

# 王金亮

教授 (博导/Senior Member)

2021年11月19日

## Contact

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## Education

2010.09-2014.01    博士    北京航空航天大学    控制理论与控制工程

## Work Experience

2020.01-今	天津工业大学	教授
2017.06-2017.09	Texas A & M University at Qatar	研究助理
2017.01-2019.12	天津工业大学	副教授
2016.07-2016.08	Texas A & M University at Qatar	研究助理
2015.06-2015.07	Texas A & M University at Qatar	研究助理
2014.07-2014.08	Texas A & M University at Qatar	研究助理
2014.01-2016.12	天津工业大学	讲师

## Research interests

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- ⇒ 复杂网络
- ⇒ 多智能体系统
- ⇒ 反应扩散神经网络
- ⇒ 耦合神经网络
- ⇒ 分数阶系统
- ⇒ 机器人动力学
- ⇒ 无源性
- ⇒ 同步
- ⇒ 一致性
- ⇒ 编队控制

## Honours and Awards

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- 2019.12 天津市工程专业学位硕士研究生优秀学位论文指导老师
- 2019.07 天津工业大学第三届“我最喜爱的研究生导师”
- 2019.06 天津市人才发展特殊支持计划“青年拔尖人才”
- 2018.06 天津市特聘教授青年学者
- 2017.11 入选天津市高校“中青年骨干创新人才培养计划”
- 2017.07 入选天津工业大学“杰出青年人才支持计划”（天工杰青）
- 2017.03 天津市“131”创新型人才培养工程第二层次人选
- 2015.07 北京航空航天大学优秀博士学位论文
- 2015.03 天津市“131”创新型人才培养工程第三层次人选
- 2012.12 教育部博士研究生学术新人奖
- 2012.06 重庆市优秀硕士学位论文

近年来，在复杂动态网络的动力学行为分析与控制方面开展了深入、细致的研究工作，并取得了一些具有国际影响的研究成果。目前以第一作者身份在**Springer**出版社出版学术专著**3**本，在一些国际知名和重要的**SCI** 期刊上发表学术论文**41** 余篇，其中**ESI-Hot Paper 1**篇，**ESI-Highly Cited Paper 11**篇。具体如下：

### Monographs:

- ◇ **Jin-Liang Wang**, Huai-Ning Wu, Shun-Yan Ren, Passivity of complex dynamical networks: analysis, control and applications, **Springer**, ISBN: 978-981-33-4287-3, 2020
- ◇ **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Analysis and control of output synchronization for complex dynamical networks, **Springer**, ISBN: 978-981-13-1352-3, 2018
- ◇ **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Analysis and control of coupled neural networks with reaction-diffusion terms, **Springer**, ISBN: 978-981-10-4907-1, 2017

### Representative Papers:

31. Yan Liu, Yi-Min Li, **Jin-Liang Wang (Corresponding author)**, Intermittent control to stabilization of stochastic highly non-linear coupled systems with multiple time delays, **IEEE Transactions on Neural Networks and Learning Systems**, doi: 10.1109/TNNLS.2021.3113508, 2021
30. **Jin-Liang Wang**, Xiao-Xiao Zhang, Guoguang Wen, Yiwen Chen, Huai-Ning 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**, doi: 10.1109/TNNLS.2021.3103809, 2021
29. **Jin-Liang Wang**, Qing Wang, Huai-Ning Wu, Tingwen Huang, Finite-time output synchronization and  $H_\infty$  output synchronization of coupled neural networks with multiple output couplings, **IEEE Transactions on Cybernetics**, doi: 10.1109/TCYB.2020.2964592, 2020
28. **Jin-Liang Wang**, Dong-Yang Wang, Huai-Ning Wu, Tingwen Huang, Finite-time passivity and synchronization of complex dynamical networks with state and derivative coupling, **IEEE Transactions on Cybernetics**, 51(7), 3845-3857, 2021
27. Qing Wang, **Jin-Liang Wang (Corresponding author)**, Finite-time output synchronization of undirected and directed coupled neural networks with output coupling, **IEEE Transactions on Neural Networks and Learning Systems**, 32(5), 2117-2128, 2021

