# Ming Li

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## Educations & Careers

**Research Associate Professor**
*School of Engineering Science, University of Science and Technology of China* *9/2016-present*

**Postdoctoral Fellow**
*Department of Applied Physics, The Hong Kong Polytechnic University* *1/2016-7/2016*

**Postdoctoral Fellow**
*Department of Modern Physics, University of Science and Technology of China* *6/2014-1/2016*

**Ph.D.**
*Department of Modern Physics, University of Science and Technology of China* *9/2009-6/2014*

**B.S.**
*School of Physics and Material Science, Anhui University* *9/2005-6/2009*

## Research Interests

◇◇: Percolation on networks
◇◇: Phase transition and critical phenomena in networked systems
◇◇: Network structure analysis
◇◇: Spreading and traffic processes in networks

## Speciality & Skills

◇◇: Theories of statistical physics and nonlinear dynamics
◇◇: Monte Carlo simulation & Graph algorithm
◇◇: Fluent in C/C++
◇◇: Some experience in Python and Matlab

## Publications

[1] Run-Ran Liu, **Ming Li**, Linyuan Lü, and Chun-Xiao Jia, *Network percolation*, Higher Education Press, Beijing, 2020. (in Chinese).

[2] Jie Chen, Mao-Bin Hu*, Yong-Hong Wu, and **Ming Li***, *Traffic-induced epidemic suppression in multiplex networks*, Journal of Statistical Mechanics: Theory and Experiment **2020**, 113403 (2020).

[3] **Ming Li**, Linyuan Lü, Youjin Deng, Mao-Bin Hu, Hao Wang, Matúš Medo, and H. Eugene Stanley, *History-dependent percolation on multiplex networks*, National Science Review **7**, 1296–1305 (2020).

[4] Jie Chen, Mao-Bin Hu*, and **Ming Li***, *Traffic-driven epidemic spreading dynamics with heterogeneous infection rates*, Chaos, Solitons & Fractals **132**, 109577 (2020).

[5] Jie Chen, Mao-Bin Hu*, and **Ming Li***, *Traffic-driven epidemic spreading in multiplex networks*, Phys. Rev. E **101**, 012301 (2020).

[6] Chao-Yun Wu, Jie Chen, Qing-Yi Hao, **Ming Li***, and Mao-Bin Hu*, *Improve traffic efficiency with advanced travel time feedback in urban networks*, Journal of Statistical Mechanics: Theory and Experiment **2019**, 023404 (2019).

[7] Jie Chen, Jin-Yong Chen, **Ming Li***, and Mao-Bin Hu*, *Traffic dynamics considering packet loss in finite buffer networks*, Chinese Physics B **28**, 48901 (2019).

[8] Jie Chen, Chao-Yun Wu, **Ming Li***, and Mao-Bin Hu*, *Hybrid traffic dynamics on coupled networks*, Physica A: Statistical Mechanics and its Applications **516**, 98 (2019).

[9] Yu-Zhang Chen, **Ming Li**, Rui Jiang, and Mao-Bin Hu, *Evacuation flow of pedestrians considering compassion effect*, Chinese Physics B **27**, 088901 (2018).

[10] Xiao-Yu Luo, Jie Chen, **Ming Li**, and Mao-Bin Hu, *Traffic dynamics on a double layer coupled network considering physical queuing*, International Journal of Modern Physics C **29**, 1850126 (2018).

[11] Hui Wang*, **Ming Li***, Lin Deng*, and Bing-Hong Wang*, *Robustness of networks with assortative dependence groups*, Physica A: Statistical Mechanics and its Applications **502**, 195 (2018).

[12] Chao-Yun Wu, **Ming Li***, Rui Jiang, Qing-Yi Hao, and Mao-Bin Hu*, *Perimeter control for urban traffic system based on macroscopic fundamental diagram*, Physica A: Statistical Mechanics and its Applications **503**, 231 (2018).

[13] Jian Huang, Mao-Bin Hu*, Rui Jiang, and **Ming Li***, *Effect of pre-signals in a Manhattan-like urban traffic network*, Physica A: Statistical Mechanics and its Applications **503**, 71 (2018).

[14] Bo Tian, Wang-Ping Sun, **Ming Li***, Rui Jiang, and Mao-Bin Hu*, *Flowrate behavior and clustering of self-driven robots in a channel*, Chinese Physics B **27**, 38902 (2018).

[15] **Ming Li**, Run-Ran Liu, Dan Peng, Chun-Xiao Jia, and Bing-Hong Wang, *Roles of the spreading scope and effectiveness in spreading dynamics on multiplex networks*, Physica A: Statistical Mechanics and its Applications **492**, 1239 (2018).

