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Education & Professional Experience

- Sept.1998 – Dec. 2002 Postgraduate Student, Applied Mathematics, Institute of Mathematics, Fudan University, Shanghai, China (Received the Ph.D. degree in January 2003 / Thesis: *Some Theoretical Problems in Complex Dynamical Systems and Their Applications*; Advisor: Professor Jiong RUAN)
- Sept. 1994 - June 1998 Undergraduate Student, Science Base & Advanced Class, Department of Mathematics, Fudan University, Shanghai, China (Received the B.Sc. degree in July 1998 / Counsellor: Professor Qing DING; Advisor of Thesis: Professor Zhenxun HUANG)
- Sept. 1988 - June 1994 Junior and High School Student, No. 2 Secondary School affiliated to East China Normal University, Shanghai, China
- Sept. 1983 – June 1988 Primary School Student, No. 9 Primary School of Cao-Yang Newly State, Shanghai, China
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- Dec. 2009 - Present Full Professor, Applied Mathematics, School of Mathematical Sciences, Fudan University, Shanghai, China (Obtained the qualification of supervising Ph.D. students in Dec. 2010)
- Apr. 2005 – Nov. 2009 Associate Professor, Applied Mathematics, School of Mathematical Sciences, Fudan University, Shanghai, China (Obtained the qualification of supervising M.Sc. students in Dec. 2005)
- Feb. 2003 - Mar. 2005 Lecturer, Applied Mathematics, Department of Mathematics, Fudan University, Shanghai, China

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- July – August 2011 Visiting Professor, Department of Mathematics, University of Wyoming, Wyoming, US
- January 2009 Visiting Professor, Deparment of Computer Science, The University of Warwick, Coventry, UK
- June – Aug. 2008 Research Fellow, Department of Electronic Engineering, City
University of Hong Kong, Hong Kong, China
- July 2007 - June 2013 Staff Scientist, CAS-MPG Partner Institute for Computational Biology, Chinese Academy of Sciences, China
- May 2004 – Apr. 2005 Postdoctoral Research Fellow, Department of Mathematics and Statistics, York University, Toronto, Canada
- Feb. - Apr. 2004, June - July 2005 Senior Research Assistant, Department of Electronic Engineering, City University of Hong Kong, Hong Kong, China
- Sept. 2002 - Nov. 2002 Research Assistant, Department of Electronic Engineering, City University of Hong Kong, Hong Kong, China

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- January 2008 – June 2017 Vice Dean, School of Mathematical Sciences, Fudan University, Shanghai, China
- March 2008 - January 2017 Deputy Director, Centre for Computational Systems Biology, Fudan University, Shanghai, China
- March 2016 – Present Deputy Dean, Institute of Science and Technology for Brain-Inspired Intelligence (ISTBI), Fudan University, Shanghai, China
- January 2017 - Present Director, Centre for Computational Systems Biology of ISTBI, Fudan University, Shanghai, China

Representative Publications since 2005

Selected papers published and/or accepted, submitted to peer-reviewed journals, or in preparation:
- **Wei Lin**, Tian Ge, and Jiangfeng Feng, *Engineering oscillators in discrete biological systems: Theory and methods for amplitude and frequency modulation*, in preparation.
- Peng Ji*, Lipeng Zhu, Chao Lu, **Wei Lin**, and Juergen Kurths, *How electricity price impacts network stability in smart power grids*, in revision.
- Zhi-Dan Zhao, Jun-Jie Jiang, Xingang Wang, Shi-Xian Qu, **Wei Lin**, and Ying-Cheng Lai*, *Ascertaining causation in complex systems from rare and noisy data*, in submission.

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1. Junjie Jiang, Zigang Huang, Thomas P. Seager, **Wei Lin**, Celso Grebogi, Alan Hastings*, and Ying-Cheng Lai* [2018], *Predicting tipping points in*

mutualistic networks through dimension reduction, **Proceedings of the National Academy of Sciences of the United States of America**, <u>vol. 115, no. 4, E639-E647</u>. <u>full file</u>.

2. Yao Guo, **Wei Lin***, and Guanrong Chen [2018] *Stability of switched systems on randomly switching durations with random interaction matrices*, **IEEE Transaction on Automatic Control**, *Regular Paper*, <u>vol. 63, no. 1, 21-36</u>. <u>full file</u>.

