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简介：

　　王金亮，教授，博士生导师，IEEE Senior Member，中国自动化学会高级会员，中国人工智能学会高级会员，北京航空航天大学控制理论与控制工程专业博士毕业。**天津市杰出青年科学基金获得者，第三批天津市人才发展特殊支持计划"青年拔尖人才"，首批天津市特聘教授青年学者，2022年天津市优秀青年研究生指导教师，2020-2021年度天津市工程专业学位优秀指导教师，2020-2021年度天津市工程专业学位硕士研究生优秀学位论文指导教师，2019年度天津市工程专业学位硕士研究生优秀学位论文指导教师，教育部博士研究生学术新人奖，北京航空航天大学优秀博士学位论文，重庆市优秀硕士学位论文等。**中国自动化学会分数阶系统与控制专业委员会委员、中国人工智能学会神经网络与计算智能专业委员会委员、中国指挥与控制学会网络科学与工程专业委员会委员。担任IEEE-CYBER 2023、IEEE SSCI 2019、IEEE-CYBER 2018等的Session Chair和CCC 2019的Session Organizer。

　　先后**主持国家自然科学基金面上项目2项和青年科学基金1项，天津市杰出青年科学基金1项，天津市自然科学基金一般项目1项和青年项目1项，中国高校产学研创新基金1项**；以第一作者在Automatica、IEEE TNNLS、IEEE TC、IEEE TCNS、IEEE TSMCS、IEEE TNSE、IEEE TETCI上发表**学术论文30余篇**；**以第一作者或唯一作者在Springer、Elsevier和IEEE出版社出版6本学术专著**；**累计被引用3000余次**(Google Scholar统计，只统计以第一作者发表的论著)，**H指数34**；**以第一发明人授权/申请发明专利10余项**；入选**爱思唯尔2023中国高被引学者，2022-2024年连续三年入选全球前2%顶尖科学家榜单（World's Top 2% Scientists）**；担任国际知名期刊 **Neurocomputing、International Journal of Adaptive Control and Signal Processing、IEEE Systems, Man, and Cybernetics Magazine和Complex & Intelligent Systems的编委**；曾担任SCI期刊**Neurocomputing（2016年）和Fractal and Fractional（2023年）的客座主编**。

　　目前在读博士13人、硕士13人，毕业博士1人、硕士21人：13人获得**硕士研究生国家奖学金**；1人赴澳大利亚悉尼科技大学攻读博士学位(获CSC奖学金资助)，8人分别到北京航空航天大学、东南大学、同济大学、湖南大学、天津工业大学攻读博士学位；2人的硕士毕业论文被评为**天津市工程专业学位硕士研究生优秀学位论文**；1人获得**天津市博士研究生科研创新项目**立项、1人获得**天津市硕士研究生科研创新项目**立项。

主持的项目：

★ 天津市杰出青年科学基金"耦合权重矩阵识别、设计及应用"(No.23JCJQJC00010, 2023.10-2027.09, 100万)

★ 中国高校产学研创新基金无人集群协同智能项目"多机器人系统的滞后一致性控制"(No.2021ZYA01001, 2022.07-2024.06, 20万)

★ 国家自然科学基金面上项目"多耦合分数阶复杂网络的动力学行为分析与控制"(No. 62173244, 2022.01-2025.12, 75.4万)

★ 天津市第三批人才发展特殊支持计划青年拔尖人才(津人才[2019]11号, 100万)

★ 天津市自然科学基金一般项目"输入和输出维数不同的复杂网络的有限时间无源性"(No. 19JCYBJC18700, 2019.04-2022.03, 10万)

★ 天津市首批特聘教授青年学者 (津教委办[2018]58号, 50万)

★ 国家自然科学基金面上项目"复杂网络推广的无源性及其在多智能体系统中的应用" (No. 61773285, 2018.01-2021.12, 76万)

★ 天津市自然科学基金青年项目"复杂网络的无源性分析、控制与应用"(No.15JCQNJC04100, 2015.04-2018.03, 6万)

★ 国家自然科学基金青年基金"耦合反应扩散神经网络的同步分析与控制"(No.61403275, 2015.01-2017.12, 23万)

学术专著（包括Springer4本、Elsevier 1本和IEEE1本）：

◇**J. -L. Wang**, S. -Y. Ren, H. -N. Wu, and T. Huang, Dynamical behaviors of multiweighted complex network systems, **Wiley-IEEE Press**, ISBN: 978-1-394-22861-4**,** 2024.

