

## Chen, Chun-Chung

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### Education

- B.S. in Physics, National Taiwan University, Taipei, Taiwan, 1992  
Advisor: Prof. Ting-Wai Chiu
- M.S. in Physics, University of Washington, Seattle, Washington, USA, 1996
- Ph.D. in Physics, University of Washington, Seattle, Washington, USA, 2002  
Thesis: Understand avalanche systems through underlying interface dynamics  
Advisor: Prof. Marcel den Nijs

### Employments

- Undergraduate Research Assistant, National Taiwan University, 1991-1992  
with Prof. Ting-Wai Chiu on Dirac propagators in external fields
- Second Lieutenant, R.O.C. Army, 1992-1994  
Maintenance officer of Hercules missile system
- Graduate Teaching Assistant, University of Washington, 1994-2002  
Lab instructor for freshman labs, electronics lab, and modern physics lab  
Grader for freshman physics, statistical mechanics, advanced quantum, and advanced classical mechanics
- Graduate Research Assistant, University of Washington, 1997-2002  
with Prof. Marcel den Nijs on interface growth models and self-organized criticality
- Research Associate, Case Western Reserve University, 2003-2006  
with Prof. Elena E. Dormidontova on statistical physics of reversibly associated polymers
- Research Associate, University of Pittsburgh, 2006-present  
with Prof. David Jasnow on theoretical biophysics

### Research Fields

- Theoretical Biophysics  
Statistical physics and computational studies of integrate-and-fire neural networks

- Polymer physics  
Theoretical modeling of reversibly associated polymers in the study of ring-chain equilibrium, metallosupramolecular polymers, polymer brushes, targeting polymer nanoparticles, and exchange kinetics of diblock copolymer micelles
- Non-equilibrium statistical physics  
Study of critical phenomena and scaling behaviors in interface growth models, contact processes, epidemic spreading, and granular avalanches
- Computational modeling and analysis  
Monte Carlo simulations in multiscale study of coarse-grained polymer systems; Eigenvalue evaluations in transfer matrix formulation of dynamic systems; Hartree-Fock self-consistent field evaluation for electronic excitations in atom clusters.

### Extra Curriculum

- Lecturer, 1988-1991  
Programming, Data Structure, Algorithmics for the Computer Study Club, [National Taiwan University](#)
- Editor, 1991  
Space Time, the periodical of the Society of Physics Students, [National Taiwan University](#)
- Communication Officer, Web master, 1994-1996  
Chinese Social Betterment Society, [University of Washington](#)

### Additional Skills

- Programming  
Proficient in software construction using C/C++. Extensive experiences with various programming, scripting, and assembly languages. Knowledgeable in topics of data structure, algorithmics, and software engineering. Highly skillful in testing and debugging of existing program codes.
- System Administration  
Extensive knowledge of network environment with hand-on experience on setup, configuration and administration of network servers. Building and administration of high performance computing clusters for multiuser research applications.
- Electronics  
Experience in design and analysis of both digital and analog circuits using various electronic instruments. Effective troubleshooting of electronics circuits (as a maintaining officer in military as well as an instructor in undergraduate electronics labs).

### References

Available upon request