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## 林振权 (博士, 教授)



### 教育背景

- 2014年3月 同等学力博士, 浙江大学大学理学院, 理学博士  
1985年9月 硕士研究生, 杭州大学物理系, 理学硕士  
-1988年7月
- 1980年9月 本科, 杭州大学物理系, 理学学士  
-1984年7月

### 经历

#### 工作经历

- 2001年11月 教授, 硕士生导师, 温州师范学院/温州大学数理学院  
-现在
- 1996年12月 副教授, 温州师范学院/温州大学物理系  
-2001年11月
- 1988年8月 讲师, 温州师范学院物理系  
-1996年12月

#### 学术交流经历

- 2003年2月 访问学者, 多伦多大学物理系  
-2003年7月
- 1994年9月 访问学者, 北京师范大学物理系院校名  
-1995年7月

#### 教学经历

1988年9月 讲授课程  
-至今

- 热力学与统计物理学
- 量子力学
- 光学
- 理论力学
- 热学
- 高等统计物理学（硕士生）

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## 研究方向

- 1 统计物理与
- 2 复杂性科学

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## 荣誉和奖励

- 1 浙江省“151人才”（第二层次）（1998年）
- 2 温州市“551人才”（第一层次）（1999年）

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## 主持和参与项目

### 教学项目

### 学术项目

- 2012年1月-2015年12月 人口分布系统的时空演化动力学的研究，国家自然科学基金面上项目，参与
- 2009年1月-2011年12月 以经济社会系统为代表的复杂系统聚集演化的机制及规律，国家自然科学基金面上项目，主持
- 2008年1月-2010年12月 基于复杂网络的聚集体演化动力学，国家自然科学基金面上项目，参与
- 2003年1月-2004年12月 聚集生长过程动力学的研究，国家自然科学基金项目，主持

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## 论文

## 学术论文

1. **Zhenquan Lin** and Z.R.Yang, Renormalization group approach to the multi-component site percolation on Sierpinski carpets, *Physica A* **219**, 246-252 (1995)
2. **Zhenquan Lin** and Z.R.Yang, Thresholds and universality of the site percolation on the Sierpinski carpets, *Commun. Theor. Phys.* **27**, 145-152 (1997)
3. **Zhenquan Lin**, Z. R. Yang and Yong Qin, Renormalization group approach to the bond percolation on Sierpinski carpets, *Chin. Phys.* **6**, 257-265 (1997)
4. **Zhenquan Lin**, Xiangmu Kong and Z.R.Yang, Critical behavior of the Gaussian model on a diamond-type hierarchical lattice with periodic and aperiodic interactions, *Physica A* **271**, 118-124 (1999)
5. 孔祥木、林振权、朱建阳, 外场中分形晶格上 Gauss 模型的临界现象, *中国科学 A* **30**, 661-672 (2000)
6. **Zhenquan Lin**, Xiangmu Kong, Jinshuang Jin and Z.R.Yang, Critical behavior of the Gaussian model with periodic interactions on diamond-type hierarchical lattices in external magnetic fields, *Commun. Theor. Phys.* **35**, 347-354 (2001)
7. **Zhenquan Lin** and Xiangmu Kong, Critical behavior of the Gaussian model on Sierpinski carpets, *Chin. Phys. Lett.* **18**, 882-884 (2001)
8. Jianhong Ke and **Zhenquan Lin**, Kinetic behavior of aggregation processes with complete annihilation, *Phys. Rev. E* **65**, 051107 (2002)
9. Jianhong Ke and **Zhenquan Lin**, Solvable  $n$ -species aggregation process with joint annihilation, *Phys. Rev. E* **66**, 041105 (2002)
10. Jianhong Ke and **Zhenquan Lin**, Kinetics of migration-driven aggregation processes, *Phys. Rev. E* **66**, 050102(R) (2002)
11. Jianhong Ke and **Zhenquan Lin**, Kinetics of the catalysis-driven aggregation processes, *Phys. Rev. E* **66**, 062101 (2002)
12. Jianhong Ke and **Zhenquan Lin**, Kinetic behavior of aggregation-fragmentation process with annihilation, *Commun. Theor. Phys.* **37**, 297 (2002)
13. Jianhong Ke and **Zhenquan Lin**, Breakdown of scaling in