这是首部介绍多权重复杂网络动力学行为的著作，为不同领域的研究人员进一步在该方向开展工作奠定了坚实基础。

https://ieeexplore.ieee.org/book/10770702

https://www.wiley.com/en-us/Dynamical+Behaviors+of+Multiweighted+Complex+Network+Systems-p-9781394228614

◇**J. -L. Wang**, S. -Y. Ren, H. -N. Wu, and T. Huang, Cooperative control of nonlinear multiagent systems: passivity-based and non-passivity-based approaches, **Elsevier**, ISBN: 978-0-443-27326-1, 2024.

从是否基于无源性方法的角度出发，介绍了本人在非线性多智能体系统的一致性、滞后一致性、编队控制等方面取得的成果。

https://shop.elsevier.com/books/cooperative-control-of-nonlinear-multiagent-systems/wang/978-0-443-27326-1

◇ **J. -L. Wang**, Dynamical behaviors of fractional-order complex dynamical networks, **Springer**, ISBN: 978-981-97-2950-0, 2024.

介绍了本人在分数阶复杂网络方向取得的一些研究成果。

https://link.springer.com/book/10.1007/978-981-97-2950-0

◇**J. -L. Wang**, H. -N. Wu, and S. -Y. Ren, Passivity of complex dynamical networks: analysis, control and applications, **Springer**, ISBN: 978-981-33-4287-3, 2021.

总结了本人在复杂网络的无源性方面取得的主要研究成果。

https://link.springer.com/book/10.1007/978-981-33-4287-3

◇**J. -L. Wang**, H. -N. Wu, T. Huang, and S. -Y. Ren, Analysis and control of output synchronization for complex dynamical networks, **Springer**, ISBN: 978-981-13-1352-3, 2019.

详细的介绍了本人在复杂网络的输出同步方面取得的成果。

https://link.springer.com/book/10.1007/978-981-13-1352-3

◇**J. -L. Wang**, H. -N. Wu, T. Huang, and S. -Y. Ren, Analysis and control of coupled neural networks with reaction-diffusion terms, **Springer**, ISBN: 978-981-10-4907-1, 2018.

这是最早的介绍耦合反应扩散神经网络动力学行为的著作。

https://link.springer.com/book/10.1007/978-981-10-4907-1

代表性论文（包括IEEE汇刊35篇和Automatica1篇）

1. **J. -L. Wang,** X. -Y. Zhao, S. -Y. Ren**,** and T. Huang, "Lag synchronization and lag H-infinity synchronization for multiweighted coupled reaction-diffusion neural networks suffering topology attacks", *IEEE Transactions on Control of Network Systems*, doi: 10.1109/TCNS.2025.3526322, 2024.

2. **J. -L. Wang,** Y. -R. Zhu, J. -Q. Wang, S. -Y. Ren**,** and T. Huang, "Adaptive event-triggered lag outer synchronization for coupled neural networks with multistate or multiderivative couplings", *IEEE Transactions on Cybernetics*, doi: 10.1109/TCYB.2024.3519171, 2024.

3. **J. -L. Wang,** L. Huang**,** S. -Y. Ren**,** and T. Huang, "Passivity-based formation control for fractional-order multiagent systems with and without communication delay", *IEEE Transactions on Emerging Topics in Computational Intelligence*, vol. 8, no. 6, pp. 4143- 4154, 2024.

4. **J. -L. Wang,** C. -G. Liu, G. Wen, S. -Y. Ren**,** and T. Huang, "Finite-time output synchronization for fractional-order complex networks with output or output derivative coupling", *IEEE Transactions on Control of Network Systems*, vol. 11, no. 3, pp. 1225-1237, 2024.

