

## CURRICULUM VITAE

### Guo-Cheng Yuan

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### Education

Ph.D., Department of Mathematics, University of Maryland at College Park (1999)  
M.A., Department of Mathematics, Peking University, China (1994)  
B.S., Department of Mathematics, Peking University, China (1992)

### Professional Appointments

1/2004 -present,	Postdoctoral fellow, Bauer Center for Genomics Research, Harvard University
7/2005 -present,	Joint postdoctoral fellow at Department of Statistics, Harvard University
6/2005,	Instructor, Physiology Course, Marine Biological Laboratory
2002-2003,	Research Scientist, SAIC at National Center for Environment Predictions
1999-2002,	Visiting Postdoctoral Research Fellow, Joint at Division of Applied Mathematics, Brown University, and at Department of Physical Oceanography, Woods Hole Oceanographic Institution
2001-2002,	Instructor, Division of Applied Mathematics, Brown University
1997-1999,	Research Assistant, Department of Mathematics, University of Maryland at College Park
1996-1997,	Teaching Assistant, Department of Mathematics, University of Maryland at College Park

### Honors and Awards

1994-1996,	University Graduate Fellowship, Award given by University of Maryland at College Park
1992,	Jiu-Zhang Mathematics Award (best graduating student), Award given by Department of Mathematics, Peking University

## Professional Memberships

- Society for Industrial and Applied Mathematics
- American Society for Cell Biology

## Computer Skills

UNIX, Windows, C/C++, Fortran, Matlab, Mathematica, R

## Invited Presentations

- 2004, Annual Conference for American Society for Cell Biology, Washington, DC
- 2002, Institute of Physical Science and technology, University of Maryland
- 2001, International Conference on Differential Equations and Dynamical Systems, Beijing, China
- 2001, American Geophysical Union Fall Meeting, San Francisco, California

## Other Conference Presentations

- 2005, Sixth International Conference on Systems Biology, Harvard Medical School, Boston, Massachusetts
- 2002, Dynamics Days, University of Maryland, College Park, Maryland
- 2001, SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah
- 2001, Dynamics Days, Duke University, Durham, North Carolina
- 2000, Workshop on Weather and Ocean Predictions, MIT, Cambridge, Massachusetts
- 2000, American Geophysical Union Fall Meeting, San Francisco, California
- 1999, SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah
- 1998, UMCP-PSU Semi-annual Workshop in Dynamical Systems and Related Topics, University of Maryland, College Park, Maryland
- 1998, Joint Mathematics Meetings, Baltimore, Maryland
- 1997, SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah
- 1996, US-Sino Conference on Differential Equations, Zhejiang University, Hangzhou, China

## Publication in Refereed Journals

1. G. C. Yuan, Y. J. Liu, M. F. Dion, M. D. Slack, L. F. Wu, S. J. Altschuler, and O. J. Rando, "Genome-scale Identification of Nucleosome Positions in *S. Cerevisiae*," ***Science***, 2005, 309(5734), p.626-630 (commented by Jean Marx, "Nucleosomes Help Guide Yeast Gene Activity," ***Science***, 17 June 2005: p.1724).
2. S. C. Yang, M. Cai, E Kalnay, M. Rienecker, G. Yuan and Z. Toth, "ENSO bred vectors in coupled ocean-atmosphere General Circulation Models," ***Journal of Climate***, 2005, (accepted)
3. G. C. Yuan, L. J. Pratt, and C. K. R. T. Jones, "Cross-jet Lagrangian Transport and Mixing in a 2 ½ Layer Model," ***Journal of Physical Oceanography***, 2004, 34(9), p.1991-2005.

4. G. C. Yuan, M. S. Lozier, L. J. Pratt, C. K. R. T. Jones, and K. R. Helfrich, "Estimating the Predictability of An Oceanic Time Series Using Linear and Nonlinear Methods," *Journal of Geophysical Research*, 2004, 109(C08), C08002.
5. G. C. Yuan, L. J. Pratt, and C. K. R. T. Jones, "Barrier Destruction and Lagrangian Predictability at Depth in a Meandering Jet," *Dynamics of Atmospheres and Oceans*, 2002, 35(1), p.41-61.
6. G. C. Yuan, J. A. Yorke, T. L. Carroll, E. Ott, and L. M. Pecora, "Testing Whether Two Chaotic One Dimensional Processes Are Dynamically Identical," *Physical Review Letters*, 2000, 85(20), p.4265-4268.
7. G. Haller and G. Yuan, "Lagrangian Coherent Structures and Mixing in Two-Dimensional Turbulence," *Physica D*, 2000, 147(3-4), p.352-370.
8. G. C. Yuan and J. A. Yorke, "An open set of maps for which every point is absolutely nonshadowable," *Proceedings of the American Mathematical Society*, 2000, 128(3), p. 909-918.
9. G. C. Yuan and J. A. Yorke, "Collapsing of Chaos in One Dimensional Maps," *Physica D*, 2000, 36(1-2), p.18-30.
10. G. C. Yuan, K. Nam, T. M. Antonsen, Jr., E. Ott, and P. N. Guzdar, "Power Spectrum of Passive Scalars in Two Dimensional Chaotic Flows," *CHAOS* 2000, 10(1), (Focus issue: chaotic kinetics and transport), p.39-49.
11. G. Yuan and B. R. Hunt, "Optimal Orbits of Hyperbolic Systems," *Nonlinearity*, 1999, 12(4), p.1207-1224.

### **Publications in Preparation**

1. G. C. Yuan\*, P. Ma\*, W. Zhong, and Jun S. Liu, "Assessing the Global Impact of Histone Acetylation on Gene Expression in *Saccharomyces cerevisiae*." (\* equal authorship).

### **Courses Taught**

- 2005, Computer Programming, Marine Biological Laboratory
- 2001-2002, Chaotic Dynamics, Brown University
- 2001-2002, Ocean Dynamics, Brown University
- 1998-1999, Pre-Calculus, University of Maryland at College Park
- 1996-1997, Calculus, University of Maryland at College Park
- 1992-1994, Calculus, Beijing University, China

## References

1. Professor Jun S. Liu  
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3. Professor Steven J. Altschuler  
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