CURRICULUM VITAE

Prof. Gautam Biswas, FNA, FASc, FNAE, F-ASME, FNASc, FIE
J C Bose National Fellow and Professor, Department of Mechanical Engineering,
Indian Institute of Technology Kanpur, Kanpur - 208016, India
(Former Director of the Indian Institute of Technology Guwahati, Guwahati – 781039, India; Former Director of the CSIR-CMERI Durgapur, Durgapur – 713209, India)

Phone: 0091-512-259-7656, +91-88-1108-6524 (M)
Fax : 0091-512-259-7408, Email : gtm@iitk.ac.in; gautam721b@gmail.com

---

The CV is organized in the following manner:

A. FIELDS OF INTEREST	PAGE: 1
B. **AWARDS AND SPECIAL MENTIONS**	PAGE: 1 – 4
C. (a) LIST OF PUBLICATIONS (**INTERNATIONAL JOURNALS**)	PAGE: 4 – 15
(b) LIST OF PUBLICATIONS (INTERNATIONAL REPORTS)	PAGE: 16 – 16
(c) LIST OF PUBLICATIONS (NATIONAL JOURNALS)	PAGE: 16 – 16
(d) LIST OF **BOOKS** Authored or Coauthored	PAGE: 16 – 17
D. PROJECTS (Sponsored and Consultancy)	PAGE: 17 – 19
E. **TEACHING EXPERIENCE** (National and International)	PAGE: 19 – 20
F. **PERSONAL INFORMATION (DOB, EDUCATION ETC)**	PAGE: 20 – 20
G. ADMINISTRATION	PAGE: 20 – 21
H. **GUIDANCE** (**PhD and MTech**)	PAGE: 21 – 26

A. FIELDS OF INTEREST:

Enhancement of Heat Transfer, Computational Fluid Dynamics, Boiling Heat Transfer, Free Surface Flows, Bubbles and Drops, Fluid Mechanics, Microfluidics and Turbulence.

B. AWARDS AND SPECIAL MENTIONS:

1987 - 1988, July-Dec 1992, May & June 1997:
Alexander von Humboldt Fellowship, Humboldt Foundation, Germany

1994: JSPS Invitation Fellowship Award, Japan Society for the Promotion of Science, 5-3-1 Kojimachi, Chiyoda-ku, Tokyo 102, Japan

1996: Fellow of the Institution of Engineers (India).

1998: Nominated as a Member of the Scientific

Council of the International Center for Heat and Mass Transfer

2001: Member of Editorial Board of the International Journal: Progress in Computational Fluid Dynamics (PCFD) published by Inderscience, Switzerland

2001: Guest Professor at the LSTM, University of Erlangen-Nuremberg, Germany (December 2001 to October 2002)

2002: Keynote speaker at the Twelfth International Heat Transfer Conference at Grenoble, France (August 18-23, 2002)

2002: Fellow of the World Innovation Foundation.

2004: Fellow of the Indian National Academy of Engineering

2004: Indian Representative at the International Union of Theoretical Applied Mechanics.

2006: Appointed as the Associate Editor of the Journal of Heat Transfer (Transactions of the ASME).

Jan 2003- Dec 2005: DEAN OF ACADEMIC AFFAIRS, IIT Kanpur

2006: Invited Speaker at the Eleventh Asian Congress of Fluid Mechanics (11ACFM), Kuala Lumpur, Malaysia (22-25 May, 2006).