[16] **Ming Li** and Bing-Hong Wang, *Percolation transition on multilayer networks*, Science & Technology Review **35**, 50 (2017), in Chinese.

[17] Jie Chen, **Ming Li***, Rui Jiang, and Mao-Bin Hu*, *Effects of the amount of feedback information on urban traffic with advanced traveler information system*, Physics Letters A **381**, 2934 (2017).

[18] Bo Tian, Rui Jiang, **Ming Li**, and Mao-Bin Hu, *Cluster mean-field analysis for spontaneous symmetric breaking in a bidirectional two-lane system with narrow entrances and parallel update*, Europhysics Letters **117**, 40003 (2017).

[19] Deng-Cheng Yan, **Ming Li**, and Bing-Hong Wang, *Dependence centrality similarity: Measuring the diversity of profession levels of interests*, Physica A: Statistical Mechanics and its Applications **479**, 118 (2017).

[20] Ling-Wei Kong, **Ming Li***, Run-Ran Liu, and Bing-Hong Wang, *Percolation on networks with weak and heterogeneous dependency*, Physical Review E **95**, 032301 (2017).

[21] **Ming Li**, Mao-Bin Hu, and Bing-Hong Wang, *Transportation dynamics on coupled networks with limited bandwidth*, Scientific Reports **6**, 39175 (2016).

[22] Run-Ran Liu, **Ming Li**, and Chun-Xiao Jia, *Cascading failures in coupled networks: The critical role of node-coupling strength across networks*, Scientific Reports **6**, 35352 (2016).

[23] Run-Ran Liu, **Ming Li**, Chun-Xiao Jia, and Bing-Hong Wang. *Cascading failures in coupled networks with both inner-dependency and inter-dependency links*. Scientific Reports **6** 25294 (2016). *Corrigendum*, Scientific Reports **6**, 34431 (2016).

[24] **Ming Li**, Youjin Deng, and Bing-Hong Wang. *Clique percolation in random graphs*. Physical Review E **92**, 042116 (2015).

[25] **Ming Li** and Bing-Hong Wang. *Percolation model and complex networks*. Modern Physics **10**, 32 (2015). in Chinese.

[26] Hui Wang, **Ming Li***, Lin Deng, and Bing-Hong Wang. *Percolation on networks with conditional dependence group*. PLoS ONE **10**, e0126674 (2015).

[27] **Ming Li** and Bing-Hong Wang. *Generating function technique in complex networks*. Journal of Physics: Conference Series **604**, 012013 (2015).

[28] **Ming Li** and Bing-Hong Wang. The structure and robustness of multilayer networks. Complex Systems and Complexity Science **12**, 32 (2015). in Chinese.

[29] **Ming Li**, Run-Ran Liu, Chun-Xiao Jia, and Bing-Hong Wang. *Cascading failures on networks with asymmetric dependence*. Europhysics Letters **108**, 56002 (2014).

[30] **Ming Li** and Bing-Hong Wang. *Percolation on networks with dependence links*. Chinese Physics B **23** 076402 (2014).

[31] **Ming Li**, Run-Ran Liu, Chun-Xiao Jia, and Bing-Hong Wang. *Critical effects of overlapping of connectivity and dependence links on percolation of networks*. New Journal of Physics **15**, 093013 (2013).

[32] Yan-Bo Xie, Yu-Jian Li, **Ming Li**, Zhen-Dong Xi, and Bing-Hong Wang. *An exact numerical approach to calculate the first passage time for general random walks on a network*. Chinese Physics Letters **30**, 110504 (2013).

[33] **Ming Li**, Chun-Xiao Jia, Run-Ran Liu, and Bing-Hong Wang. *Emergence of cooperation in spatial public goods game with conditional participation*. Physica A: Statistical Mechanics and its Applications **392**, 1840 (2013).

[34] Zhong-Jun Ding, Rui Jiang, **Ming Li**, Qi-Lang Li, and Bing-Hong Wang. *Effect of violating the traffic light rule in the Biham-Middleton-Levine traffic flow model*. Europhysics Letters **99**, 68002 (2012).

[35] **Ming Li**, Rui Jiang, Mao-Bin Hu, Bing-Hong Wang, and Qing-Song Wu. *Traffic flow in a rectangle street-parking-allowed Manhattan-like urban system*. In CICTP 2012, 383 (2012).

[36] **Ming Li**, Zhong-Jun Ding, Rui Jiang, Mao-Bin Hu, and Bing-Hong Wang. *Traffic flow in a Manhattan-like urban system*. Journal of Statistical Mechanics: Theory and Experiment **12**, P12001 (2011).