5. **J. -L. Wang,** X. Han, and T. Huang, "PD and PI control for the lag consensus of nonlinear multiagent systems with and without external disturbances", *IEEE Transactions on Cybernetics*, vol. 54, no. 6, pp. 3716-3726, 2024.

6. **J. -L. Wang,** C. -G. Liu, X. -L. Liu, L. Huang, and T. Huang, "Passivity for multiadaptive coupled fractional-order reaction-diffusion neural networks", *IEEE Transactions on Emerging Topics in Computational Intelligence*, vol. 8, no. 2, pp. 1350-1361, 2024.

7. **J. -L. Wang,** H. -Y. Wu, T. Huang, and S. -Y. Ren, "Finite-time synchronization and H-infinity synchronization for coupled neural networks with multistate or multiderivative couplings", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 35, no. 2, pp. 1628-1638, 2024.

8. **J. -L. Wang,** L. -H. Zhao, H. -N. Wu, and T. Huang, "Finite-time passivity and synchronization of multi-weighted complex dynamical networks under PD control", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 35, no. 1, pp. 507-518, 2024.

9. **J. -L. Wang,** X. -X. Zhang, G. Wen, Y. Chen, and H. -N. Wu, "Passivity and finite-time passivity for multi-weighted fractional-order complex networks with fixed and adaptive couplings", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 34, no. 2, pp.

894-908, 2023.

10. **J. -L. Wang,** L. Wang, and H. -N. Wu, "Synchronization for complex networks with multiple state or delayed state couplings under recoverable attacks", *IEEE Transactions on Systems, Man and Cybernetics: Systems*, vol. 53, no. 1, pp. 38-48, 2023.

11. **J. -L. Wang**, Q. Wang, H. -N. Wu, and T. Huang, "Finite-time output synchronization and H-infinity output synchronization of coupled neural networks with multiple output couplings", *IEEE Transactions on Cybernetics*, vol. 51, no. 12, pp. 6041-6053, 2021.

12. **J. -L. Wang**, D. -Y. Wang, H. -N. Wu, and T. Huang, "Finite-time passivity and synchronization of complex dynamical networks with state and derivative coupling", *IEEE Transactions on Cybernetics*, vol. 51, no. 7, pp. 3845-3857, 2021.

13. **J. -L. Wang** and L. -H. Zhao, "PD and PI control for passivity and synchronization of coupled neural networks with multi-weights", *IEEE Transactions on Network Science and Engineering*，vol. 8, no. 1, pp. 790-802, 2021.

14. **J. -L. Wang**, D. -Y. Wang, H. -N. Wu, and T. Huang, "Output synchronization of complex dynamical networks with multiple output or output derivative couplings", *IEEE Transactions on Cybernetics*, vol. 51, no. 2, pp. 927-937, 2021. (**ESI-Highly Cited Paper**)

15. **J. -L. Wang**, S. -H. Qiu, W. -Z. Chen, H. -N. Wu, and T. Huang, "Recent advances on dynamical behaviors of coupled neural networks with and without reaction-diffusion terms", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 31, no. 12, pp. 5231-5244, 2020.

16. **J. -L. Wang**, Q. Wang, H. -N. Wu, and T. Huang, "Finite-time consensus and finite-time H-infinity consensus of multi-agent systems under directed topology", *IEEE Transactions on Network Science and Engineering*, vol. 7, no. 3, pp. 1619-1632, 2020.

17. **J. -L. Wang,** X. -X. Zhang, H. -N. Wu, T. Huang, and Q. Wang, "Finite-time passivity of adaptive coupled neural networks with undirected and directed topologies", *IEEE Transactions on Cybernetics*, vol. 50, no. 5, pp. 2014-2025, 2020.

18. **J. -L. Wang**, Z. Qin, H. -N. Wu, and T. Huang, "Finite-time synchronization and H-infinity synchronization of multiweighted complex networks with adaptive state couplings", *IEEE Transactions on Cybernetics*, vol. 50, no. 2, pp. 600-612, 2020.