- aggregation-fragmentation-annihilation process of  $n$ -species systems, Commun. Theor. Phys. **38**, 235 (2002)
14. **Zhenquan Lin** and Jianhong Ke, Kinetics of a migration-driven aggregation process with birth and death, Phys. Rev. E **67**, 031103 (2003)
  15. Jianhong Ke and **Zhenquan Lin**, Solvable aggregation model with monomer annihilation, Phys. Rev. E **67**, 062101 (2003)
  16. Jianhong Ke and **Zhenquan Lin**, A solvable two-species catalysis-driven aggregation model, J. Phys. A: Math. Gen. **36**, 3683 (2003)
  17. Jianhong Ke and **Zhenquan Lin**, Kinetic behaviour of irreversible aggregation-annihilation process with input term, Physica A **320**, 261 (2003)
  18. Jianhong Ke, **Zhenquan Lin**, and Youyi Zhuang, Aggregate size distributions in migration driven growth models, Eur. Phys. J. B **36**, 423 (2003)
  19. Jianhong Ke, **Zhenquan Lin** and Xianghong Wang, Exact solution of the cluster size distribution for multi-polymer coagulation process, Chin. Phys. Lett. **20**, 151 (2003)
  20. Jianhong Ke, Juanjuan Lin and **Zhenquan Lin**, Scaling in aggregation process with a kernel related to the reaction activities, Chin. Phys. Lett. **20**, 1390 (2003)
  21. Jianhong Ke, **Zhenquan Lin** and Xianghong Wang, Kinetic behaviour of two-species-group aggregation process with complete annihilation, Chin. Phys. **12**, 443 (2003)
  22. Jianhong Ke and **Zhenquan Lin**, Kinetics of an  $n$ -species aggregation chain model with complete annihilation, Commun. Theor. Phys. **39**, 115 (2003)
  23. **Zhenquan Lin**, Jianhong Ke and Xianghong Wang, Kinetic behaviour of the aggregation-annihilation process of two-species-group system, Commun. Theor. Phys. **39**, 635 (2003)
  24. Jianhong Ke, **Zhenquan Lin** and Yusu Chen, Nonuniversality and breakdown of scaling in aggregation process with removal term, Commun. Theor. Phys. **40**, 123 (2003)
  25. Youyi Zhuang, **Zhenquan Lin** and Jianhong Ke, Kinetics of a migration-driven aggregation-fragmentation process, Commun. Theor. Phys. **40**, 231 (2003)

26. Jianhong Ke and **Zhenquan Lin**, Catalysis-driven aggregate growth, *J. Phys. A: Math. Gen.* **37**, 3967 (2004)
27. Jianhong Ke, Youyi Zhuang and **Zhenquan Lin**, Two-species aggregation processes with migration, *Phys. Lett. A* **325**, 9 (2004)
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29. Jianhong Ke, Xianghong Wang, **Zhenquan Lin** and Youyi Zhuang, Scaling in the aggregation process with catalysis-driven fragmentation, *Physica A* **338**, 356 (2004)
30. Jianhong Ke and **Zhenquan Lin**, Dynamics of aggregate growth through monomer birth and death, *Chin. Phys. Lett.* **21**, 972 (2004)
31. Jianhong Ke, Xiaou Cai and **Zhenquan Lin**, Population and asset distributions in economically competitive activities: a rate-equation approach, *Chin. Phys. Lett.* **21**, 1216 (2004)
32. Jianhong Ke, **Zhenquan Lin**, and Youyi Zhuang, Scaling behavior of an aggregation-migration model, *Commun. Theor. Phys.* **41**, 781 (2004)
33. Xianghong Wang, Jianhong Ke, and **Zhenquan Lin**, Dynamics of aggregation-annihilation process with cluster removals, *Chin. Phys.* **13**, 765 (2004)
34. Jianhong Ke, Xianghong Wang, **Zhenquan Lin**, and Youyi Zhuang, Dynamic scaling of migration-driven aggregate growth, *Chin. Phys.* **13**, 772 (2004)
35. Jianhong Ke, **Zhenquan Lin** and Youyi Zhuang, Scaling theory for intermediary-activated migration processes, *Int. J. Mod. Phys. B* **18**, 2628 (2004)
36. **Zhenquan Lin**, Jianhong Ke and Gao-Xiang Ye, Exchange-driven growth with birth rate less than death, *Commun. Theor. Phys.* **43**, 837 (2005)
37. Jianhong Ke, **Zhenquan Lin** and Youyi Zhuang, Monomer migration and annihilation processes, *Commun. Theor. Phys.* **43**, 953 (2005)
38. Jianhong Ke, Youyi Zhuang and **Zhenquan Lin**, Aggregate growth driven by monomer transfer, *Chin. Phys.* **14**, 1676 (2005)
39. Jianhong Ke, Youyi Zhuang, **Zhenquan Lin** and Peng Ye, Competition between

