

## Curriculum Vitae

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The title of Ph.D. thesis is:  
“Theory and applications of random and restricted walks”  
Supervisor: Professor Riubao Tao  
Position: (1). 1989.7-2002.9: Lecturer(1989.7-1990.12), Associate Professor(1990.12-1993.12), Professor(1993.12-2002.9), and Dean(1998.10-2002.9) in Department of Applied Physics, South China University of Technology, Guangzhou, P.R. China.  
(2). 2001.6-2002.1: Visiting Professor, Brunel University, London, the U.K.  
2002.9-2003.9: Research Associate, Martin-Luther-University, Halle, Germany.  
(3). 2003.9-present: Professor, Zhejiang Institute of Modern Physics, Zhejiang University, Hangzhou, P.R. China.  
Research fields: Theoretical studies on:  
(1). Condensed matter physics:  
Superconductivity, Noise in mesoscopic system.  
(2). Statistical physics:  
Fractal, Random walk, Econophysics, Game theory, Complex networks.  
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## Publications

1. “Theoretical explanation of anomaly of ultrasound in La Sr Cu ”,  
Min Zhang, Dafang Zheng, and Ruibao Tao,  
*Physica C* **153**, 255(1988).
2. “An extended generating function technique for treating random walks on  
complex networks”,  
Dafang Zheng, Shunqing Shen, and Ruibao Tao,  
*Acta Physica Sinica* **37**, 1823(1988).
3. “Analysis of the dimensionality of Y Ba Cu O crystal lattics”,  
Shunqing Shen, Dafang Zheng, and Ruibao Tao,  
*Acta Physica Sinica* **37**, 1829(1988).
4. “Self-avoiding trails on finitely ramified fractals”,  
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*Acta Physica Sinica* **38**, 1140(1989).
5. “The trail problem on finitely ramified fractals”,  
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6. “Ultradiffusion on multifurcating hierarchical structures”,  
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*J. Phys. A:Math. Gen.* **22**, L287(1989).
7. “Elastic softening in La-Cu-O Compounds”,  
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8. “Trails on a regular diffusion-limited aggregation fractal”,  
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9. “Hopping conduction on an imperfect Fibonacci lattice”,  
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10. “Low-temperature expansions of fractal Ising models”,  
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11. “Critical dynamics of the kinetic Potts model on some fractals”,  
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*J. Phys. A: Math. Gen.* **23**, 5841(1990).

12. “Spectral structure of two-dimensional Fibonacci quasilattices”,  
Xiujun Fu, Youyan Liu, Bolin Cheng, and Dafang Zheng,  
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13. “Biased ultradiffusion”,  
Dafang Zheng, Youyan Liu, Wenji Deng, and Nanzhi Zou,  
J. Phys. A: Math. Gen. **24**, L123(1991).
14. “Ultradiffusion on the fractal branching Koch curves”,  
Dafang Zheng, Wenji Deng, and Youyan Liu,  
J. Phys. A: Math. Gen. **25**, L371(1992).
15. “A theoretical approach to thermal property of array of cylinders embedded  
in homogeneous matrix”,  
Gu guoqing and Zheng Dafang,  
Acta Math. Scien. **12**, 144(1992).
16. “Quasiperiodicity and magnetic phase transition of a class of one-dimensional  
aperiodic systems”,  
Wenji Deng, Youyan Liu, and Dafang Zheng,  
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17. “Electronic properties of a one-dimensional three-tile quasilattice”,  
Wenji Den, Youyan Liu, and Dafang Zheng,  
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18. “Dynamical crossover on a family of fractals”,  
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Phys. Lett. A **193**, 206(1994).
19. “Matrix method for random walks on lattices”,  
Dafang Zheng, Youyan Liu, and Z.D.Wang,  
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20. “Shot noise in Mesoscopic conductors with electron-phonon scattering”,  
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21. “Quantum conductivity exponent of a fractal Koch curve”,  
Dafang Zheng, Youyan Liu, and Z.D.Wang,  
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22. “Transient transport through a quantum dot: The impurity Anderson model”,  
Dafang Zheng, W.S.Li, and Youyan Liu,  
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23. “Biased ultradiffusion on a fractal branching Koch curve”,  
Baomin Xu, Dafang Zheng, Liqing Zhang, and Yongqing Liu,  
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24. “Spectral density for the tunneling current zero-frequency shot-noise in  
a one-dimensional mesoscopic system”,  
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25. “General situation of gas sensors and their developing direction”,  
Chongjin Liu and Dafang Zheng,  
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26. “Enhanced winnings in a mixed-ability population playing a minority game”,  
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27. “Minority game with arbitrary cutoffs”,  
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28. “Properties of resistive polymer humidity sensors impelled by AC ageing”,  
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29. “Effect of rectangular function correlated noises on  
dynamic properties of a single-mode laser”,  
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30. “Trader dynamics in a model market”,  
N.F.Johnson, M.Hart, P.M.Hui, and Dafang Zheng,  
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31. “Statistical properties of the attendance time series in the minority game”,  
Dafang Zheng and Bing-Hong Wang,  
Physica A **301**, 560(2001).
32. “Non-universal scaling and dynamical feedback in generalised models of fi-  
nancial markets”,  
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34. “A model for the size distribution of customer groups and businesses”  
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35. “Herd formation and information transmission in a population: Non-universal behaviour”,  
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38. “A generalized dynamic herding model with feed-back interactions”,  
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C. Xu, P.M. Hui, and Da-Fang Zheng ,  
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