

## PETER J. MUCHA

School of Mathematics, Georgia Institute of Technology, Atlanta, GA 30332-0160  
much@math.gatech.edu, 404/894-9235, 404/894-4409(fax)  
Born 24 January, 1971 U.S. citizen

### EDUCATION:

- Ph.D. in Applied & Computational Mathematics, Princeton University, 1998  
(thesis advisors: S. A. Orszag & I. Goldhirsch)  
M.A. in Applied & Computational Mathematics, Princeton University, 1996  
M.Phil. in Physics, University of Cambridge, 1995 (thesis advisor: M. Warner)  
B.S. in Engineering Physics, Cornell University, 1993

### PROFESSIONAL EXPERIENCE:

- 2001–present Assistant Professor, School of Mathematics, Georgia Tech  
1998–2001 Applied Mathematics Instructor, Dept. of Mathematics, MIT

### HONORS & AWARDS:

- 2003–2006 DOE Early Career PI in Applied Mathematics Award  
1999–2002 NSF Mathematical Sciences Postdoctoral Research Fellowship  
1994–1998 NSF Graduate Fellowship  
1993–1994 Winston Churchill Foundation Scholarship

### CURRENT RESEARCH SUPPORT:

- 2003–2006 DOE Office of Science, “Model Interacting Particle Systems”  
2002–2005 NSF Division of Mathematical Sciences, DMS-0204309  
“Simulations and Models for Sedimentation”

### COLLABORATORS (in past 60 months):

W. N. Bell, M. P. Brenner, T. Callaghan, M. Carlson, L. Cipelletti, I. Goldhirsch, C. Hohenegger, S. Manley, M. E. J. Newman, M. Niethammer, S. A. Orszag, E. Pichon, M. A. Porter, R. Sadr, P. N. Segrè, B. I. Shraiman, A. Tannenbaum, S.-Y. Tee, G. Turk, B. Van Horn, M. Vergassola, X. Wang, J. White, D. A. Weitz, M. Yoda

### STUDENT COLLABORATORS:

Ph.D. students: Svetlana Bukharina (from 2004), Christel Hohenegger (from 2003), Hwa Kil Kim (from 2003).  
Collaborations with other Ph.D. students: Mark Carlson (2001–2004, advisor: Greg Turk), Marc Niethammer (2002, advisor: Allen Tannenbaum), Shang-You Tee (1999–2004, advisor: David Weitz).  
Undergraduate Research: Michael Abraham (2002), W. Nathan Bell (2002–2003), Thomas Callaghan (2003–2004), Casey Warmbrand (2003).

### SELECTED PUBLICATIONS:

1. “Rigid Fluid: Animating the interplay between rigid bodies and fluid,” M. Carlson, —, & G. Turk, to appear in *SIGGRAPH* (2004).
2. “A model for velocity fluctuations in sedimentation,” —, S.-Y. Tee, D. A. Weitz, B. I. Shraiman, & M. P. Brenner, *Journal of Fluid Mechanics* **501**, 71–104 (2004).
3. “Diffusivities and front propagation in sedimentation,” — & M. P. Brenner, *Physics of Fluids* **15**, 1305–1313 (2003).
4. “Nonuniversal velocity fluctuations of sedimenting particles,” S.-Y. Tee, —, L. Cipelletti, S. Manley, M. P. Brenner, P. N. Segrè, & D. A. Weitz, *Physical Review Letters* **89**, 054501 (2002).
5. “Melting and Flowing,” M. Carlson, —, B. Van Horn, & G. Turk, *ACM SIGGRAPH Symposium on Computer Animation*, 167–174 & 202 (2002).