ARUP MUKHERJEE
DEPARTMENT OF MATHEMATICAL SCIENCES
MONTCLAIR STATE UNIVERSITY
February 2015

a) PROFESSIONAL PREPARATION
Saint Xavier's College, Calcutta, India, Mathematics, B.Sc   1984
University of Calcutta, India, Applied Mathematics, M.Sc.   1989
Penn State University, Mathematics, Ph.D   1996

b) Appointments
Montclair State University, Associate Professor of Mathematics, September 2006—present
Montclair State University, Assistant Professor of Mathematics, September 2000—August 2006
Rutgers University, Assistant Professor of Mathematics, September 1996—August 2000

c) TEI Experience
July 2014, Tianjin University, Tianjin, China, Advanced Scientific Writing
July 2013, Tianjin University, Tianjin, China, Advanced Scientific Writing
July 2012, Taishan Medical University, Taian, China, Advanced Scientific Writing

d) Selected Recent Publications
Theoretical Prediction of Defects in Couette flow of Nematic Liquid Crystals under high shear rates, Proceedings (refereed) of 8th International Conference of IMBIC (2014), 64-70 (with B. Mukherjee)
Laminar Shear flow in ferro-fluids: Stability studies, 2013, Magnetohydrodynamics, 49, No. 3, 4, pp. 505-512 (with A. Vaidya and P. Yecko)
Analysis of Ericksen-Leslie Model for Couette flow of Nematic Liquid Crystals under high shear rates, Proceedings (refereed) of 7th International Conference on Mathematical Sciences for Advancement of Science and Technology (2013), 73-78 (with B. Mukherjee)
Taylor Couette flow of ferrofluid: spin field and spin boundary condition effects, Arup Mukherjee, William Childress, Philip Yecko, 2010, Physics Procedia 9(2010), 156--161
Freedericksz transition in nematics: effects of non-linear shear profile and elastic anisotropy, Bagisa Mukherjee and Arup Mukherjee, 2009, Molecular Crystals and Liquid Crystals, Vol. 508, Issue 1, pp. 274—285
Modeling bubbles and droplets in magnetic fluids, Mark S. Korlee, Arup Mukherjee, Bogdan G. Nita, John G. Stevens, A. David Trubatch, and Philip Yecko, 2008, J. Phys. Condensed Matter 20
Analysis of flows of ferrofluids under simple shear, Mark S. Korlee, Arup Mukherjee, Bogdan G. Nita, John G. Stevens, A. David Trubatch, and Philip Yecko, 2008, Magnetohydrodynamics, Vol. 44, No. 1, pp. 3—11
Discrete and continuous models for the evolution of lizard populations, Jones M. A. and Mukherjee A, 2006, Section 6.5, pp 340—348 in Mathematical Modelling: Education, Engineering and Economics (ICTMA 12) (Ed. By C. Haines, P. Galbraith, W. Blum, and S. Khan) Chichester: Horwood Publishing ISBN: 1-904275-20-6
Instability of solutions in shear flow of Nematic Liquid Crystals in the presence of external fields, Mukherjee A, and Mukherjee B, 2006, Bull. Cal. Math. Soc., 14(1), pp. 49—62
A proofs course that transitions students to advanced, applied mathematics courses, Jones M.A. and Mukherjee A, 2005 in Innovative Approaches to Undergraduate Mathematics Courses beyond Calculus, (Ed. By R.J. Maher), MAA Notes, Vol. 67, pp. 39—52
An adaptive finite element solver for initial data in numerical relativity, Mukherjee A, 2005, Far East J. Appl. Math., Volume 21, Number 3, pp. 347—366

e) Synergistic Activities
   Participant, GK-12 Trip, Ecuador, March 2011
   Participant, GK-12 Trip, Panama, March 2010
   Organizer, Satellite Reconnect Conference, June 2005
   Judge, Student Poster Sessions
        AMS Joint Meetings, San Antonio, January 2006
        AMS Joint Meetings, Baltimore, January 2003
   Reviewer, Faculty Summer Research Grant Proposal
        William Patterson University, 2005
        William Patterson University, 2003

   Panelist, Session on People Networking, Rutgers University, August 2004

f) Teaching Experience
   Graduate Courses
        Partial Differential Equations, Ordinary Differential Equations, Numerical Analysis, Finite Element
        Methods, Continuum Mechanics
   Undergraduate Courses
        Numerical Analysis, Mathematical Modeling, Differential Equations, Advanced Calculus I, II,
        Calculus I, II, III, Transition to Advanced Mathematics, Mathematics for Business II: Calculus,
        Pre-Calculus, Elementary Algebra Basic Skills

g) Selected Professional Presentations
   Invited Speaker, Emerging Trends in Applied Mathematics, February 2014,
   Invited Speaker, International Conference on Magnetic Fluids, New Delhi, India, January 2013
   Speaker, International Conference on Magnetic Fluids, Sendai, Japan, July 2010
   Invited Speaker, International Symposium on Recent Advances in the Mathematical Science,
   Calcutta, India, December 2008
   Presenter, International Conference on Magnetic Fluids, Kosice, Slovakia, July 2007
   Speaker, AMS Joint Meetings, San Antonio, January 2006
   Invited Speaker, Distinguished Visiting Scholars Program, California State University,
   Northridge, December 2005
   Speaker, International Conference on the Teaching of Mathematical Modeling, ICTMA12,
   London, July 2005
   Speaker, International Conference on Computational Science 2005, Atlanta, May 2005
   Speaker, International Conference on the Teaching of Mathematical Modeling, ICTMA12,
   London, July 2005

h) Association Memberships
   Member SIAM