Hamed Ghasvari Jahromi

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PERSONAL DATA

Visa Status: Canadian Permanent Resident.

SUMMARY OF QUALIFICATIONS

- I have Seven years of experience in applying mathematical and computational tools to applicable and industrial problems, Developing new techniques for novel approaches to the project goals has been my passion throughout the projects I was involved in, which led to breakthrough achievements in some of them.
  My field of Specialization is Fluid Dynamics,Porous Media and Multiphase flows, I also have experiance in fundamental research in fields of Non-Newtonian Fluid Dynamics, Turbulent Flows, Lubrication Theory and Fluid-Solid Interaction. Working with patience and passion , extreme desire to achieve new skills in addition to a goal oriented mind is what enables me to do state of art research and to handle the stress of time-bound projects.

EDUCATION

- Ph.D. Mechanical Engineering, The University of British Columbia, 2011.

  - Thesis: Dynamics of a Multiphase flow with degenerative behavior in a curved channel with flexible, porous and free moving boundaries.

  - Adviser: Prof. Mark Martinez

  - Ranked 1st in Thermo-fluid Group at UBC(GPA:93/100).

  - The only Winner of University Graduate Fellowship (UGF) from Mechanical Engineering Department Thermo-fluid Group of UBC. (2008)

Relevant Assignments

- Pupl and Paper Industry

  - Built the 1st software package for prediction of dewatering rate based on actual operating conditions of paper machines.(2011-PAPRICAN)

  - Calculated the critical optimum Geometry of a device named forming shoe for pulp and paper industry. (2011-For FP-Innovation and to become a patent by AstenJohnson)

  - Predicted the exact location of an unfavorable suction pulse in twin wire formers and proposed the way to eliminate that.(2010-FP-Innovation)

- Advanced the knowledge of cross flow filtration of dilute suspensions by forecasting the first topographical map of fiber mat in curved channels.(2010-FP-Innovation)

- Accomplished the 1st general study of two phase flow for Pulp and Paper Industry (this was a critical and vital study because in previous ones the presence of the main material,i.e. Fibers, was neglected and it was impossible to conduct measurements due to complexity of Geometry), (2007-2009,FP-Innovation)

- Automobile Industry

  - Invented an instrument for automatic installation of pins in the bottom of the cars.(07/2003-09/2003 Iran Khodro Company)

  - Invented a wind tool for installing Break-Booster of SAMAND automobile. (07/2003-09/2003 Iran Khodro Company)

- Environment and Civil

  - Designed and Proposed Pipeline from Beach Terminal into the Ocean bed for CO2 (Liquid) transfer produced by power plants.(2005-2007 IRAN PIPE AND MACHINE COMPANY)

  - Designed Water transferring system to a village with 6000 people population.(In The Ministry of housing and Urban Development 2004)

  - Supervised Tire wearing Study in Vancouver.(2010-2011Rubber Association of Canada).

- Oil and Gas Industry

  - Calculated the flow parameters over fuel storage tanks.(2003-Petrochemical Industries design and Engineering Company,PIDEC)

  - Designed and Proposed Portable Marine Loading Arms.(2004-South Zagros Oil and Gas Production Co.)

- Other Industries

  - Analyzed 3-D flow of Particles through Aerodynamic Lenses.(2004-With Dr.G.Ahmadi and Dr.O.Bouali,For Kodak Co.)

  - Calculated ventilation of a theater saloon for 800 people.(2004-In The Ministry of housing and Urban Development)

- Proposal for Research Funds

  - Derived and validated a new dimensionless number (HG) for calculation of slip on boundaries(using this and the methodology behind it , one can forecast turbulent flows in pipes and channels by theoretical means rather than conducting experiments).(2006-2007, for Grant to build a new Lab at Iran University of Science and Technology)

  - Determined Mixed-Mode Stress Intensity Factors from Isochromatic Fringe Patterns to prove application of Photo-elasticity in Mechanical Engineering (2005, Grant Proposal for Photo-elasticity devices,Iran University of Science and Technology)

HONORS AND AWARDS

- Ranked 1st among all PhD students in Mechanical Engineering Thermo-fluid Group at UBC (GPA:93/100).