3. Yongzheng Sun, Siyang Leng, Ying-Cheng Lai, Celso Grebogi, and **Wei Lin*** [2017] *Closed-loop control of complex networks: A trade-off between time and energy*, **Physical Review Letters**, <u>vol. 119, Article no. 198301.</u> <u>full file.</u>

4. Huanfei Ma, Siyang Leng, Chenyang Tao, Xiong Ying, Jürgen Kurths, Ying-Cheng Lai, and **Wei Lin*** [2017] *Detection of time delays and directional interactions based on time series from complex dynamical systems*, **Physical Review E**, <u>vol. 96 (1), Article no. 012221</u>. <u>full file</u>.

5. Shijie Zhou, Peng Ji, Qing Zhou, Jianfeng Feng, Jürgen Kurths, and **Wei Lin*** [2017] *Adaptive elimination of synchronization in coupled oscillator*, **New Journal of Physics**, <u>vol. 19, Article no. 083004</u>. <u>full file</u>.

6. **Wei Lin**, Xin Chen, and Shijie Zhou [2017] *Achieving control and synchronization merely through a stochastically adaptive feedback coupling*, **CHAOS**, <u>vol. 27, Article no. 073110</u>. <u>full file</u>.

7. Pan Li, **Wei Lin**, and Konstantinos Efstathiou [2017] *Isochronous dynamics in pulse coupled oscillator networks with delay*, **CHAOS**, <u>vol. 27 (5), Article no. 053103</u>.

8. Yao Guo, **Wei Lin***, Yuming Chen, and Jianhong Wu [2017], *Instability in time-delayed switched systems induced by fast and random switching*, **Journal of Differential Equations**, <u>vol. 263 (2), 880-909</u>.

9. Kunquan Lan and **Wei Lin** [2017] *Population models with quasi-constant-yield harvest rates*, **Mathematical Biosciences and Engineering**, <u>vol. 14 (2), 467-490</u>.

10. Yao Guo, **Wei Lin***, and Daniel W. C. Ho [2016] *Discrete-time systems with random switches: From systems stability to networks synchronization*, **CHAOS**, <u>vol. 26 (3), Article no. 033113</u>.

11. Wei Cheng, Edmund T. Rolls, Jiang Qiu, Wei Liu, Yanqing Tang, Chu-Chung Huang, XinFa Wang, Jie Zhang, **Wei Lin**, Lirong Zheng, JunCai Pu, S hih-Jen Tsai, Albert C. Yang, Ching-Po Lin, Fei Wang, Peng Xie, Jianfeng Feng* [2016] *Medial reward and lateral non-reward orbitofrontal cortex circuits change in opposite directions in depression*, **Brain**, <u>vol. 139 (12) 3296-3309</u>.

12. Pei Yu and **Wei Lin** [2016] *Complex dynamics in biological systems arising from multiple limit cycle bifurcation*, **Journal of Biological Dynamics**, <u>vol. 10 (1), pp. 263-285</u>.

13. Siyang Leng, **Wei Lin***, and Jürgen Kurths [2016] *Basin stability for delayed dynamics*, **Scientific Reports**, <u>vol. 6, Article no. 21449</u>.

14. Kunquan Lan and **Wei Lin** [2016] *Uniqueness of nonzero positive solutions of Laplacian elliptic equations arising in combustion theory*, **Discrete and Continuous Dynamical System-B**, <u>vol. 21, no. 3, pp. 849-861</u>.

15. Huanfei Ma, Daniel W. C. Ho, Ying-Cheng Lai, and **Wei Lin*** [2015] *Detection meeting control: Unstable steady states in high-dimensional nonlinear dynamical systems*, **Physical Review E**, vol. 92 (4), Article no. 042902.

16. Yongzheng Sun* and **Wei Lin*** [2015] *A Positive role of multiplicative noise on the emergence of flocking in a stochastic Cucker-Smale system*, **CHAOS**, vol. 25, Article no. 083118.

17. Bing Xu and **Wei Lin*** [2015] *Parameters identification by a piecewise adaptive rule with a fractional power*, **International Journal of Bifurcation and Chaos**, vol. 25 (12), Article no. 1550166.

18. Chenyang Tao, **Wei Lin**, and Jianfeng Feng [2015] *Reconstruction of excitatory neuronal connectivity via metric score pooling and regularization*, **Proceedings of Machine Learning Research (PMLR): Workshop and Conference Proceedings**: **Neural connectomics workshop at ECML 2014** (vol. 46: 57-66, edited by: D. Battaglia, I. Guyon, V. Lemaire, and J. Soriano).   Also published in book: **Neural Connectomics Challenge,** *The Springer Series on Challenges in Machine Learning*, Springer, 2017.

19. Chengwen Chen, Ye Yao, Liang Zhang, Minjie Xu, Jianping Jiang, Tonghai Dou, **Wei Lin**, Guoping Zhao, Minren Huang, and Yan Zhou* [2015], *A comprehensive analysis of the transcriptomes of Marssonina brunnea and infected poplar leaves to capture vital events in host-pathogen interactions*, **PLoS ONE**, vol. 10 (7), Article no. e0134246.