- aggregation and migration processes of a multi-species system, *Chin. Phys.* **14**, 2602 (2005)
40. Xianghong Wang, Jianhong Ke, and **Zhenquan Lin**, The distribution function of residue-residue contacts in protein molecules, *Chin. J. Poly. Sci.* **23**, 387 (2005)
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  44. Lucas Goehring, Stephen W. Morris and **Zhenquan Lin**, Experimental investigation of the scaling of columnar joints, *Phys. Rev. E* **74**, 036115 (2006)
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  48. Haifeng Wang, **Zhenquan Lin** and Xiangmu Kong, Kinetic behavior of exchange-driven growth with catalyzed-birth processes, *Commun. Theor. Phys.* **46**, 1113 (2006) (通讯作者)
  49. Jianhong Ke, **Zhenquan Lin** and Xiaoshuang Chen, Novel biased aggregation-annihilation model, *Commun. Theor. Phys.* **47**, 355 (2007)
  50. Anjia Han, Yu Chen, **Zhenquan Lin**\* and Jianhong Ke, Kinetic behavior of aggregation-exchange growth process with catalyzed-birth, *Commun. Theor. Phys.* **47**, 479 (2007)

51. Jianhong Ke, **Zhenquan Lin**, Yizhuang Zheng, Xiaoshuang Chen, and Wei Lu, Solvable single-species aggregation–annihilation model for chain-shaped cluster growth, *J. Phys.: Condens. Matter* **19**, 065104 (2007)
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53. Jianhong Ke, Yizhuang Zheng, **Zhenquan Lin**, Xiaoshuang Chen, Coagulation and self-duplication processes of a chain-shaped polymer system, *Phys. Lett. A* **368**, 188 (2007)
54. Yu Chen, Jianhong Ke and **Zhenquan Lin**, Kinetics of catalysis-driven aggregation processes with sequential input of catalyst, *Commun. Theor. Phys.* **49**, 235 (2008)
55. Jianhong Ke, **Zhenquan Lin** and Xiaoshuang Chen, Analytical results of a two-species predator-prey model, *Commun. Theor. Phys.* **49**, 791 (2008)
56. Haifeng Wang, **Zhenquan Lin\*** and Yan Gao, Kinetics of aggregation growth with competition between catalyzed birth and catalyzed death, *Chin. Phys. B* **17**, 1490 (2008)
57. Ke Lu, **Zhenquan Lin\*** and Yunfei Sun, Kinetic behaviors of a competitive population and fitness system in exchange-driven growth, *Commun. Theor. Phys.* **50**, 105 (2008)
58. Shunyou Yang, Shengqing Zhu, Jianhong Ke and **Zhenquan Lin**, Kinetics of infection-driven growth model with birth and death, *Commun. Theor. Phys.* **50**, 787 (2008)
59. Jianhong Ke, **Zhenquan Lin** and Xiaoshuang Chen, An analytical solution of coagulation processes with collision-induced fragmentation, *J. Phys. A: Math. Theor.* **41**, 285005 (2008)
60. Shengqing Zhu, Shunyou Yang, Jianhong Ke and **Zhenquan Lin**, Kinetic behaviours of aggregate growth driven by time-dependent migration, birth and death, *J. Phys. A: Math. Theor.* **41**, 505004 (2008)
61. Yunfei Sun, Dan Chen, **Zhenquan Lin\*** and Jianhong Ke, Kinetic behaviors of