2006: Fellow of the American Society of Mechanical Engineers (ASME)

2007: Dr. Gurmukh D. and Veena M. Mehta Endowed Chair in Mechanical Engineering

2007: Re-elected as Indian Representative at the International Union of Theoretical Applied Mechanics (IUTAM)

2007: Fellow of the National Academy of Sciences, India

2008: President, Indian Society for Theoretical and Applied Mechanics (ISTAM), India

2008: Member of the Editorial Board of Computational Thermal Sciences (Begell House)

2009: Director, CSIR-Central Mechanical Engineering Research Institute, Durgapur

2010: Fellow of the Indian Academy of Sciences (Bangalore)

2010: Delivered Prestigious CNR Rao Lecture at IIT Kanpur

2010: Member of the Editorial Board of Indian Journal of Engineering and Materials Sciences (IJEMS)

2010: Delivered Bhatnagar Memorial Lecture at the 55 th ISTAM Congress

2010: Acting Director, Academy of Scientific and Innovative Research (AcSIR), New Delhi

2011: Awarded J C Bose National Fellowship by Department of Science and Technology

2011: Member of the Working Group on S & T Human Resource Development of the Planning Commission, Govt of India.

2011: Delivered Keynote Lecture at the Second International Conference on Computational Methods for Thermal Problems, Dalian, China

2011: Delivered Prof. B.R. Seth Memorial Institute Lecture at IIT Kharagpur

2012: Member of Editorial Board of Heat Transfer – Asian Research

2012: Delivered ISRO-IISC Space Technology Cell Research Seminar at IISc

2012: Fellow of the Indian National Science Academy (INSA), New Delhi, India.

2013: Invited Lecture at the 100 th Indian Science Congress Kolkata.

2013: Distinguished Alumnus Award: Bengal Engineering and Science University, Shibpur.

2013: Director, Indian Institute of Technology Guwahati, Guwahati - 781039

2014: Foundation Day Oration: Tezpur University, Assam, India.

2014: President, Indian Society for Heat and Mass Transfer

2014: Prof. A.S. Gupta Memorial Lecture, 59th Congress of ISTAM, Bangalore

2015: Associate Editor, Computers & Fluids (international Journal of Repute)

2015: Plenary Lecture at the Indian National Conference on Applied Mechanics (INCAM), IIT Delhi

2015: Honorary Fellow of the Indian Institute of Chemical Engineers, India

2015: Invited Lecture at the Institute of Physics of Academia Sinica, Taiwan

2016: Distinguished Alumnus Award from Indian Institute of Technology Kharagpur.

2017: Honorary Doctorate (Honoris Causa) conferred by National Institute of Technology, Agartala, India.

2018: Keynote Lecture, I2CNER Annual Symposium on Challenges in Thermal Science and Engineering, Kyushu University, Japan

2018: Plenary Lecture, Fifth International; Conference in Thermal Problems, IISc Bangalore, India.

2018: Plenary Lecture, Advanced Measurements and Multiscale CFD Simulations, Indo-German Symposium, IIT Delhi, India.

2018: Honorary Doctorate conferred by Aristotle University of Thessaloniki, Greece

2018: Twenty seventh Dr. Amitabha Bhattacharyya Memorial Lecture of IEI, Indian Engineering Congress, India

2019: Invited Talk at the Taiwan-India Joint Conference at CASTS, National Taiwan University, Taiwan

2019: National Technology Day Lecture at the CSIR- National Geophysical Research Institute (NGRI), Hyderabad.

2019: Plenary talk at the 7th International Conference on Advancements and Futuristic Trends in Mechanical and Materials Engineering, IIT Ropar.

2020: Plenary talk at the International Conference on Recent Advancement of Mechanical Engineering, NIT Silchar

2020: Plenary talk at the International Conference on Innovations in Thermo-Fluid Engineering and Sciences, NIT Rourkela

2020: Plenary talk at the International Conference on Energy and Sustainable Development, Jadavpur University

C. LIST OF ACADEMIC PUBLICATIONS:

Google Scholar Citations: 7211, h-index- 51, i10 index- 119

PUBLICATIONS IN JOURNALS IN REVERSE CHRONOLOGICAL ORDER

Refereed Journals:

(a) International Journals

1. S. R. Gorthi, P. K. Mondal, G. Biswas and K.C. Sahu, Electro-capillary filling in a microchannel under the influence of magnetic and electric fields, ***Can J Chem Eng***. Vol. 99; 1–17, (2021)