20. Jun Guo, Wei Wang, Zhi-cheng Sun, Xin-sheng Wu, Mei Hao, Jian-long Ge, Pan-tong Yao, Jian-bing Zhu, **Wei Lin**, and Lei Xue* [2015] *A three-pool model dissecting readily releasable pool replenishment at the calyx of held*, **Scientific Reports**, vol. 5, Article no. 9517.

21. Yongzheng Sun*, **Wei Lin***, and Radek Erban* [2014] *Time delay can facilitate coherence in self-driven interacting particle systems,* **Physical Review E**, vol. 90, Article no. 062708.

22. Tian Ge, Xiaoying Tian, Jürgen Kurths, Jianfeng Feng, and **Wei Lin*** [2014] *Achieving modulated oscillations by feedback control*, **Physical Review E,** vol. 90, Article no. 022909.

23. Xiaoxi Ji, Yu Wu, Wenbo Sheng, and **Wei Lin*** [2014] *Identification of interactions in fractional-order systems with high dimensions*, **CHAOS,** vol. 24, Article no. 023119.

24. Huanfei Ma and **Wei Lin*** [2013] *Realization of parameters identification in nonautonomous and only locally Lipschitzian dynamical systems with multiple types of time delays*, **SIAM Journal on Control and Optimization,** vol. 51, p. 3692-3721.

25. Huanfei Ma, **Wei Lin***, and Ying-Cheng Lai [2013] *Detecting unstable periodic orbits in high-dimensional chaotic systems from time series: Reconstruction meeting with adaptation*, **Physical Review E,** *Rapid Communication*, vol. 87, Article no. 050901 (R).

26. **Wei Lin***, Yang Pu, Yao Guo, and Jürgen Kurths [2013] *Oscillation suppression and synchronization: Frequencies determine the role of control*

with time delays, **Europhysics Letters (EPL)**, vol. 102, Article no. 20003, Supplementary information.

27. Zhang Chen and **Wei Lin** [2013] *Square-mean weighted pseudo almost automorphic solutions for non-autonomous stochastic evolution equations*, **Journal de Mathématiques Pures et Appliquées**, vol. 100, p. 476-504.

28. Kunquan Lan and **Wei Lin** [2013] *Positive solutions of systems of Caputo fractional differential equations*, **Communications in Applied Analysis**, vol. 17, p. 61-86.

29. Tian Ge, Yindong Cui, **Wei Lin***, Jürgen Kurths, and Chong Liu [2012] *Characterizing time series: When Granger causality triggers complex networks*, **New Journal of Physics**, vol. 14, Article no. 083028.

30. Yao Guo, **Wei Lin***, and Miguel A.F. Sanjuan [2012] *The efficiency of a random and fast switch in complex dynamical systems*, **New Journal of Physics**, vol. 14, Article no. 083022.

31. Yu Wu, Wenlian Lu, **Wei Lin**, Gareth Leng, and Jianfeng Feng* [2012] Bifurcations of emergent bursting in a neuronal network, **PLoS ONE**, vol. 7, Article no. e38402.

32. Tian Ge, **Wei Lin***, and Jianfeng Feng [2012] *Invariance principles allowing of non-Lyapunov functions for estimating attractor of discrete dynamical systems*, **IEEE Transaction on Automatic Control**, vol. 57, pp. 500.

33. Yu Wu and **Wei Lin*** [2011] *Adaptively locating unknown steady states: Formalism and basin of attraction*, **Physics Letters A**, vol. 375, pp. 3279.

34. Jing Kang, Bing Xu, Ye Yao, **Wei Lin**, Conor Hennessy, Peter Fraser, and Jianfeng Feng* [2011] *A dynamical model reveals gene colocalizations in nucleus*, **PLoS Computational Biology**, vol. 7, Article no. e1002094.

35. Andreas W.M. Dress and **Wei Lin** [2011] *Dynamics of a discrete-time model of an "ideal-storage" system describing hetero-catalytic processes on metal surfaces,* **International Journal of Bifurcation and Chaos**, vol. 21, pp. 1331.

36. Zhang Chen and **Wei Lin** [2011] *Square-mean pseudo almost automorphic process and its application to stochastic evolution equations*, **Journal of Functional Analysis**, vol. 261, pp. 69.

37. Kunquan Lan and **Wei Lin** [2011] *Multiple positive solutions of systems of Hammerstein integral equations with applications to fractional differential equations*, **Journal of the London Mathematical Society**, vol. 83, pp. 449.

