Wolfgang Losert – Biographical Sketch

Prof. Losert's research focuses on the nonlinear dynamics of soft matter and biomaterials. His group has expertise in modeling and experimental tests of the dynamic evolution of interfaces and far from equilibrium systems.

a. Professional preparation

Techn. Univ. München, Diplom(~MS), *Summa Cum Laude*	Applied Physics	1995
City College of the City University of New York, Ph.D.	Physics	1998
Haverford College, Research Associate	Physics	1998-2000

b. Appointments

Associate Professor, Dept. of Physics and IPST, Univ. of Maryland	7/2006-
Biophysics Program, Bioengineering Program, Univ. of Maryland	2004-present
Assistant Professor, Dept. of Physics and IPST, Univ. of Maryland	8/2000-6/2006
Visiting Assistant Professor, Dept of Physics, Haverford College	7/1999-7/2000

c. Honors

Fellowship of the German National Merit Foundation (Studienstiftung). The foundation supports the top 0.2% of students in Germany, based on academic merit (grades and faculty recommendation) (1992-1995)

Research Corporation Research Innovation Award (2001).

Graduate Research Board Semester Research Award (2002).

Ferrell Award, University of Maryland (2006).

d. Publications

1. R. Skupsky, C. McCann, R. Nossal, **W. Losert, "**Bias in the Gradient Sensing Response of Chemotactic Cells" to appear in *J. Theoretical Biology* (2007).
2. Luo R, Ahvazi B, Amarei D, Shroder D, Burrola B, **Losert W**, Randazzo PA. "Kinetic analysis of GTP hydrolysis catalyzed by the Arf1.GTP.ASAP1 complex" *Biochem J.* Nov 20 (2006).
3. R. Skupsky[#], W. Losert, and **R. Nossal**, "Distinguishing modes of Eucaryotic Gradient Sensing", *Biophysical Journal* **89,** 2806-2823 (2005).
4. A. J. Pons, A. Karma, S. Akamatsu, M. Newey[#], A. Pomerance[#], H. Singer, and **W. Losert**, "Feedback control of unstable cellular solidification fronts", to appear in Phys. Rev E (2007).
5. L.-Q. Wu, K. Lee[#], X. Wang, D.S. English, W. Losert, and **G.F. Payne** "Chitosan-mediated and spatially selective electrodeposition of nano-scale particles" *Langmuir* **21**, 3641-3646 (2005).

Other significant publications

6. J. Stambaugh[#], K. Van Workum, J. Douglas, and **W. Losert**, "Polymerization Transitions in Two-Dimensional Systems of Dipolar Spheres," *Phys. Rev. E.* **72** 031301 (2005).
7. P. Ribiere, P. Richard, M. Toya, **W. Losert**, R. Delannay and D. Bideau "Effect of rare events on out of equilibrium relaxation", *Phys. Rev. Lett.* **95,** 268001 (2005).
8. N. Taberlet[#], P. Richard, and **W. Losert**, "Understanding the dynamics of segregation bands of simulated granular material in a rotating drum", *Europhys. Lett.* **68**, 522-528 (2004).
9. K. Lee and **W. Losert**, "Controlled dynamics of grain boundaries in binary alloys", *Acta Materialia* **53**, 3503-3510 (2005).
10. S. Akamatsu, K. Lee[#], and **W. Losert,** "Control of eutectic solidification microstructures through laser spot perturbations" *Journal of Crystal Growth* **289**, 331 *(2006).*

e. Synergistic Activities

Helped establish interdisciplinary biophysics research in the Physics Department: From the Spring 2003 semester until the Fall of 2004 I have organized a seminar series, and a group webpage to foster interactions among faculty and students with biophysics interest. Also helped establish a systems biology interaction with the National Cancer Institute (NIH). See http://www.cancer.gov/ncicancerbulletin/NCI_Cancer_Bulletin_050206/page3

Evidence for career development efforts on behalf of graduate students include one Burroughs Wellcome Fund Interfaces in Sciences Award ($500,000 total for 5 years, two of them as Postdoc in my group) to Erin Rericha, (2007), and two biophysical society Student Research Achievement Awards to Justin Stambaugh (2004) and Sejin Han (2005). Also involved undergraduate students (>30), high school interns (3) and international students (9) in research group.

Active in the scientific community: Minisymposium Chair, American Society of Cell Biology Meeting (2007); Organizer, Dynamics Days 2006 (www.chaos.umd.edu/DDays2006) with a focus on nonleinar dynamics of biological systems; Program Committee, Division of Fluid Dynamics (2006-present); Organizing Committee, 2004 Gordon Conference on Granular and Granular Fluid Flow. Co-Organizer of Dynamics Days 2002.

f. Collaborators & Other Affiliations

(i) Current external collaborators:

S. Akamatsu, G. Faivre, University of Paris, France
J.F. Douglas, Polymers Division, National Institute of Standards and Technology
K. Helmerson, National Institute of Standards and Technology
S. Leikin, Laboratory of Physical and Structural Biology, NIH
R. Nossal, D. Sackett, Laboratory of Integrative and Medical Biophysics, NIH
C.S. O'Hern, Department of Mechanical Engineering, Yale University
C. Parent, National Cancer Institute, NIH
P. Randazzo, National Cancer Institute, NIH
J. Urbach, Department of Physics, Georgetown University
J.A. Warren, Director, Center for theoretical & computational Materials Science, NIST

(ii) Recent Collaborators:

W. Goldburg, University of Pittsburgh, R. Delannay, P. Richard, Univ. Rennes, France, A. Karma, Northeastern University, M.P. Brenner, Harvard University; J.-C. Geminard, CNRS Lyon; J.T. Jenkins, Cornell Univ.; H.A. Stone, Harvard University

(iii) Graduate and Postdoctoral Advisors

Postdoc Advisor: Jerry P. Gollub, Dept. of Physics and Astronomy, Haverford College

Graduate Advisors: Herman Z. Cummins, Dept. of Physics, City College of New York

Former Graduate Students: Matt Ferguson (Univ Grenoble), Michael Newey (General Dynamics), Ron Skupsky (UC Berkeley), Kyuyong Lee (Pusan Univ, Korea), Justin Stambaugh (Lincoln Labs, MA), Masahiro Toiya (Brandeis Univ., MA).

Current Graduate Students: Beatriz Burrolla, Meghan Driscoll, Sejin Han, Colin McCann, Andrew Pomerance, Steven Slotterback.

Current Postdocs: Erin Rericha, Daniel Wheeler.