2. S. R. Gorthi, S. K. Meher, G. Biswas, P. K. Mondal, Capillary imbibition of non-Newtonian fluids in a microfluidic channel: analysis and experiments, ***Proc. R. Soc. A***, Vol. 476, pp. 20200496-1 – 20200496-14, (2020)

3. S. Chatterjee, A. Hens, K. C. Ghanta, G. Biswas, Molecular dynamics study of sessile ionic nanodroplet under external electric field, ***Chemical Engineering Science***, Vol. 229, pp. 116143-1 –116143-13, (2021)

4. B. Nath, M. P. Borthakur, and G. Biswas, Electric field induced dynamics of viscoplastic droplets in shear flow, ***Physics of Fluids***, Vol. 32, pp. 092110-1 –92110 -16, (2020).

5. P.K. Kirar, K. Alvarenga, P. Kolhe, G. Biswas, and K.C. Sahu, Coalescence of drops on the free-surface of a liquid pool at elevated temperatures, ***Physics of Fluids***, Vol. 32, pp. 052103-1 –052103-10, (2020);

6. S. R. Gorthi, H. S. Gaikwad, P. K. Mondal and G. Biswas, Surface Tension Driven Filling in a Soft Microchannel: Role of Streaming Potential, ***Ind. Eng. Chem. Res.***, Vol. 59, pp. 3839−3853 (2020).

7. V. Pandey, H. Deka, G. Biswas, and A. Dalal, Dynamics of Growth and Breakup of an Evaporating Pendant Drop, ***Journal of Heat Transfer (ASME)***, Vol. 142, Issue 2, pp. 021601-1 –021601-8, (2020)

8. B.Nath, A. P. Bidkar, V. Kumar, A. Dalal, M. K. Jolly, S. S. Ghosh and G. Biswas, Deciphering Hydrodynamic and Drug-Resistant Behaviors of Metastatic EMT Breast Cancer Cells Moving in a Constricted Microcapillary, ***Journal of Clinical Medicine***, Vol. 8, pp 1194-1 – 1194-15, (2019)

9. M. S. Agrawal, H. S. Gaikwad, P. K. Mondal and G. Biswas, Analysis and Experiments on the Spreading Dynamics of a Viscoelastic Drop, ***Applied Mathematical Modelling***, Vol. 75 pp. 201-209, (2019)

10. B. Nath, G. Biswas and A. Dalal, Influence of electric field on deformation of a drop in shear flow, ***Physics of Fluids***, Vol. 31, pp. 042102-1—042102-13, (2019)

11. H. Deka, P.-H. Tsai, G. Biswas, A. Dalal, B. Ray, A.-B. Wang, Dynamics of formation and oscillation of non-spherical drops, ***Chemical Engineering Science*****,** Vol. 201, pp. 413–423, (2019)

12. H. Deka, G. Biswas, K. C. Sahu, Y. Kulkarni, A. Dalal, Coalescence dynamics of a compound drop on a deep liquid pool, ***Journal of Fluid Mechanics, (JFM Rapids)*****,** Vol. 866, pp. R2-1 –R2-11, (2019)

13. R. K. Arun, V. Gupta, P. Singh, G. Biswas and N. Chanda, Selection of Graphite Pencil Grades for the Design of Suitable Electrodes for Stacking Multiple Single-Inlet Paper-Pencil Fuel Cells, ***Chemistry Select***, Vol. 4, pp. 152—159, (2019)

14. H. Deka, G. Biswas, S. Chakraborty, and A. Dalal, Coalescence dynamics of unequal sized drops, ***Physics of Fluids*****,** Vol 31, pp. 012105-1--012105-17**,** (2019)

15. M. P. Borthakur, G. Biswas and D. Bandyopadhyay, Dynamics of drop formation from submerged orifices under the influence of electric field, ***Physics of Fluids*****,** Vol. 30, pp. 122104-1—122104-11, (2018)

16. B. Nath, A. Raza, V. Sethi, A. Dalal, S. S. Ghosh and G. Biswas, Understanding flow dynamics, viability and metastatic potency of cervical cancer (HeLa) cells through constricted microchannel, ***Scientific Reports*****,** Vol. 8, pp. 17357-1 – 17357-10, (2018)

17. M. P. Borthakur, G. Biswas, D. Bandyopadhyay and K.C. Sahu, Dynamics of an arched liquid jet under the influence of gravity, ***European Journal of Mechanics / B Fluids***, Vol. 74, pp. 1-9, (2019).

