

## *Piotr Haldas*

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### **Research Experience**

**Saint Joseph's University** Philadelphia, Pennsylvania  
Assistant Professor, Physics Department, August 2004 to present.

**Emory University** Atlanta, Georgia  
Postdoctoral fellow, Physics Department, December 2001 to August 2004. Studied local perturbations of colloidal suspensions using confocal microscopy. Worked with Prof. Eric R. Weeks.

**Memorial University of Newfoundland** St. John's, Newfoundland, Canada  
Postdoctoral fellow, Department of Physics and Physical Oceanography, December 1999 to November 2001. Investigated the dynamics of defects in one-dimensional traveling finger patterns. Studied the kinematics of spheres moving through a Bingham liquid. Researched the morphology of impact craters in granular media. Worked with Prof. John R. de Bruyn.

### **Teaching Experience**

**Emory University** Atlanta, Georgia  
Instructor, Freshman Seminar, Fall and Spring 2003, Spring 2004.

**Memorial University of Newfoundland** St. John's, Newfoundland, Canada  
Instructor, Computational Physics and Data Analysis, Fall 2000.

**Silesian University** Katowice, Poland  
Instructor, first and second year physics graduate courses, October 1995 to June 1998.

**St. Staszic High School** Sosnowiec, Poland  
Physics teacher, lectures in English, September 1995 to October 1999.

**Private Elementary School** Katowice, Poland  
Physics teacher, September 1995 to October 1997.

**Silesian University** Katowice, Poland  
Lab assistant during General Physics lectures, September 1994 to June 1995.

### **Education**

**Silesian University** Katowice, Poland  
Ph. D. in physics, December 1999. Dissertation title: "Temperature and pressure studies of dielectric permittivity in near-critical binary mixtures." Advisor: Prof. Sylwester Rzoska, Institute of Physics, Silesian University.

**Silesian University** Katowice, Poland  
Ms.C. in physics, June 1995. Dissertation title: "The study of the Gaussian cage model in simple liquids." Advisor: Prof. Zygmunt Gburski, Institute of Physics, Silesian University

**Seminars**

- Saint Joseph’s University, Dean’s Colloquium, Philadelphia, PA, April 2007.
- Bucknell University, seminar, Lewisburg, PA, April 2005.
- Saint Joseph’s University, seminar, Philadelphia, PA, March 2005.
- Saint Joseph’s University, Sigma Xi Physics Society talk, Philadelphia, PA, November 2004.
- Saint Joseph’s University, seminar, Philadelphia, PA, November 2004.
- Saint Joseph’s University, seminar, Philadelphia, PA, February 2004.
- University of P.J. Šafárik, seminar, Kosice, Slovak Republic, May 2003.
- University of Mainz, seminar, Mainz, Germany, May 2003.
- University of Edinburgh, seminar, Edinburgh, Scotland, May 2003.
- Harvard University, “squishy” physics talk, Cambridge, MA, April 2003.
- Brandeis University, seminar, Waltham, MA, April 2003.
- Memorial University of Newfoundland, seminar, St. John’s, NF, Canada, April 2001.
- University of Wroclaw, seminar, Wroclaw, Poland, March 1999.
- Silesian University, seminar, Katowice, Poland, February 1999.
- Silesian University, seminar, Katowice, Poland, December 1998.