19. **J. -L. Wang,** X. -X. Zhang, H. -N. Wu, T. Huang and Q. Wang, "Finite-time passivity and synchronization of coupled reaction-diffusion neural networks with multiple weights", *IEEE*

Transactions on Cybernetics, vol. 49, no. 9, pp. 3385-3397, 2019.

20. **J. -L. Wang**, Z. Qin, H. -N. Wu, and T. Huang, "Passivity and synchronization of coupled uncertain reaction-diffusion neural networks with multiple time-delays", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 30, no. 8, pp. 2434-2448, 2019.

21. **J. -L. Wang**, P. -C. Wei, H. -N. Wu, T. Huang, and M. Xu, "Pinning synchronization of complex dynamical networks with multiweights", *IEEE Transactions on Systems, Man and Cybernetics: Systems,* vol. 49, no. 7, pp. 1357-1370, 2019. (**ESI-Highly Cited Paper**)

22. **J. -L. Wang**, Z. Qin, H. -N. Wu, T. Huang, and P. -C. Wei, "Analysis and pinning control for output synchronization and H-infinity output synchronization of multiweighted complex networks", *IEEE Transactions on Cybernetics*, vol. 49, no. 4, pp. 1314-1326, 2019. (**ESI-Highly Cited Paper**)

23. **J. -L. Wang**, M. Xu, H. -N. Wu, and T. Huang, "Passivity analysis and pinning control of multi-weighted complex dynamical networks", *IEEE Transactions on Network Science and Engineering*, vol. 6, no. 1, pp. 60-73, 2019. (**ESI-Highly Cited Paper**)

24. **J. -L. Wang**, H. -N. Wu, T. Huang, and M. Xu, "Output synchronization in coupled neural networks with and without external disturbances", *IEEE Transactions on Control of Network Systems*, vol. 5, no.4, pp. 2049-2061, 2018.

25. **J. -L. Wang**, M. Xu, H. -N. Wu, and T. Huang, "Finite-time passivity of coupled neural networks with multiple weights", *IEEE Transactions on Network Science and Engineering,* vol. 5, no. 3, pp. 184-197, 2018.

26. **J. -L. Wang**, H. -N. Wu, T. Huang, S. -Y. Ren, J. Wu, and X. -X. Zhang, "Analysis and control of output synchronization in directed and undirected complex dynamical networks", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 29, no. 8, pp. 3326-3338, 2018 (**ESI-Highly Cited Paper**)

27. **J. -L. Wang**, H. -N. Wu, T. Huang, S. -Y. Ren, and J. Wu, "Passivity and output synchronization of complex dynamical networks with fixed and adaptive coupling strength", *IEEE Transactions on Neural Networks and Learning Systems,* vol. 29, no. 2, pp. 364-376, 2018. (**ESI-Highly Cited Paper**)

28. **J. -L. Wang**, H. -N. Wu, T. Huang, S. -Y. Ren, and J. Wu, "Passivity of directed and undirected complex dynamical networks with adaptive coupling weights", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 28, no. 8, pp. 1827-1839, 2017. (**ESI-Highly Cited**

Paper)

29. **J. -L. Wang**, H. -N. Wu, T. Huang, S. -Y. Ren, and J. Wu, "Passivity analsis of coupled reaction-diffusion neural networks with Dirichlet boundary conditions", *IEEE Transactions on Systems, Man and Cybernetics: Systems*, vol. 47, no. 8, pp. 2148-2159, 2017.

30. **J. -L. Wang**, H. -N. Wu, T. Huang, S. -Y. Ren, and J. Wu, "Pinning control for synchronization of coupled reaction-diffusion neural networks with directed topologies", *IEEE Transactions on Systems, Man and Cybernetics: Systems*, vol. 46, no. 8, pp. 1109-1120, 2016 (**ESI-Highly Cited paper**)

31. **J. -L. Wang**, H. -N. Wu, T. Huang, and S. -Y. Ren, "Pinning control strategies for synchronization of linearly coupled neural networks with reaction-diffusion terms", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 27, no. 4, pp. 749-761, 2016 (**ESI-Highly Cited Paper**)

32. **J. -L. Wang**, H. -N. Wu, T. Huang, and S. -Y. Ren, "Passivity and synchronizaton of linearly coupled reaction-diffusion neural networks with adaptive coupling", *IEEE Transactions on Cybernetics*, vol. 45, no. 9, pp. 1942-1952, 2015.