- The only Winner of University Graduate Fellowship (UGF) from Mechanical Engineering Department of UBC. (22,000.00)

- Full PhD tuition Award UBC (30,000.00) (2007-CANADA)

- Ranked 3rd among all M.Sc students in Mechanical Engineering Thermo-fluid Group at IUST (GPA:17.24/20). (2007)

- Ranked 1st in National Physics Laboratory Olympiads. (1997-IRAN)

- Ranked 1st in National Chemistry Laboratory Olympiads. (1997-IRAN)

- Ranked 3rd paper in Young mathematicians Conference. (1996-IRAN)

- Ranked 1st For Research on Fish in National Research Competition for Students (1995)

- Ranked 1st For Research on Birds in National Research Competition for Students (1994)

OTHER PROFESSIONAL EXPERIENCES AND SKILLS

- Computer and Programming Skills: Fortran, Comsol, FLUENT, Tecplot, MATLAB, Eponet, ADAMS.

Journal Publications

- Ghasvari Jahromi, H., Martinez,D.M. Olson,A.J. (2011). Solution of Coupled System of ODES and PDES with highly degenerative behaviour matched together to form the solution to a long standing mathematical problem. (PhD Thesis). Ready for submission to the International journal of nonlinear science and numerical simulation.

- Ghasvari Jahromi, H., Martinez,D.M. Olson,A.J. (2011). Mathematical Modelling of a two phase flow inside a curve channel with flexible porous moving wall.(PhD Thesis). Ready for submission to the Journal of Theoretical and Computational Fluid Dynamics.

- Ghasvari Jahromi, H., Martinez,D.M. Olson,A.J. (2011). Solution of Coupled system of nonlinear differential equations for a flow in a very thin channel with one flexible porous moving wall. (PhD Thesis). Ready for submission to the Journal of Advanced engineering mathematics.

- M.H. Shojaeefard,K. Goudarzi,H. Ghasvari Jahromi ," Numerical Simulation of $2_D Turbidity Curr$ $American Society of Mechanical Engineers, Fluids Engineering Division (Publication) FED, 200$ $Fluids Engineering Division$

- S. Hormozi, B. Firoozabadi, H.Ghasvari jahromi, " Characteristic Variables and Entrainment in 3-D Density Currents", Scientia of Iranica Journal , Vol. 15, No. 5, pp. 575-583, 2008.

Publications in International Conferences

- Ghasvari Jahromi, H., Martinez,D.M. Olson,A.J. (2009). Flow of papermaking suspension during forming section. 5th Annual European Rheology Conference, April 15-17, Cardiff - United Kingdom,"PhD Thesis".

- H. Ghasvari Jahromi, Gh. Atefi, A. Moosaie, S. Hormozi, H. Afshin. Analytical solution of turbulent Couette flow by Cosserat continuum model and gradient theory, Proc. of FEDSM 2006 ASME Joint U.S. - European Fluids Engineering Summer Meeting, July 2006, Miami, Florida, USA.

- S. Hormozi, B. Firoozabadi, H. Ghasvari, "3-D Simulation of Turbulent Density Current Using Launder-Sharma Turbulence Model", FEDSM2006, 2nd Joint US-European Fluids Engineering Summer Meeting, Miami Florida, USA, July 17-20, 2006.

- S. Hormozi, B. Firoozabadi, H. Ghasvari, "Comparison of 2-D Turbulent Particle Laden Density Current and Wall Jet", FEDSM2006, 2nd Joint US-European Fluids Engineering Summer Meeting, Miami Florida, USA, July 17-20, 2006.

- S. Hormozi, B. Firoozabadi, H. Ghasvari, "3-D Simulation of Conservative and Non-Conservative Density Current", IMECE2006, ASME International Mechanical Engineering Congress and Exposition, Chicago, USA, November 5-11, 2006.

- S. Hormozi, B. Firoozabadi, H. Ghasvari, "3-D Modeling of Particle Laden Density Current", IMECE2006, ASME International Mechanical Engineering Congress and Exposition, Chicago, USA, November 5-11, 2006.

- S. Hormozi, B. Firoozabadi, H. Ghasvari, "Entrainment in 3-D density currents" 7thInternational Conference on Hydroinformatics, HIC 2006, Nice, France, September 4-8, 2006.

- S. Hormozi, B. Firoozabadi, H. Ghasvari,"Characteristic Variables in 3-D Density Currents", 10th International and 14th Annual Mechanical Engineering Conference, Isfahan University of Technology, Isfahan, Iran, May 2006.

- S. Hormozi, B. Firoozabadi, H. Ghasvari,"3-D Simulation of Sedimentation in Turbidity Currents, 10th Conference on Fluid Dynamics, Yazd University, Iran, November 1-3, 2006.