**Conferences:  
Talks and  
Posters**

- *Hands-On Research in Complex Systems School*, talk, Sao Paulo, Brazil, July 2009.
- *APS Meeting*, talk, New Orleans, LA, March 2008.
- *Sigma Xi Scientific Research Society Annual Meeting*, poster, Orlando, FL, November 2007.
- *AAPT Summer Meeting*, poster, Greensboro, NC, July 2007.
- *SEPS/AAPT Meeting*, talk, Philadelphia, PA, March 2006.
- *APS Meeting*, talk, Baltimore, MD, March 2006.
- *APS Meeting*, invited talk, Los Angeles, CA, March 2005.
- *APS-DFD Meeting*, talk, East Rutherford, NJ, November 2003.
- *Slow Dynamics in Complex Systems*, talk, Sendai, Japan, November 2003.
- *APS Meeting*, talk, Austin, TX, March 2003.
- *Society of Rheology Meeting*, talk, Minneapolis, MN, October 2002.
- *Gordon Granular Conference*, poster, Plymouth, NH, July 2002.
- *Principles of Soft Matter*, poster, Santa Fe, NM, May 2001.
- *Nonlinear Dynamics and Pattern Formation Conference*, poster, Austin, TX, June 2001.
- *Soft Condensed Matter Conference*, poster, Geilo, Norway, April 1999.
- *Dielectric and Related Phenomena Conference*, poster, Szczyrk, Poland, September 1998.
- *Complex Fluids Far from Equilibrium Conference*, poster, Trieste, Italy, June 1998.
- *Conference of Bilingual Teachers*, poster, Warsaw, Poland, June 1997.
- *Dielectric and Related Phenomena Conference*, poster, Szczyrk, Poland, September 1996.

**Grants and  
Honors**

- Saint Joseph’s University Summer Research Grant (Summer 2009)
- Major Research Instrumentation Grant, NSF, co-PI (Spring 2008).
- Howard Hughes Medical Institute Grant, participant (Fall 2007).

Cottrell College Science Award, Research Coropration (Spring 2007) “*Fluorescence microscopy studies of the re-entrant glass transition.*”

Saint Joseph’s University Summer Research Grant (Summer 2005)

Howard Hughes Teacher/Scholar (Spring and Fall 2003) fellow

KBN graduate student promotion grant, (awarded by Polish NSF to outstanding graduate students), “*Pressure and temperature studies of dielectric permittivity in mixtures of limited miscibility*” (1997-1999).

Certificate in Advanced English (June 1997).

### Publicity and Other Activities

“SJU receives 413,000 NSF grant to enhance microscopy”, City Suburban News, 10 Sept. 2008.

“SJU receives 413,000 grant to enhance microscopy”, SJU web site, 26 Aug. 2008.

“Summer scholars test effectiveness of new cancer drug”, SJU Hawk Eye, 18 Aug. 2008.

“SJU summer scholars test effectiveness of potential cancer drug”, SJU web site, 31 July 2008.

“Squish Physics” lectures, West Chester East High School, 18 Nov. 2005.

“Craters in a sandbox”, Phys. Rev. Focus, story 8, 12 Sept. 2003.

### Other Professional Activities

Member: American Physical Society, Society of Rheology, American Associaton of Physics Teachers

Attended New Faculty Workshop, College Park, MD, Nov. 4-7, 2004.

Attended Analytical and Quantitative Light Microscopy Summer School, Woods Hole, MA, May 7-15, 2002.

### Publications

J. Fingerut, L. Schamel, A. Faugno, M. Mastrinaro, and P. Habdas, “The role of silk threads in the dispersal 1 of larvae through stream pools”, *Journal of Zoology* **279**, 137 (2009).

A. Latka, Y. Han, A.M. Alsayed, A.B. Schofield, A.G. Yodh, and P. Habdas, “Particle dynamics in colloidal suspensions above and below the glass-liquid re-entrance transition”, *Europhysics Letters* **86**, 58001 (2009).

Z. Zhang, N. Xu, D.T.N. Chen, P. Yunker, A.M. Alsayed, K.B. Aptowicz, P. Habdas, A.J. Liu, S.R. Nagel, and A.G. Yodh, “Thermal Vestige of the Zero-Temperature Jamming Transition”, *Nature* **459**, 230 (2009).

A. McElrone, S. Jackson, and P. Habdas, “Hydraulic disruption and passive migration by a bacterial pathogen in oak tree xylem”, *J. Experimental Botany* **59**, 2649 (2008).

K.E. Holloway, P. Habdas, N. Semsarillar, K. Burfitt, and J.R. de Bruyn, “Spreading and fingering in spin coating”, *Phys. Rev. E* **75**, 046308 (2007).