33. **J. -L. Wang**, H. -N. Wu, and T. Huang, "Passivity-based synchronization of a class of complex dynamical networks with time-varying delay, *Automatica*, vol. 56, pp. 105-112, 2015 (**ESI-Hot Paper, ESI-Highly Cited Paper**)

34. **J. -L. Wang** and H. -N. Wu, "Synchronization and adaptive control of an array of linearly coupled reaction-diffusion neural networks with hybrid coupling", *IEEE Transactions on Cybernetics*, vol. 44, no. 8, pp. 1350-1361, 2014.

35. **J. -L. Wang**, H. -N. Wu, and L. Guo, "Novel adaptive strategies for synchronization of linearly coupled neural networks with reaction-diffusion terms", *IEEE Transactions on Neural Networks and Learning Systems*, vol. 25, no. 2, pp. 429-440, 2014.

36. **J. -L. Wang**, H. -N. Wu, and L. Guo, "Passivity and stability analysis of reaction-diffusion neural networks with Dirichlet boundary conditions", *IEEE Transactions on Neural Networks*, vol. 22, no. 12, pp. 2105-2116, 2011.

授权/申请的发明专利（其中已授权7项）

1. **王金亮**，凌坤，文晓璐，任顺燕，具有通信时滞的多智能体系统H无穷滞后编队控制方法，申请日：2024年08月15日，申请号：2024111178904；

2. **王金亮**，韩笑，崔铭娟，一种拓扑设计方法及其在多智能体系统一致性中的应用，专利申请日：2024年08月05日，申请号：2024110639706；

3. **王金亮**，凌坤，任顺燕，王思杨，人在回路的多智能体系统的H无穷滞后一致性控制方法，专利申请日：2024年07月09日，申请号：2024109159500；

4. **王金亮**，凌坤，文晓璐，任顺燕，非线性二阶多智能体系统的滞后编队控制方法，申请日：2024年09月10日，授权公告日：2025年01月14日，授权公告号：CN 118778458 B，专利号：ZL 2024 1 1260200.0；

5. **王金亮**，赵馨钰，翟一鸣，任顺燕，遭受攻击多机器人系统滞后H无穷一致性PI控制方法，申请日：2024年08月20日，授权公告日：2024年12月27日，授权公告号：CN 118655768 B，专利号：ZL 2024 1 1139249.0；

6. **王金亮**，赵馨钰，翟一鸣，任顺燕，遭受拓扑攻击多智能体系统的滞后一致性PD控制方法，申请日：2024年08月20日，授权公告日：2024年12月27日，授权公告号：CN 118655769 B,专利号：ZL 2024 1 1139387.9；

7. **王金亮**，王健桥，任顺燕，多智能体系统二分一致性完全分布式输出反馈控制方法，申请日：2024年09月03日，授权公告日：2024年12月20日，授权公告号：CN 118759857 B，专利号：ZL 2024 1 1222980.X；

8. **王金亮**，王健桥，任顺燕，多智能体系统二分跟踪一致性自适应输出反馈控制方法，专利申请日：2024年07月18日，授权公告日：2024年10月22日，授权公告号：CN 118502254 B，专利号：ZL 2024 1 0961251.X；

9. **王金亮**，韩笑，任顺燕，基于PID的多智能体系统的输出滞后一致性控制方法，专利申请日：2024年05月09日，授权公告日：2024年08月09日，授权公告号：CN 118151523 B，专利号：ZL 2024 1 0564322.2；

10. **王金亮**，凌坤，任顺燕，基于人机交互二阶非线性多智能体系统的编队控制方法，专利申请日：2023年06月12日，授权公告日：2024年02月23日，授权公告号：CN 116540736 B，专利号：ZL 2023 1 0689187.X。