26. **Jin-Liang Wang**, Lin-Hao Zhao, PD and PI control for passivity and synchronization of coupled neural networks with multi-weights, **IEEE Transactions on Network Science and Engineering**, 8(1), 790-802, 2021
25. **Jin-Liang Wang**, Dong-Yang Wang, Huai-Ning Wu, Tingwen Huang, Output synchronization of complex dynamical networks with multiple output or output derivative couplings, **IEEE Transactions on Cybernetics**, 51(2), 927-937, 2021 (**ESI-Highly cited paper**)
24. **Jin-Liang Wang**, Shui-Han Qiu, Wei-Zhong Chen, Huai-Ning Wu, Tingwen Huang, Recent advances on dynamical behaviors of coupled neural networks with and without reaction-diffusion terms, **IEEE Transactions on Neural Networks and Learning Systems**, 31(12), 5231-5244, 2020
23. Shun-Yan Ren, Qing Wang, **Jin-Liang Wang (Corresponding author)**, Passivity-based finite-time synchronization of nonlinear multi-agent systems, **IEEE Transactions on Network Science and Engineering**, 7(3), 1953-1965, 2020
22. **Jin-Liang Wang**, Qing Wang, Huai-Ning Wu, Tingwen Huang, Finite-time consensus and finite-time  $H_\infty$  consensus of multi-agent systems under directed topology, **IEEE Transactions on Network Science and Engineering**, 7(3), 1619-1632, 2020
21. Qing Wang, **Jin-Liang Wang (Corresponding author)**, Huai-Ning Wu, Tingwen Huang, Consensus and  $H_\infty$  consensus of nonlinear second-order multi-agent systems, **IEEE Transactions on Network Science and Engineering**, 7(3), 1251-1264, 2020
20. **Jin-Liang Wang**, Xiao-Xiao Zhang, Huai-Ning Wu, Tingwen Huang, Qing Wang, Finite-time passivity of adaptive coupled neural networks with undirected and directed topologies, **IEEE Transactions on Cybernetics**, 50(5), 2014-2025, 2020
19. **Jin-Liang Wang**, Zhen Qin, Huai-Ning Wu, Tingwen Huang, Finite-time synchronization and  $\mathcal{H}_\infty$  synchronization of multiweighted complex networks with adaptive state couplings, **IEEE Transactions on Cybernetics**, 50(2), 600-612, 2020
18. **Jin-Liang Wang**, Xiao-Xiao Zhang, Huai-Ning Wu, Tingwen Huang, Qing Wang, Finite-time passivity and synchronization of coupled reaction-diffusion neural networks with multiple weights, **IEEE Transactions on Cybernetics**, 49(9), 3385-3397, 2019
17. **Jin-Liang Wang**, Zhen Qin, Huai-Ning Wu, Tingwen Huang, Passivity and synchronization of coupled uncertain reaction-diffusion neural networks with multiple time-delays, **IEEE Transactions on Neural Networks and Learning Systems**, 30(8), 2434-2448, 2019
16. **Jin-Liang Wang**, Pu-Chong Wei, Huai-Ning Wu, Tingwen Huang, Meng Xu, Pinning syn-

chronization of complex dynamical networks with multiweights, **IEEE Transactions on Systems, Man and Cybernetics: Systems**, 49(7), 1357-1370, 2019 (**ESI-Highly cited paper**)

15. **Jin-Liang Wang**, Zhen Qin, Huai-Ning Wu, Tingwen Huang, Pu-Chong Wei, Analysis and pinning control for output synchronization and  $\mathcal{H}_\infty$  output synchronization of multiweighted complex networks, **IEEE Transactions on Cybernetics**, 49(4), 1314-1326, 2019 (**ESI-Highly cited paper**)

14. **Jin-Liang Wang**, Meng Xu, Huai-Ning Wu, Tingwen Huang, Passivity analysis and pinning control of multi-weighted complex dynamical networks, **IEEE Transactions on Network Science and Engineering**, 6(1), 60-73, 2019 (**ESI-Highly cited paper**)

13. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Meng Xu, Output synchronization in coupled neural networks with and without external disturbances, **IEEE Transactions on Control of Network Systems**, 5(4), 2049-2061, 2018

12. **Jin-Liang Wang**, Meng Xu, Huai-Ning Wu, Tingwen Huang, Finite-time passivity of coupled neural networks with multiple weights, **IEEE Transactions on Network Science and Engineering**, 5(3), 184-197, 2018

11. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Jigang Wu, Xiao-Xiao Zhang, Analysis and control of output synchronization in directed and undirected complex dynamical networks, **IEEE Transactions on Neural Networks and Learning Systems**, 29(8), 3326-3338, 2018 (**ESI-Highly cited paper**)

10. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Jigang Wu, Passivity and output synchronization of complex dynamical networks with fixed and adaptive coupling strength, **IEEE Transactions on Neural Networks and Learning Systems**, 29(2), 364-376, 2018 (**ESI-Highly cited paper**)

9. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Jigang Wu, Passivity of directed and undirected complex dynamical networks with adaptive coupling weights, **IEEE Transactions on Neural Networks and Learning Systems**, 28(8), 1827-1839, 2017 (**ESI-Highly cited paper**)

8. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Jigang Wu, Passivity analysis of coupled reaction-diffusion neural networks with Dirichlet boundary conditions, **IEEE Transactions on Systems, Man and Cybernetics: Systems**, 47(8), 2148-2159, 2017

7. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Jigang Wu, Pinning control for synchronization of coupled reaction-diffusion neural networks with directed topologies, **IEEE Transactions on Systems, Man and Cybernetics: Systems**, 46(8), 1109-1120, 2016 (**ESI-Highly**

**cited paper)**

6. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Pinning control strategies for synchronization of linearly coupled neural networks with reaction-diffusion terms, **IEEE Transactions on Neural Networks and Learning Systems**, 27(4), 749-761, 2016 (**ESI-Highly cited paper**)

5. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Shun-Yan Ren, Passivity and synchronization of linearly coupled reaction-diffusion neural networks with adaptive coupling, **IEEE Transactions on Cybernetics**, 45(9), 1942-1952, 2015

4. **Jin-Liang Wang**, Huai-Ning Wu, Tingwen Huang, Passivity-based synchronization of a class of complex dynamical networks with time-varying delay, **Automatica**, 56, 105-112, 2015 (**ESI-Hot paper**, **ESI-Highly cited paper**)

3. **Jin-Liang Wang**, Huai-Ning Wu, Synchronization and adaptive control of an array of linearly coupled reaction-diffusion neural networks with hybrid coupling, **IEEE Transactions on Cybernetics**, 44(8), 1350-1361, 2014

2. **Jin-Liang Wang**, Huai-Ning Wu, Lei Guo, Novel adaptive strategies for synchronization of linearly coupled neural networks with reaction-diffusion terms, **IEEE Transactions on Neural Networks and Learning Systems**, 25(2), 429-440, 2014

1. **Jin-Liang Wang**, Huai-Ning Wu, Lei Guo, Passivity and stability analysis of reaction-diffusion neural networks with Dirichlet boundary conditions, **IEEE Transactions on Neural Networks**, 22(12), 2105-2116, 2011

## Research Funds

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### \* 国家级项目：

- ◇ 国家自然科学基金面上项目(主持，在研)

项目批准号：**62173244**(直接经费**58万**)

2022.01-2025.12

- ◇ 国家自然科学基金面上项目(主持，在研)

项目批准号：**61773285**(直接经费**64万**)

2018.01-2021.12

- ◇ 国家自然科学基金青年基金(主持，已结题)

项目批准号：**61403275**(**23万**)

2015.01-2017.12

### \* 省部级项目：

- ◇ 天津市自然科学基金一般项目(主持，在研)

合同编号：**19JCYBJC18700**(**10万**)

2019.04-2022.03

- ◇ 天津市自然科学基金青年基金(主持，已结题)

合同编号：**15JCQNJC04100**(**6万**)

2015.04-2018.03





## Graduate Admissions

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◇ 欢迎有较高学术追求，数学基础较好且勤奋刻苦的有志青年报考我的博士和硕士研究生：

- |          |        |           |
|----------|--------|-----------|
| 1. 博士研究生 | 1-2名/年 | 数学科学学院    |
|          |        | 硕博连读、普博均可 |
| 2. 硕士研究生 | 4名/年   | 计算机学院     |
|          |        | 学硕、专硕均可   |
| 3. 硕士研究生 | 1名/年   | 数学科学学院    |
|          |        | 学硕        |