38. Kunquan Lan and **Wei Lin** [2011] *A variational inequality index for condensing maps in Hilbert spaces and applications to semilinear elliptic inequalities*, **Nonlinear Analysis: T. M. A.**, vol. 74, pp. 5415.

39. **Wei Lin**, Huanfei Ma, Jianfeng Feng, and Guanrong Chen [2010] *Locating unstable periodic orbits: When adaptation integrates into delayed feedback control*, **Physical Review E**, vol. 82, Art. No. 046214.

40. Huanfei Ma, Bing Xu, **Wei Lin***, and Jianfeng Feng [2010] *Adaptive identification of time delays in nonlinear dynamical models*, **Physical Review E,** vol. 82, Art. No. 066210.

41. **Wei Lin*** and Huanfei Ma [2010] *Synchronization between adaptively coupled systems with discrete and distributed time-delays*, **IEEE Transactions on Automatic Control**, *Regular Paper*, vol. 55, pp. 819.

42. **Wei Lin** [2010] *Comment on "Adaptive steady-state stabilization for nonlinear dynamical systems"*, **Physical Review E**, vol. 81, Art. No. 038201.

43. Wenyong Zhong and **Wei Lin*** [2010] *Time-scale-dependent criteria for the existence of positive solutions to p-Laplacian multipoint boundary value problem*, **Advance in Difference Equations**, vol. 2010, Article ID 746106, 20 pages.

44. **Wei Lin*** and Guanrong Chen [2009] *Large memory capacity in chaotic artificial neural networks: A view of the anti-integrable limit*, **IEEE Transactions on Neural Networks,** *Regular Paper*, vol. 20, pp.1340.

45. Huanfei Ma and **Wei Lin*** [2009] *Nonlinear adaptive synchronization rule for identification of a large amount of parameters in dynamical models*, **Physics Letters A**, vol. 374, pp. 161.

46. Wenyong Zhong and **Wei Lin*** [2009] *Existence of positive solutions in generalized boundary value problem for p-Laplacian dynamic equations on time scales*, **Advances in Difference Equations**, vol. 2009, Art. ID 848191.

47. Zi-Yin Shen, Jianhua Huang, **Wei Lin**, *et al.* [2009] *Transition of studying on Shen deficiency syndrome and aging from holistic concept to systematic biology viewpoint*, **Chinese Journal of Integrated Traditional and Western Medicine**, vol. 29, pp. 548 (In Chinese).

48. **Wei Lin** [2008] *Realization of synchronization in time-delayed systems with stochastic perturbation*, **Journal of Physics A: Mathematical and Theoretical**, vol. 41, Art. No. 235101.

49. Qing Ding and **Wei Lin** [2008] *The transmission property of the discrete Heisenberg ferromagnetic spin chain*, **Journal of Mathematical Physics**, vol. 49, Art. No. 093501.

50. **Wei Lin** [2008] *Chaos control and synchronization in only locally Lipschitz systems*, **Physics Letters A**, vol. 372, pp. 3195.

51. Zi-Yin Shen, Xin-Min Zhang, **Wei Lin**, *et al.* [2008] *Establishment of a quantitative mathematical model of Shen-deficiency syndrome based on whole-genome transcriptional profiles*, **Chinese Journal of Integrated Traditional and Western Medicine**, vol. 28, pp. 131 (In Chinese).

52. **Wei Lin** and Huanfei Ma [2007] *Failure of parameter identification based on adaptive synchronization techniques*, **Physical Review E**, vol. 75, Art. No. 066212.

53. **Wei Lin**, Jianhong Wu, and Guanrong Chen [2007] *Generalized snap-back repeller and semi-conjugacy to shift operators of piecewise continuous transformations,* **Discrete and Continuous Dynamical Systems-Series A**, vol. 19, pp.103.

54. **Wei Lin** [2007] *Global existence theory and chaos control of fractional differential equations*, **Journal of Mathematical Analysis and Applications**, vol. 332, pp. 709.

