernetics
`19-`25	Inter. Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
`18-`25	Pacific Rim International Conference on Artificial Intelligence (PRICAI)
`18, `21-`24	Inter. Conference on Intelligent Robots and Systems (IROS)
2015	Journal of Neurocomputing
2015	Inter. Conference on Robotics and Automation (ICRA) workshop on Machine Learning for Social Robotics
2014	Inter. Conference on Neural Information Processing Systems (NIPS) (sub-review)
2013	Inter. Conference on Machine Learning (ICML) Workshop on Reinforcement Learning Competition
2013	IEEE Transactions on Computational Intelligence and AI in Games (T'CIAIG)
2013	Journal of Human Robot Interaction (JHRI)

Organizing/Service

2024	**Young Editorial Board**, Intelligent Marine Technology and Systems
2024	**Guest Editor**, Robot Learning
2024	**Organizer,** IEEE International Conference on Robotics and Biomimetics (ROBIO 2024) Special Session
`23-Present	**Professional Committee**, Hybrid Intelligence of Chinese Association of Automation
`18-Present	**Co-founder and Committee Member,** Socially Intelligent Robotics Consortium
2022	**Session Chair**, Inter. Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
`19-`25	**Program Committee**, Inter. Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)
'18-`24	**Program Committee,** Pacific Rim International Conference on Artificial Intelligence (PRICAI)
`21-`22	**Program Committee**, Adaptive and Learning Workshop at AAMAS
2018	**Organizer,** International Conference on Robotics and Automation (ICRA) Workshop
2017	**Organizer**, IEEE RAS International Conference on Humanoid Robots Workshop
2015	**Program Committee**, International Conference on Robotics and Automation (ICRA) workshop on Machine Learning for Social Robotics
2013-2015	**Organizer**, Intelligent Autonomous Systems Academic Talk, University of Amsterdam
2013	**Organizer and Program Committee,** Workshop on Reinforcement Learning Competition at International Conference on Machine Learning (ICML), Atlanta, USA

2013 **Organizer,** Reinforcement Learning Competition 2013

Students Mentoring

Current PhD Students

2024-2028 Zheng Fang, *Model-Based Imitation Learning*

Current Master Students

2023-2026 Song Xiang, *Meta-Reinforcement Learning for Underwater Robot Control*

2023-2026 Enqi Zhao, *Augmenting Mobile Robot Learning via LLM*

2023-2026 Pengyu Zhao, *Offline Reinforcement Learning via Sim-to-Real Transfer*

2023-2026 Yang Chen, *Personalized Conversation Based on Physiological Emotion*

2023-2026 Liu Tian, *Social Robot Behavior Learning via Adversarial Imitation Learning*

2023-2026 Yangming Hu, *Multi-Person Dialogue Orientation for Social Robot*

2023-2026 Tian Shen, *Self-Imitation Robot Learning with LLM*

2023-2026 Ke Zhang, *Learning from LLM Provided Demonstration and Feedback*

2023-2026 Tongxu Ai, *LLM for Augmenting RL Agent Learning*

2022-2025 Fei Tang, *Deep Reinforcement Learning for Social Robot*

2022-2025 Xingwei Pan, *Multi-Task Learning for Underwater Robot*

2022-2025 Jun Wang, *Third-Person Imitation Learning for Underwater Robot*

2022-2025 Shilong Niu, *Underwater Robot Learning from Human Feedback*

2022-2025 Hongqi Yu, *Emotional Speech Understanding of Social Robot*

2022-2025 Zicheng Sun, *Model-based Adversarial Imitation Learning*

Former Master Students in Ocean University of China

2021-2024 Wei Meng, *Meta-Reinforcement Learning for Sim-to-Real Transfer*

2021-2024 Jiangshan Hao, *Interactive Imitation Learning and Planning*

2021-2024 Lei Zhang, *Social Reinforcement Learning for Human Understanding of Social Robot*

2021-2024 Chuanxiong Zheng, *Online Imitation Learning for Social Robot in Games*