- catalysis-driven growth of three-species aggregates on base of exchange-driven aggregations, *Commun. Theor. Phys.* **51**, 1042 (2009)
62. Haifeng Wang, **Zhenquan Lin**, Yan GAO and Heng Zhang, Solvable Catalyzed Birth-Death-Exchange Competition Model of Three Species, *Commun. Theor. Phys.* **52**, 735 (2009)
  63. Haifeng Wang, **Zhenquan Lin**, Yan GAO and Chao Xu, Kinetics of catalytically activated duplication in aggregation growth, *Chin. Phys. B* **18**, 3577 (2009)
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  65. Jianhong Ke, **Zhenquan Lin** and Xiaoshuang Chen, Scaling in Rate-Changeable Birth and Death Processes with Random Removals, *Commun. Theor. Phys.* **51**, 165 (2009)
  66. Jianhong Ke, Pingping Li, Xiaoshuang Chen, **Zhenquan Lin** and Yizhuang Zheng, Connectivity of growing networks with link constraints, *Eur. Phys. J. B* **70**, 211 (2009)
  67. Dan Chen, **Zhenquan Lin\***, Yunfei Sun and Jianhong Ke, Competition between self-birth and catalyzed death in aggregation growth with catalysis injection, *Commun. Theor. Phys.* **52**, 1139 (2009)
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  70. Meixia Song, **Zhenquan Lin\***, Xiaodong Li, and Jianhong Ke, Aggregation behaviors of a two-species system with lose-lose interactions, *Commun. Theor. Phys.* **53**, 1190 (2010)
  71. Xiaodong Li, **Zhenquan Lin\***, Meixia Song and Jianhong Ke, Competing role of catalysis-coagulation and catalysis-fragmentation in kinetic aggregation behaviours, *Chin. Phys. B* **19**, 128201 (2010)



72. Yan Gao, Haifeng Wang, **Zhenquan Lin** and Xinying Xue, Kinetics of catalytically activated aggregation fragmentation process, *Chin. Phys. B* **20**, 086801 (2011)
73. Ming Yin, **Zhenquan Lin\*** and Jianhong Ke, Dynamic models of pest propagation and pest control, *Chin. Phys. B* **20**, 088201 (2011)
74. Ping-Ping Li, Jianhong Ke, **Zhenquan Lin** and P. M. Hui, Cooperative behavior in evolutionary snowdrift games with the unconditional imitation rule on regular lattices, *Phys. Rev. E* **85**, 021111 (2012)
75. Yuangang Wu, **Zhenquan Lin\***, Jianhong Ke, Kinetic evolution behaviors of catalysis-select migrations, *Chin. Phys. B* **21**, 068201 (2012)
76. **Zhenquan Lin\*** and Gaoxiang Ye, Dynamic aggregation evolution of competitive societies of cooperative and noncooperative agents. *Chin. Phys. B* **22**(5), 058201 (2013)
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78. 王春娟, 林振权, 人类通信行为中的标度律, *复杂系统与复杂性科学*, 第10卷第3期, 2013年9月
79. 李丽, 李萍萍, 柯见洪, 夏海江, 林振权, 两种类粒子间的聚集与完全湮没竞争过程的标度行为, *物理学报*, 2014, 63(11):118201.
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81. **Zhenquan Lin\***, Shanci Hou, and Jinshan Wu, The correlation between editorial delay and the ratio of highly cited papers in *Nature*, *Science* and *Physical Review Letters*, *Scientometrics*, 107(3) , 1457-1464 (2016)
82. **Zhenquan Lin\*** and Fan Meng, Empirical analysis on the runners' velocity distribution in city marathons, *Physica A*, 490(), 533–541 (2018)

教学论文

1. 林振权, 相对论经典理想气体 $\Gamma$ 空间微观态密度的计算, 大学物理, 12(11), 8-11, 1993

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## 指导硕士生

2004级	韩安家, 王海峰
2005级	卢柯
2006级	孙云飞, 陈丹
2007级	李晓东, 宋美霞
2008级	尹铭, 李红
2009级	吴远刚
2010级	王春娟
2011级	姜兴隆
2013级	侯善慈
2014级	孟帆
2015级	胡金洁

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## 指导本科生竞赛

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## 科研获奖

1. 林振权、孔祥木, 分形上相变与临界现象研究, 浙江省科学技术奖三等奖(浙江省政府), 2002年
2. 柯见洪、林振权、郑亦庄、庄友谊、王向红, 聚集体的非线性演化动力学, 浙江省科学技术奖三等奖(浙江省政府), 2008年