

Wangli He

Winner of the National Outstanding Youth Science Foundation

Winner of the Sixth Young Scientist Award of Chinese Association of Automation

Recipient of the first prize of Shanghai Natural Science Award

Winner of Young Elite Scientist Sponsorship Program by China Association for Science and Technology

Winner of Shanghai Rising-Star Program

Wangli He received the B.Sc. degree in information and computing science and the Ph.D. degree in applied mathematics from Southeast University, Nanjing, China, in 2005 and 2010, respectively. From 2010 to 2017, she held several visiting positions with Central Queensland University, The University of Hong Kong, City University of Hong Kong, Potsdam Institute for Climate Research Institute, and Tokyo Metropolitan University. She is currently the Deputy Dean of the School of Information Science and Engineering, East China University of Science and Technology. Her current research interests include distributed coordination control and optimization, networked multi-agent systems, autonomous intelligent unmanned systems and industrial cyber-physical systems, machine learning and industry intelligence

Dr. He was a recipient of the National Outstanding Youth Science Foundation in 2019 and The Sixth Young Scientist Award of Chinese Association of Automation in 2020. She was also a recipient of the first prize of Shanghai Natural Science Award in 2019. She was the Chair of the Technical Committee on Networked-based Control Systems and Applications of IES from 2018 to 2019. She is an Associate Editor of several international journals including the IEEE Transactions on Neural Networks and Learning Systems and the IEEE Journal of Emerging and Selected Topics in Industrial Electronics.

2022 Most Cited Chinese Researchers (Elsevier-Scopus) in Control Science and Engineering

Dr. He serves as project principals for more than 10 national and provincial projects, including 3 projects of National Natural Science Foundation of China, National Key Research and Development Program of China, and Shanghai Rising-Star Program. She has published more than 100 fully-referred journal articles and fully-referred conference papers including Automatica and the most prestigious IEEE Transactions.

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Research Interests:

Distributed coordination control and optimization, Networked multi-agent systems, Autonomous intelligent unmanned systems, Industrial cyber-physical systems, Machine learning and Industry intelligence

Professional Services:

Associate Editor, IEEE Transactions on Neural Networks and Learning Systems

Associate Editor, IEEE Journal of Emerging and Selected Topics in Industrial Electronics

Deputy Secretary, Women Scientists Association of Chinese Association of Automation

Visiting Professor, Tokyo Metropolitan University, 2015-2017

Teaching:

Distributed Cooperative Control and Optimization, Graduate course

Nonlinear control, Graduate course

Optimization Method, Undergraduate course

Signals and Systems, Undergraduate course

Research Program:

- [Dec. 2022 to Nov. 2027, Shanghai Pilot Program for Basic Research,](#)
- Jan. 2020 to Dec. 2022, National Science Foundation for Excellent Young Scholars, Modeling, Cooperative Analysis and Control of Networked Systems
- Dec. 2019 to Dec. 2022, National Key Research and Development Program of China under Grant, Decision Making and Optimization of “Human-Machine-Thing” Ternary Cooperation in Complex Manufacturing Environment
- Jan. 2018 to Dec. 2021, General Program of National Natural Science Foundation of China, Coordinated Functioning and Security Control of Networks of Heterogeneous Networks

- Jan. 2016 to Dec. 2016, General Program of National Natural Science Foundation of China, Modeling, Collective Analysis and Control of Multi-layer Dynamic Networks

Selected Publications:

- **Wangli He***, Wenying Xu, Xiaohua Ge, Qing-Long Han, Wenli Du, Feng Qian. Secure control of multi-agent systems against malicious attacks: a brief survey. IEEE Transactions on Industrial Informatics, 2022, 18(6): 3595-3608.
- **Wangli He***, Feng Qian*, Qing-Long Han, Guanrong Chen. Almost sure stability of nonlinear systems under random and impulsive sequential attacks. IEEE Trans. Automatic Control, 2020, 65(9): 3879-3886.
- Wenying Xu, **Wangli He***, Daniel W. C. Ho and Jürgen Kurths. Fully Distributed Observer-Based Consensus Protocol: Adaptive Dynamic Event-Triggered Schemes, Automatica, 139: 110188.
- **Wangli He***, Tinghui Luo, Yang Tang, Wenli Du, Yu-Chu Tian and Feng Qian. Secure communication based on quantized synchronization of chaotic neural networks under an event-triggered strategy. IEEE Trans. Neural Networks and Learning Systems, 2020, 31(9): 3334 - 3345.
- **Wangli He***, Bin Xu, Qing-Long Han, Feng Qian. Adaptive consensus control of linear multi-agent systems with dynamic event-triggered strategies. IEEE Transactions on Cybernetics, 2020, 50(7): 2996-3008.
- **Wangli He***, Zekun Mo. Secure Event-Triggered Consensus Control of Linear Multi-Agent Systems Subject to Sequential Scaling Attacks, IEEE Transactions on Cybernetics, 2021, DOI 10.1109/TCYB.2021.3070356
- Kun Liang, **Wangli He***, Jing Xu, and Feng Qian. Impulsive effects on synchronization of singularly perturbed complex networks with semi-Markov jump topologies. IEEE Trans. Systems, Man, and Cybernetics: Systems, 2021, doi:10.1109/TSMC.2021.3062378.
- **Wangli He***, Zekun Mo, Qing-Long Han, Feng Qian. Secure impulsive synchronization in Lipschitz-type multi-agent systems subject to deception attacks, IEEE/CAA Journal of Automatica Sinica, 2020, 7(5): 1326 -1334.
- **Wangli He***, Biao Zhang, Qing-Long Han. Feng Qian, Jürgen Kurths, Jinde Cao. Leader-following consensus of nonlinear multi-agent systems with stochastic sampling. IEEE Transactions on Cybernetics, 2017, 47(2): 327-338

- **Wangli He***, Xiaoyang Gao, Weimin Zhong, Feng Qian. Secure impulsive synchronization control of multi-agent systems under deception attacks. Information Sciences, 2018, 459: 354-368

Patent for Invention

- 一种动态环境下视觉定位与静态地图构建方法及系统; CN 112991447 A
- 一种轮式移动小车协同编队与路径规划方法; CN 111367285 A
- 一种基于视觉语义信息的动态障碍环境导航方法和装置; CN 111367318 A

Software Copyright

- 基于事件触发的 3D 多智能体协同控制可视化仿真平台 V1.0; 2021SR0975665
- 基于 DoS 攻击的 3D 多智能体协同控制可视化仿真软件 V1.0; 2021SR0975664
- 3D 多智能体协同控制可视化仿真软件 V2.0; 2021SR0032368
- 3D 多智能体协同控制可视化仿真软件 V1.0; 2019SR0845942
- 多智能体协同控制可视化仿真软件 V1.0; 2018SR577522