2021-2024 Zheng Zhang, *Model-based Reinforcement Learning for Underwater Robot*

2021-2024 Tianhao Chen, *Adversarial Imitation Learning from Imperferct Demonstrations*

2020-2023 Hao Ju, *Transfer Reinforcement Learning for Manipulator Control*

2020-2023 Dong Jiang, *Interactive Adversarial Imitation Learning*

2020-2023 Zheng Fang, *Multi-Agent Adversarial Imitation Learning for Underwater Robot*

2020-2023 Hui Wang, *Autonomous Behavior Learning From Implicit Feedback for Social Robot*

2019-2022 Jie Huang, *Interactive Imitation Learning from Demonstration and Human Feedback*

2019-2022 Rongshun Juan, *Sim2Real for Autonomous Underwater Robot*

2019-2022 Zhen Ma, *Interactive Reinforcement Learning for Social Robot*

2019-2022 Chunxi Cheng, *Reinforcement Learning for Path Planning of Underwater Robot*

2018-2021 Jinying Lin, *Interactive Reinforcement Learning from Facial Feedback*

2018-2021 Qilei Zhang, *Interactive Reinforcement Learning for Autonomous Underwater Robot*

Former Master Students in University of Amsterdam

2014-2015 **Johan Sundin, Jorge Saez Gomez, Fernando Flores Garcia, Lydia Mennes and Nicolo Girardi**

I mentored Johan et al., five master students at University of Amsterdam, contributing to an ongoing project of mine "Teaching an agent to play Super Mario with human reward".

2014 **Timon Kanters, Luisa Zintgraf and Philipp Beau**

I supervised Timon, Luisa and Philipp, master students at University of Amsterdam. They investigated "model-based reinforcement learning methods for learning in invasive species".

2013-2014 **Luka Stout and Camelia Simoiu**

I supervised Luka, and Camelia, master students at University of Amsterdam, as they focused on investigating "multi-objective learning methods in invasive species".

2012-2013 **Camiel Verschoor, Eugenio Bargiacchi, Anna Keune and Steven Laan**

I supervised Camiel, Eugenio, Anna and Steven, master students at University of Amsterdam, who developed "decentralized approach for multi-agent learning in real-time strategy (RTS) game". This project resulted in a paper at the 25th Benelux Conference on Artificial Intelligence (BNAIC).

Teaching

`22-present Artificial Intelligence

`18-present Introduction to Matrix Analysis

`16-present Signals and Systems

`17-present Fundamentals of Circuit Analysis

Other Activities and Trainings

2021 Training Program of English Teaching for Graduate Students at Ocean University of China
2016 Volunteer at the 15th Autonomous Agents and Multi-Agent Systems (AAMAS), Singapore
2015 SNN(Dutch Foundation for Neural Networks) Symposium on Intelligent Machines, Nijmegen, The Netherlands
2014 Workshop on Interactive Intelligence at Lorentz (Invited), Leiden, The Netherlands
2014 English Presentation Course, Schuijt Opleidingen (Schuijt Trainings), The Netherlands
2014 Dutch Course for Pre-intermediate (B1), University of Amsterdam, The Netherlands
2013 Agent Systems, Dutch Research School for Information & Knowledge Systems (SIKS), The Netherlands
2013 Research Methods and Methodology for Information & Knowledge Systems, Dutch Research School for Information & Knowledge Systems (SIKS), The Netherlands
2013 Dutch Course for Beginners (A2), University of Amsterdam, The Netherlands
2013 Volunteer at the 12th Autonomous Agents and Multi-Agent Systems (AAMAS), Saint Paul, USA
2013 Dutch Course for Absolute Beginners (A1), University of Amsterdam, The Netherlands
2012 Fourth Information Interaction in Context Symposium, Nijmegen, The Netherlands
2011 English Upper-Intermediate, University of Amsterdam, The Netherlands
2010 Volunteer at the 8th World Congress on Intelligent Control and Automation (WCICA), Jinan, China

Languages

Chinese (native), English (fluent), Dutch (intermediate), Japanese (basic)