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Ali Mazouchi

Objective

A position in research and development related to application of fluid mechanics and heat transfer

Education

Ph.D. in Mechanical Engineering, Jan. 98-present, GPA 3.9
Stanford University, Palo Alto, California

M.S. in Mechanical Engineering, Sept. 95-March 97, GPA 3.6
University of Tehran, Tehran, Iran

B.S. in Mechanical Engineering, Sept. 91-June 95, GPA 3.25
Iran University of Science & Technology, Tehran, Iran

Experience

Research Assistant, June 98-present
under Professor G. M. Homsy, Stanford University
Working on low Reynolds number interfacial flows,
- Study of thermocapillary migration of gas bubbles in a tube
- Boundary integral method in study of steady viscous flow over topography
- Study of time dependent free surface flow with a moving contact line

Teaching Assistant, Sept.-Dec. 2000
Chemical process Modeling, Dynamics and Control,
Department of Chemical Engineering, Stanford University

Research Assistant, Aug.-Dec. 1997
under Professor P. Zamankhan, Lappeenranta University of Technology, Finland
- Molecular dynamics simulation of granular flows

Teaching Assistant, Sept.-Nov. 1997
Thermodynamics,
Department of Energy Technology, Lappeenranta University of Tech., Finland

Research Assistant, Sept. 95-Match 97
under Professor P. Zamankhan, University of Tehran
Working on numerical simulation and data analysis,
- Computer simulation of cluster formation
- Wavelet and Fourier transform analysis

Software developer and computing engineer, May 94-June 98
Pariz Company, Iran
- Developed computational tool for estimation of earth fill in road construction projects

Publications

Ali Mazouchi and G. M. Homsy, “Free surface Stokes flow with a moving contact line. II. over a wedge” forthcoming in *Phys. Fluids*

Ali Mazouchi and G. M. Homsy, “Free surface Stokes flow with a moving contact line. I. over a plane,” forthcoming in *Phys. Fluids*

Ali Mazouchi and G. M. Homsy, “Free surface Stokes flow over topography,” forthcoming in *Phys. Fluids*

Ali Mazouchi and G. M. Homsy, “Thermocapillary migration of long bubbles in polygonal tubes,” *Phys. Fluids* 13, 1594 (2001)

Ali Mazouchi and G. M. Homsy, “Thermocapillary migration of long bubbles in cylindrical capillary tubes,” *Phys. Fluids* 12,542 (2000)

P. Zamankhan, A. Mazouchi and P. Sarkomaa, “Some qualitative of the Couette flow of monodisperse, smooth, inelastic spherical particles,” *Appl. Phys. Lett.* 71, 3790 (1997)

Conferences

Ali Mazouchi and G. M. Homsy, “Free surface Stokes flow with a moving contact line,” *APS/DFD 54th Annual Meeting, Nov. 2001, San Diego, CA*

G. M. Homsy and Ali Mazouchi, “Some Stokes flow problems in coating: beyond lubrication theory,” *4th European Coating Symposium, Oct. 2001, Université Libre de Bruxelles, Belgium*

G. M. Homsy, A. Mazouchi and E. Lajeunesse , “Thermocapillary migration of bubbles in microchannels,” *Mechanics and Materials Conference, June 2001, San Diego, CA*

Ali Mazouchi and G. M. Homsy, “Boundary integral method for solution of viscous flow over topography,” *APS/DFD 53rd Annual Meeting, Nov. 2000, Washington DC*

Ali Mazouchi and G. M. Homsy, “Thermocapillary migration of bubbles in polygonal Tubes,” *APS/DFD 52nd Annual Meeting, Nov. 1999, New Orleans, LA*

Ali Mazouchi and G. M. Homsy, “Steady thermocapillary-driven motion of gas bubble in a tube,” *APS/DFD 51st Annual Meeting, Nov. 1998, Philadelphia, PA*

Ali Mazouchi and Hamid Saffari, “Analysis of velocity and temperature profiles in laminar fully developed flow in internally finned tubes,” *The 5th Annual Mech. Eng. Conf. of Iranian Society of Mech. Eng., May 1997, Tabriz, Iran*

Related Coursework

Fluid mechanics, heat transfer, gas dynamics, thermodynamics, turbomachinery, combustion engines, statics, dynamics, vibrations, linear control systems, material sciences, design, numerical methods (finite difference, finite element, spectral method, and molecular dynamics), and basic circuits

Computer Skills

Extensive use of AutoCad, Excel, Matlab and Mathematica.
Experience in parallel programming (MPI and OpenMP)
Programming languages: C/C++, Fortran and Pascal.