

## BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Wolfgang Losert	Associate Professor, Dept of Physics, IPST, and IREAP, Biophysics Program, Bioengineering Program, University of Maryland College Park

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
Technische Univ. München	Diplom (summa c.l.)	1995	Applied Physics
City College of the City University of New York	Ph.D.	1998	Physics
Haverford College, Haverford, PA	PostDoc	1998-2000	Physics – nonlinear dynamics

### A. Positions and Honors

1999-2000 Visiting Assistant Professor, Dept. of Physics, Haverford College  
 2000-2006 Assistant Professor, Dept. of Physics, Institute for Physical Science and Technology, and Institute for Research in Electronics and Applied Physics, University of Maryland College Park  
 2006 – present Associate Professor, Biophysics Program and Bioengineering Program Dept. of Physics, Institute for Physical Science and Technology, and Institute for Research in Electronics and Applied Physics, University of Maryland College Park  
 2006-present Coordinator of Systems Biology Interaction with National Cancer Institute

#### Honors:

1992-1995 Fellowship of the German National Merit Foundation (Studienstiftung). The foundation supports the top 0.2% of students in Germany, based on academic merit.  
 2001 Research Corporation Research Innovation Award.  
 2002 University of Maryland Graduate Research Board Semester Research Award  
 2006 University of Maryland Ferrell Award

**Honors won by my students and Postdocs:** Burroughs Wellcome Fund Interfaces in Sciences Award to Erin Rericha, (2007). Biophysical Society Student Research Achievement Award to Justin Stambaugh (2004) and Sejin Han (2005).

### B. Selected peer-reviewed publications.

1. S. Han<sup>#</sup>; D.J. McBride; W. Losert, and S. Leikin, "Segregation of type I collagen homo- and heterotrimers in fibrils," to appear in *J. Mol. Biol.* (2008).
2. R. Skupsky<sup>#</sup>, C. McCann<sup>#</sup>, R. Nossal, and **W. Losert** "Bias in the Gradient Sensing Response of Chemotactic Cells" *Journal of Theoretical Biology* **247**, 242-258 (2007).
3. Luo R, Ahvazi B, Amarei D, Shroder D, Burrola B<sup>#</sup>, **Losert W**, Randazzo PA. "Kinetic analysis of GTP hydrolysis catalyzed by the Arf1.GTP.ASAP1 complex" *Biochem J.* **402**, 439–447 (2007).
4. A. J. Pons, A. Karma, S. Akamatsu, M. Newey<sup>#</sup>, A. Pomerance<sup>#</sup>, H. Singer, and **W. Losert**, "Feedback control of unstable cellular solidification fronts", *Phys. Rev E* **75**, 021602 (2007).
5. S. Akamatsu, K. Lee<sup>#</sup>, and **W. Losert**, "Control of eutectic solidification microstructures through laser spot perturbations" *Journal of Crystal Growth* **289**, 331 (2006).

