Lisa J. Fauci

Mathematics
Tulane University
New Orleans, Louisiana 70118
(504) 865-5727

EDUCATION

B.S.	Pace University	Mathematics	June 1981
M.S.	New York University	Mathematics	Feb 1984
Ph.D.	New York University	Mathematics	Oct 1986

PROFESSIONAL EXPERIENCE

July 1998 - present	Professor of Mathematics Tulane University, New Orleans, Louisiana
July 1993 - June 1998	Associate Professor of Mathematics Tulane University, New Orleans, Louisiana
July 1986 - June 1993	Assistant Professor of Mathematics Tulane University, New Orleans, Louisiana
Jan 1990 - June 1991	Visiting Assistant Professor of Mathematics University of Utah, Salt Lake City, Utah
July 1995 - Dec 1995	Visiting Member Courant Institute, New York University

HONORS

- Alfred P. Sloan Research Fellow, 1992-1994.
- Tulane University, Liberal Arts and Sciences Faculty Research Award, 1999

Selected Publications:

- *Truncated newton methods and the modeling of complex immersed elastic structures*, with A. Fogelson, Commun. on Pure and Applied Math., Vol. XLVI, 787-818 (1993).
- *Computational modeling of the swimming of biflagellated algal cells*, Contemp. Math., Vol. 141, 91-102 (1993).
- *Sperm motility in the presence of boundaries*, with A. McDonald, Bull. Math. Biology, Vol. 57, No. 5, 679-699 (1995).
- *A microscale model of bacterial swimming, chemotaxis and substrate transport*, with R. Dillon and D. Gaver, J. Theor. Biology, Vol. 177, 325-340 (1995).

- *Modeling biofilm processes using the immersed boundary method*, with R. Dillon, D. Gaver and A. Fogelson, J. Comp. Physics, Vol. 129, 57-73 (1996).
- *Computational model of the fluid dynamics of undulatory and flagellar swimming*, Amer. Zoologist, Vol. 36, 599-607 (1996).
- *Coupling the internal axoneme mechanics of cilia and flagella with external fluid dynamics*, with R. Dillon, Proceedings of the International Congress on Cilia, Mucus, and Mucociliary Interactions, Jerusalem, Israel, Marcel Dekker, 87-96 (1998).
- *A computational model of ameboid deformation and locomotion* , with D. Bottino, Eur. Biophys. J., 27, 532-539 (1998).
- *A microscale model of bacterial and biofilm dynamics in porous media*, with R. Dillon, Biotech. and Bioengr., Vol. 68, No. 5, 536-547 (2000).
- *An integrative model of internal axoneme mechanics and external fluid dynamics in ciliary beating*, with R. Dillon, J. Theor. Biol., 207, 415-430 (2000).
- *A computational model of the collective fluid dynamics of motile micro-organisms*, with M. Hopkins, J. Fluid Mech., 455, 149-174 (2002).

PROFESSIONAL ACTIVITIES

- Director, Center for Computational Science at Tulane and Xavier Universities.
- Member of SIAM Council.
- Associate Editor, SIAM Journal of Scientific Computing.
- Workshop leader, Biological Fluid Dynamics, Pittsburgh Supercomputing Center, July 1991.
- Co-organizer, Biological Fluid Dynamics Workshop, in Summer Program in Mathematical Physiology, MSRI, Berkeley, August, 1992.
- Co-chair, Mini-symposium on Biological Fluid Dynamics, Special Year in Mathematical Biology, University of Utah, May, 1996.
- Co-chair, 1996 Gordon Conference on Theoretical Biology and Biomathematics, Tilton, New Hampshire, June 1996.
- Organizing committee, Special Year in Mathematical Biology, Institute for Mathematics and its Applications, Minneapolis, MN, 1998-1999.
- Organizing committee, International Conference on Mathematics in Biology at the Annual Meeting of the Society for Mathematical Biology, Salt Lake City, Utah, August, 2000.
- Scientific program committee, 7th US National Congress on Computational Mechanics, Albuquerque, NM, July, 2003.