- P. Habdas, “Substances with strange properties”, *Foton* **94**, 52 (2006).
- P. Habdas, Eric R. Weeks, David G. Lynn, “Squishy materials”, *The Physics Teacher* **44**, 276 (2006).
- P. Habdas and J.R. de Bruyn, “Dynamics of defects and traveling waves in an interfacial finger pattern”, *Physica D* **200**, 273 (2005).
- P. Habdas, D. Schaar, Andrew C. Levitt, Eric R. Weeks, “Forced motion of a probe particle near the colloidal glass transition”, *Europhys. Lett.* **67**, 477 (2004).
- A.M. Walsh, K.E. Holloway, P. Habdas, and J.R. de Bruyn, “Morphology and scaling of impact craters in granular media”, *Phys. Rev. Lett.* **91**, 104301 (2003).
- J.R. de Bruyn, P. Habdas, S. Kim, “Fingering instability of a sheet of yield-stress fluid”, *Phys. Rev. E.* **66**, 031504 (2002).
- P. Habdas and Eric R. Weeks, “Video Microscopy of Colloidal Suspensions and Colloidal Crystals”, *Current Opinion in Colloid & Interface Science* **7**, 196 (2002).
- S.J. Rzoska, A. Drozd-Rzoska, J. Ziolo, P. Habdas, and J. Jadzyn, “Critical anomaly of dielectric permittivity for the temperature and pressure paths on approaching the critical consolute point”, *Phys. Rev. E* **64**, 061104 (2001).
- P. Habdas, M. Case, J.R. de Bruyn, “Behavior of sink and source defects in a one-dimensional traveling finger pattern”, *Phys. Rev. E* **63**, 066305 (2001).
- P. Habdas, P. Urbanowicz, P. Malik, S.J. Rzoska, “Temperature studies of dielectric permittivity and mass density pretransitional anomalies in binary mixtures”, *Phase Transitions: A Multinational Journal* **73**, 439 (2001).
- P. Habdas, M. Paluch, A. Drozd-Rzoska, P. Malik, S.J. Rzoska, “Pressure and temperature studies of dielectric permittivity in the homogeneous phase of nitrobenzene-dodecane binary mixture”, *Chem. Phys.* **241**, 351 (1999).
- S.J. Rzoska, M. Paluch, A. Drozd-Rzoska, P. Habdas, P. Urbanowicz, “Pressure behaviour of dielectric permittivity on approaching the critical consolute point”, *Europhys. Lett.* **45**, 334 (1999).
- M. Paluch, S.J. Rzoska, P. Habdas, J. Ziolo, “On the isothermal, pressure behaviour of the relaxation times in supercooled glass-forming liquids”, *J. Phys.: Condens. Matter* **10**, 4131 (1998).
- M. Paluch, J. Ziolo, S. J. Rzoska, P. Habdas, “The influence of pressure on dielectric relaxation for phthalate derivatives in supercooled state”, *J. Phys.: Condens. Matter* **9**, 5485 (1997).
- M. Paluch, J. Ziolo, P. Habdas, S. J. Rzoska, “Dielectric relaxation of glass-forming dibutyl phthalate under high pressure”, *High Temperatures - High Pressures* **29**, 155 (1997).
- M. Paluch, P. Habdas, S. J. Rzoska, T. Schimpel, “Electric permittivity in the one- and two-phase region of 1-nitropropane-hexadecane near-critical solution”, *Chem. Phys.* **213**, 483 (1996).

M. Paluch, J. Ziolo, P. Habdas, S. J. Rzoska, “Isothermal and high - pressure studies of dielectric relaxation in supercooled glycerol”, *J. Phys.: Condens. Matter* **8**, 10885 (1996).

M. Paluch, J. Ziolo, S. J. Rzoska, P. Habdas, “High-pressure and temperature dependence of dielectric relaxation in supercooled di-isobutyl phthalate”, *Phys. Rev. E* **54**, 4008 (1996).