6. J. Galanis, D. Harris, D. Sackett, **W. Losert**, and R. Nossal, "Spontaneous patterning of confined granular rods", *Phys. Rev. Lett.* **96** 028002 (2006).
7. N. Taberlet<sup>#</sup>, M. Newey<sup>#</sup>, P. Richard and **W. Losert** "On axial segregation in a tumbler: an experimental and numerical study" *J Stat. Mech.* P07013 (2006).
8. R. Skupsky<sup>#</sup>, **W. Losert**, and R. Nossal, "Distinguishing modes of Eucaryotic Gradient Sensing", *Biophysical Journal* **89**, 2806-2823 (2005).
9. A. Pomerance<sup>#</sup>, J. Matthews, M. Ferguson<sup>#</sup>, J.S. Urbach, and **W. Losert**, "Actin polymerization in a thermal gradient" *Macromolecular Symposia* **227**, 231-242 (2005).
10. L.-Q. Wu, K. Lee<sup>#</sup>, 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).
11. J. Stambaugh<sup>#</sup>, K. Van Workum, J. Douglas, and **W. Losert**, "Polymerization Transitions in Two-Dimensional Systems of Dipolar Spheres," *Phys. Rev. E* **72** 031301 (2005).
12. K. Lee<sup>#</sup> and **W. Losert**, "Controlled dynamics of grain boundaries in binary alloys", *Acta Materialia* **53**, 3503-3510 (2005).
13. N. Taberlet<sup>#</sup>, 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).
14. M. Toiya<sup>#</sup>, J. Stambaugh<sup>#</sup>, and **W. Losert**, "Transient and oscillatory granular shear flow" *Phys Rev Lett.* **83**, 088001 (4 pages) (2004).
15. J. Stambaugh<sup>#</sup>, Z. Smith\*, E. Ott, and **W. Losert**, "Segregation in a monolayer of magnetic spheres", *Phys. Rev. E* **70**, 031304 (6 pages) (2004).
16. S.J. Friedmann, G. Kwon\*, and **W. Losert** "Granular memory and its effect on the triggering and distribution of rock-avalanche events," *J. Geophys. Res.* **108**, No. B8, 2380-2391 (2003).
17. J. Stambaugh<sup>#</sup>, D.P. Lathrop, E. Ott, and **W. Losert**, "Pattern Formation in a Monolayer of Magnetic Spheres", *Phys. Rev. E* **68**, 026207 (5 pages) (2003).
18. N. Taberlet<sup>#</sup>, P. Richard, A. Valance, R. Delannay, **W. Losert**, J-M. Pasini, and J.T. Jenkins, "Super Stable Heap in a thin channel," *Phys. Rev. Lett* **91**, 264301 (4 pages) (2003).
19. J.-C. Geminard and **W. Losert**, "Frictional Properties of bidisperse granular matter," *Phys. Rev. E* **65**, 041301 (5 pages) (2002).
20. L. Bocquet, **W. Losert**, T.C. Lubensky, and J.P. Gollub, "Granular Shear dynamics and forces: Experiments and continuum theory," *Phys. Rev. E* **65**, 011307 (19 pages) (2002).
21. J.-C. Tsai, **W. Losert**, G.A. Voth, J.P. Gollub, "Two-dimensional granular Poiseuille flow on an incline: multiple dynamical regimes," *Phys. Rev. E* **65**, 011306 (13 pages) (2002).
22. G.A. Voth, B. Bigger\*, M.R. Buckley\*, **W. Losert**, M.P. Brenner, H.A. Stone, and J.P. Gollub, "Ordered clusters and dynamical states of particles in a vibrated fluid," *Phys. Rev. Lett.* **88**, 234301 (4 pages) (2002).
23. **W. Losert**, L. Bocquet, T.C. Lubensky, and J.P. Gollub, "Particle dynamics in sheared granular matter," *Phys. Rev. Lett.* **85**, 1428 (4 pages) (2000).
24. **W. Losert**, J.-C. Geminard, S. Nasuno, and J.P. Gollub, "Mechanisms for slow strengthening in granular materials," *Phys. Rev. E*, **61** 4060-4068 (2000).
25. **W. Losert**, D.G.W. Cooper\*, and J.P. Gollub, "Propagating front in an excited granular layer," *Phys. Rev. E* **59**, 5855-5861 (1999).
26. **W. Losert**, D.G.W. Cooper\*, J. Delour, A. Kudrolli, and J.P. Gollub, "Velocity statistics in vibrated granular media," *Chaos* **9**, 682-690 (1999).
27. **W. Losert**, O.N. Mesquita, J.M.A. Figueiredo, and H.Z. Cummins, "Direct Measurement of Dendritic Array Stability," *Phys. Rev. Lett.* **81**, 409-412 (1998).
28. **W. Losert**, D.A. Stillman\*, H.Z. Cummins, P. Kopzcynski, W.-J. Rappel and A. Karma, "Selection of doublet cellular patterns in directional solidification through spatially periodic perturbations," *Phys. Rev. E* **58**, 7492-7506 (1998).
29. **W. Losert**, B.Q. Shi and H.Z. Cummins, "Evolution of dendritic patterns during alloy solidification: Onset of the initial instability," *Proc. Nat. Acad. Sci. USA* **95**, 431-438 (1998).