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POSITIONS HELD

University of California, San Diego, La Jolla, CA

- Postdoctoral Research Fellow (3/2006 – present).
- PIs: Jeff Hasty and Lev Tsimring.

Georgia Institute of Technology, Atlanta, GA

- Graduate Research Assistant (1/2001 – 3/2006).
- PI: Kurt Wiesenfeld.

EDUCATION

Georgia Institute of Technology, Atlanta, GA.

- Ph.D. in physics, 2006.
- Dissertation: “Synchronization and Signal Enhancement in Nonlinear and Stochastic Systems.”
- Advisor: Dr. Kurt Wiesenfeld.
- GPA: 3.94/4.00.

Georgia Institute of Technology, Atlanta, GA.

- BS with highest honor (2000), physics.
- GPA: 4.00/4.00.

AWARDS/FUNDING

- NIH Kirschstein Fellowship (Individual), Grant No. GM082168-01, 2007-Present
- President’s Fellowship, Georgia Institute of Technology, 2001-2005
- Chair’s Fellowship, Georgia Institute of Technology, 2001-2005
- Gilbert F. Amelio Fellowship, Georgia Institute of Technology, 2002
- Honored as the top graduating senior in the College of Sciences, Georgia Institute of Technology, 2000
- Received the Outstanding Graduating Senior of the Year award from the School of Physics, Georgia Institute of Technology, 2000

REFEREED PUBLICATIONS

- [1] M. Bennett, M. F. Schatz, H. Rockwood and K. Wiesenfeld, “Huygens’ clocks,” *Proc. Roy. Soc. London A* **458**, 563-579 (2002).
- [2] M. Bennett and K. Wiesenfeld, “Averaged equations for distributed Josephson junction arrays,” *Physica D* **192**, 196-214 (2004).
- [3] M. Bennett, K. Wiesenfeld and F. Jaramillo, “Stochastic resonance in hair cells,” *Fluct. Noise Lett.* **4**, L1-L10 (2004).
- [4] J. F. Lindner, M. Bennett and K. Wiesenfeld, “Stochastic resonance in the mechano-electrical transduction of hair cells,” *Phys. Rev. E* **72**, 051911 (2005) and *Virtual Journal of Biological Physics Research* **10**, no. 10 (2005).

- [5] J. F. Lindner, M. Bennett and K. Wiesenfeld, "Potential energy landscape and finite-state models of array-enhanced stochastic resonance," *Phys. Rev. E* **73**, 031107 (2006).
- [6] M. R. Bennett and K. Wiesenfeld, "Towards a unified rate theory of stochastic resonance," *Fluct. Noise Lett.* **6**, 405-L413 (2006).
- [7] M. R. Bennett, D. Volfson, L. Tsimring and J. Hasty, "Transient dynamics of genetic regulatory networks," *Biophys. J.* **92**, 3501-3512 (2007).
- [8] C. Grilly, J. Stricker, W. L. Pang, M. R. Bennett and J. Hasty, "A synthetic gene network for tuning protein degradation in *Saccharomyces cerevisiae*," *Mol. Sys. Bio.* **3**, 127 (2007).
- [9] T. Lu, T. Shen, M. R. Bennett, P. G. Wolynes and J. Hasty, "Phenotypic variability of growing cellular populations," *Proc. Natl. Acad. Sci. USA* **104**, 18982-18987 (2007).
- [10] M. R. Bennett, W. L. Pang, N. A. Ostroff, B. L. Baumgartner, S. Nayak, L. S. Tsimring and J. Hasty, "Metabolic gene regulation in a dynamically changing environment," *Nature* **454**, 1119-1122 (2008).
- [11] J. Stricker, S. Cookson, M. R. Bennett, L. S. Tsimring and J. Hasty, "A fast, robust and tunable synthetic gene oscillator," *Nature* **456**, 516-519 (2008).
- [12] A. Handel and M. R. Bennett, "Surviving the bottleneck: Transmission mutants and the evolution of microbial populations," *Genetics* **180**, 2193-2200 (2008).
- [13] W. Mather, M. R. Bennett, J. Hasty and L. S. Tsimring, "Delay-induced degrade-and-fire oscillations in small genetic circuits," accepted for publication in *Phys. Rev. Lett.* (2008).

NON-REFEREED PUBLICATIONS

- [1] M. R. Bennett and J. Hasty, "A DNA methylation-based switch generates bistable gene expression," *Nat. Genet.* **39**, 146-147 (2007).
- [2] M. R. Bennett and J. Hasty, "Genome rewired," *Nature* **452**, 824-825 (2008).

TEACHING EXPERIENCE

University of California, San Diego, La Jolla, CA, 2006 - present

- Substitute Lecturer, Bioengineering 122: Biosystems and Control.
- Substitute Lecturer, Bioengineering 125: Modeling and Computation in Bioengineering.

Georgia Institute of Technology, Atlanta, GA, 2004 - 2005

- Lecturer, Physics 2212: Lecture class in sophomore level electromagnetism containing 103 students. Student survey results available on request.
- Substitute Lecturer, Physics 3201: Lecture class in junior level mechanics.
- Substitute Lecturer, Physics 2211: Lecture class in sophomore level mechanics containing 197 students.
- Undergraduate research mentor for Stephen Medina: "An audio demonstration of stochastic resonance."

PEER REVIEW

Referee for:

- Nature Genetics
- Molecular Systems Biology
- PLoS Computational Biology
- Biophysical Journal
- CHAOS

- Physica D
- Europhysics Letters
- American Journal of Physics
- Communications in Nonlinear Science and Numerical Simulations
- Hong Kong Research Grants Council

REFERENCES

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- Alexander Hoffman, Ph.D.
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- Andreas Handel, Ph.D.
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