55. Zhang Chen, **Wei Lin***, and Jie Zhou [2007] *Complete and generalized synchronization in a class of noise perturbed chaotic systems*, **CHAOS**, <u>vol. 17, Art. No. 023106</u>.
56. Wenyong Zhong, **Wei Lin***, and Jiong Ruan [2007] The *generalized invariance principle for dynamic equations on time scales*, **Applied Mathematics and Computation**, <u>vol. 184, pp. 557</u>.
57. **Wei Lin** and Guanrong Chen [2006] *Using white noise to enhance synchronization of coupled chaotic systems*, **CHAOS**, <u>vol. 16, Art. No. 013134</u>.
58. **Wei Lin** and Guanrong Chen [2006] *Heteroclinical repellers imply chaos*, **International Journal of Bifurcation and Chaos**, <u>vol. 16, pp. 1471</u>.
59. Chen Wu, Jiong Ruan, and **Wei Lin** [2006] *Existence and stability of periodic solution in the delayed Cohen-Grossberg neural network with high-order terms*, **Applied Mathematics and Computation**, vol. 177, pp. 194.
60. **Wei Lin** [2005] *Description of complex dynamics in a class of impulsive differential equations*, **Chaos, Solitons & Fractals**, <u>vol. 25, no. 5, pp. 1007-1017</u>.
61. **Wei Lin** and Yangbo He [2005] *Complete synchronization of the noise-perturbed Chua's circuits*, **CHAOS**, <u>vol. 15, Art. No. 023705</u>.

Grants & Awards

- 2017 NSFC (Grant No. 61773125, PI, 4 years), China
- 2017 Highly Cited Chinese Researcher in General Engineering, <u>Elsevier</u>
- 2017 K. C. Wong Education Foundation Year 2017 Programme, Hong Kong, China
- 2016 Excellent Teacher, voted by the Graduated Students of the year 2016, Fudan University, China
- 2016 Highly Cited Chinese Researcher in General Engineering, <u>Elsevier</u>
- 2015 Tian-Yuan Grant of NSFC for 2015 Summer School of Modern Mathematical Biology (Grant No. 11526011, PI, 1 year), China
- 2015 the National High-tech Research and Development Program (863 Program no. 2015AA020512, Member, 3 years), China
- 2015 Highly Cited Chinese Researcher in General Engineering, <u>Elsevier</u>
- 2014 Tian-Yuan Grant of NSFC for 2014 Summer School of Modern Mathematical Biology (Grant No. 11426027, PI, 1 year), China
- 2014 Zhuo-Shi Program of Fudan University (PI, 3 years), China
- 2013 NSFC for Excellent Young Scholars (Grant No. 11322111, PI, 3 years), China
- 2013 Tian-Yuan Grant of NSFC (Grant No. 11326031, 1 year), China
- 2012 Joint Program on Mathematical Modeling for Management of Shanghai Medical Insurance Funds, (with Shanghai Municipal Medical Insurance Bureau), China
- 2012 NSFC (Grant No. 61273014, PI, 4 years), China

- 2011 Rising-Star (Tracked) Program (Grant No.11QH1400200, PI, 2 years), Science and Technology Commission of Shanghai Municipality, China
- 2011 Tian-Yuan Grant of NSFC (Grant No. 11126002, 1 year), China
- 2011 Excellent Teacher, voted by the Graduated Students of the year 2011, Fudan University, China
- 2010 Shuguang Scholar Program (Grant No. 10SG02, PI, 2 years), Shanghai Educational Development Foundation, China
- 2010 Cao-Guang-Biao Education Foundation Award, Shanghai Educational Development Foundation, China
- 2010 Second Prize of the Fok-Ying-Tung Education Foundation Award for Young Scientists in Universities, Ministry of Education, China
- 2010 Hong Kong People Sponsored Fellowship for Teaching and Research, Fudan University, China
- 2009 NSFC (Grant No. 10971035, PI, 3 years), China
- 2009 Excellent Teacher, voted by the Graduated Students of the year 2009, Fudan University, China
- 2008 Member of the Echelon of Shanghai Excellent Young University Teachers, Education Commission of Shanghai Municipality, China
- 2008 NSFC (Grant No. 60874121, PI, 3 years), China
- 2007 Rising-Star Program (Grant No. 07QA14002, PI), Science and Technology Commission of Shanghai Municipality, China
- 2007 NBRP-973 (Grant Nos. 2007CB814904 and 2007CB507406, Members, 5 years), China
- 2006 National Basic Research Program (NBRP-973) (Grant No. 2006CB303102, Member, 5 years), China
- 2006 Excellent Doctoral Thesis of Shanghai (Thesis: *Some Theoretical Problems in Complex Dynamical Systems and Their Applications,* supervised by Professor Jiong Ruan), Education Commission of Shanghai Municipality, China
- 2006 Excellent Star of New Century, Fudan University, China
- 2006 Liu Hao-Qing Fellowship for Teaching and Research, Fudan University, China
- 2005 NSFC (Grant No. 10501008, PI, 3 years), China
- 2004 Star of New Century Fellowship, Fudan University, China
- 2004 National Natural Science Foundation of China (NSFC) (Grant No. 90409001, Member, 3 years), China