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EDUCATION:

Ph.D.: Physics
The University of Chicago, Chicago, Illinois, March 1995
Thesis: *On the Suppression of Thermal Conduction by Tangled Magnetic Fields*

B.A.: Physics, *magna cum laude*
Harvard College, Cambridge, Massachusetts, June 1990

POSITIONS HELD:

6/00 – Present	Research Assistant Professor Courant Institute of Mathematical Sciences, New York University
1/00 – 5/00	Adjunct Assistant Professor Astronomy Department, Columbia University
6/97 – 12/99	NSF Postdoctoral Research Fellow Astronomy Department, Columbia University
9/98 – 12/98	Adjunct Professor of Physics The Cooper Union
4/95 – 4/97	Postdoctoral Research Assistant Department of Applied Mathematics and Theoretical Physics University of Cambridge
7/91 – 3/95	Research Assistant Department of Astronomy and Astrophysics The University of Chicago
9/90 – 6/91	Teaching Assistant Physics Department, The University of Chicago

AWARDS:

NSF Mathematical Sciences Postdoctoral Research Fellowship (1997-1999)
GAANN Fellowship of the University of Chicago (1990-1993)

PUBLICATIONS:

- Tao, L., Shelley, M.J., MacLaughlin, D.W., and Shapley, R.S. "An Egalitarian Network Model for the Emergence of Simple and Complex Cells in Macaque V1", submitted to *Science*
- Tao, L., Cai, D. and Shelley, M.J. "Bistability and Tunable Gating in a Recurrent Neuronal Network with Synaptic Failure and Hidden Neurons", submitted to *PNAS*
- Shelley, M.J. and Tao, L. "Efficient and Accurate Time-Stepping Schemes for Integrate-and-Fire Neuronal Networks", *J. Comp. Neurosci.* **11**, 111, 2001
- Birch, A.C., Kosovichev, A.G., Spiegel, E.A. and Tao, L. "Resonant Vibrational Instabilities in Magnetized Stellar Atmospheres", *Solar Phys.* **199**, 291, 2001
- Ruderman, M.A., Tao, L. and Kluzniak, W. "A Central Engine for Cosmic Gamma-Ray Burst Sources", *Astrophysical J.* **542**, 243, 2000
- Smith, K.A., Solis, F.J., Tao, L., Thornton, K. and Olvera de la Cruz, M. "Domain Growth in Ternary Fluids: A Level Set Approach," *Phys. Rev. Lett.* **84**, 91, 2000
- Spiegel, E.A. and Tao, L. "Photofluid Instabilities of Hot Stellar Envelopes," *Phys. Rep.* **311**, 163, 1999
- Umurhan, O.M., Tao, L. and Spiegel, E.A. "Stellar Oscillons," *Ann. N. Y. Acad. Sci.* **867**, 298, 1999 (Eds. J.R. Buchler, S.T. Gottesman and H.E. Kandrup)
- Tao, L., Proctor, M.R.E., and Weiss, N.O. "Turbulent Flux Expulsion," *Mon. Not. R. Astron. Soc.* **300**, 907, 1998
- Tao, L., Weiss, N.O., Brownjohn, D.P., and Proctor, M.R.E. "Flux Separation in Stellar Magnetoconvection," *Astrophys. J. Lett.* **496**, L39, 1998.
- Solis, F.J. and Tao, L. "Lacunarity of Random Fractals," *Phys. Lett.* **A228**, 351, 1997.
- Cattaneo, F., Kim, E.-J., Proctor, M., and Tao, L. "Fluctuations in Quasi-Two-Dimensional Fast Dynamos," *Phys. Rev. Lett.* **75**, 1522, 1995.
- Tao, L. "On the Suppression of Thermal Conduction by Magnetic Fields," *Mon. Not. R. Astron. Soc.* **275**, 965, 1995.
- Tao, L., Du, Y., Rosner, R. and Cattaneo, F. "On the Spatial Distribution of Magnetic Fields on the Solar Surface," *Astrophys. J.* **443**, 434, 1995.
- Tao, L., Cattaneo, F., and Vainshtein, S. I. "Evidence for the Suppression of the Alpha-Effect by Weak Magnetic Fields" in *Solar and Planetary Dynamos* (Eds. M.R.E. Proctor, P.C. Matthews, and A.M. Rucklidge), NATO ASI, Isaac Newton Lecture Note Series, 1993.
- Vainshtein, S. I., Tao, L., Cattaneo, F., and Rosner, R. "Turbulent Magnetic Transport Effects and Their Relation to Magnetic Field Intermittency" in *Solar and Planetary Dynamos* (Eds. M.R.E. Proctor, P.C. Matthews, and A.M. Rucklidge), NATO ASI, Isaac Newton Lecture Note Series, 1993.