18. V. Pandey, G. Biswas and A. Dalal, Effect of surface wettability and electric field on transition of film boiling to nucleate boiling, ***Numerical Heat Transfer, Part A***, Vol. 74, pp. 1105-1120 (2018).

19. S. Bhardwaj, A. Dalal, G. Biswas and P. P. Mukherjee, Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional Channel, ***Physics of Fluids***, Vol. 30, pp. 102102-1—102102-14, (2018)

20. V. Pandey, G. Biswas, A. Dalal and S.W.J. Welch, Bubble Lifecycle During Heterogeneous Nucleate Boiling, ***Journal of Heat Transfer (ASME),*** Vol. 140, pp. 121503-1—121503-17, (2018)

21. B. Nath, G. Biswas, A. Dalal, and K. C. Sahu, Cross-stream migration of drops suspended in Poiseuille flow in the presence of an electric field, ***Physical Review E***, Vol. 97, pp. 063106-1--063106-13, (2018)

22. H. Deka, B. Ray, G. Biswas, and A. Dalal, Dynamics of tongue shaped cavity generated during the impact of high-speed microdrops, ***Physics of Fluids*****,** Vol. 30, pp. 042103-1 – 042103-14, (2018)

23. M. P. Borthakur, G. Biswas, and D. Bandyopadhyay, Dynamics of deformation and pinch-off of a migrating compound droplet in a tube, ***Physical Review E*****,** Vol. 97, pp. 043112-1 – 043112-9, (2018)

24. M.P. Borthakur, D. Bandyopadhyay and G. Biswas, Electric field mediated separation of water–ethanol mixtures in carbon nanotubes integrated in nanoporous graphene membranes, ***Faraday Discuss***., 209, 259–271, (2018)

25. H. Deka, B. Ray, G. Biswas, A. Dalal, P.-H. Tsai, and A.-B. Wang, The regime of large bubble entrapment during a single drop impact on a liquid pool, ***Physics of Fluids*****,** Vol. 29, (Issue 9) pp. 092101-1- 092101-13, (2017).

26. M. P. Borthakur, G. Biswas, and D. Bandyopadhyay, Formation of liquid drops at an orifice and dynamics of pinch-off in liquid jets**,** ***Physical Review E***, Vol. 96, pp. 013115-1— 013115-11, (2017).

27. S. R. Gorthi, P. K. Mondal, and G. Biswas, Magnetic-field-driven alteration in capillary filling dynamics in a narrow fluidic channel, ***Physical Review E*****,** Vol. 96, pp. 013113-1—013113-14, (2017).

28. S. Timung, J. Chaudhuri, M. P. Borthakur, T. K. Mandal, G. Biswas and D. Bandyopadhyay, Electric field mediated spraying of miniaturized droplets inside microchannel, ***Electrophoresis***, Vol 38, pp. 1450-1457, (2017)

29. H. Chattopadhyay, S. K. Samanta, G. Biswas and B. B. Sharma, Direct numerical simulation of evaporation in a biporous media, ***Journal of Mechanical Science and Technology (KSME)***, Vol. 31 (6), pp. 2635~2641, (2017)

30. B. Nath, G. Biswas, A. Dalal and K. C. Sahu, Migration of a droplet in a cylindrical tube in the creeping flow regime, ***Physical Review E*****,** Vol. 95, pp. 033110-1—033110-11, (2017)

31. V. Pandey, G. Biswas, and A. Dalal, Saturated film boiling at various gravity levels under the influence of electrohydrodynamic forces, ***Physics of Fluids*****,** Vol. 29, pp. 032104-1- 032104-13, (2017)

32. H. Srivastava, A. Dalal, K. C. Sahu and G. Biswas, Temporal linear stability analysis of an entry flow in a channel with viscous heating, ***International Journal of Heat and Mass Transfer***, Vol. 109, pp. 922-929, (2017).

33. P. Saha, G. Biswas, A.C. Mandal and S. Sarkar, Investigation of coherent structures in a turbulent channel with built-in longitudinal vortex generators, ***International Journal of Heat and Mass Transfer***, Vol. 104, pp. 178-198, (2017).

34. R.K. Arun, P. Singh, G. Biswas, N. Chanda and S. Chakraborty, Energy generation from water flow over a reduced graphene oxide surface in a paper–pencil device, ***Lab-on-a-Chip***, Vol. 16, pp. 3589-3596, (2016).

35. R. K. Arun, N. Priyadarshini, K. Chaudhury, N. Chanda, G. Biswas and S. Chakraborty, Paper-PDMS hybrid microchannel: a platform for rapid fluid-transport and mixing**,** ***J. Micromech. Microeng.*****,** Vol. 26, 105008-1—105008-9, (2016).

36. V. Pandey, G. Biswas, and A. Dalal, Effect of superheat and electric field on saturated film boiling**,** ***Physics of Fluids*** , Vol. 28, 052102-1- 052102-18, (2016)

37. A. Sinha, H. Chattopadhyay, A. K. Iyengar, G. Biswas, Enhancement of heat transfer in a fin-tube heat exchanger using rectangular winglet type vortex generators**,** ***International Journal of Heat and Mass Transfe*****r,** Vol. 101, pp. 667–681, (2016)

38. S. Sarkar, S. Ganguly, G. Biswas and P. Saha, Effect of cylinder rotation during mixed convective flow of nanofluids past a circular cylinder, ***Computers and Fluids*****,** Vol. 127, pp. 47-64 (2016)

39. A. Hens, K. Mondal, G. Biswas and D. Bandyopadhyay, Pathways from disordered to ordered nanostructures from defect guided dewetting of ultrathin bilayers, ***Journal of Colloid and Interface Science,*** Vol. 465, pp. 128–139 (2016)

40. I.Chakraborty, G. Biswas, S. Polepalle and P.S. Ghoshdastidar, Bubble Formation and Dynamics in a Quiescent High-Density Liquid, ***AIChE Journal***, Vol. 61, pp. 3996 - 4012, (2015).

41. A. Hens, G. Biswas and S. De, Evaporation of water droplets on Pt-surface in presence of external electric field – A molecular dynamics study***, The Journal of Chemical Physics,*** Vol. 143, 094702-1 – 094702-11, (2015)

42. P. Randive, A. Dalal, K.C. Sahu, G. Biswas, P. Mukherjee, Wettability effects on contact line dynamics of droplet motion in an inclined channel, ***Physical Review E***, Vol. 91, pp. 053006-1 – 053006-16, (2015)

43. S. Biswas, P. Sharma, B. Mondal and G. Biswas, Analysis of Mixed Convective Heat Transfer in a Ribbed Channel using The Lattice Boltzmann Method**,** ***Numerical Heat Transfer Part A*****,** Vol. 68, pp. 75-98, (2015)

44. B. Ray, G. Biswas and A. Sharma, Regimes during liquid drop impact on a liquid pool, ***Journal of Fluid Mechanics***, Vol. 768, pp. 492-523, (2015).

45. D. Chatterjee and G. Biswas, Dynamic behavior of flow around rows of square cylinders kept in staggered arrangement, ***Journal of Wind Engineering and Industrial Aerodynamics***, Vol. 136, pp. 1-11, (2015).

46. P. Saha, G. Biswas and S. Sarkar, Comparison of winglet-type vortex generators periodically deployed in a plate-fin heat exchanger – A synergy based analysis, ***International Journal of Heat and Mass Transfer*****,** Vol. 74, pp. 292-305, (2014**)**

47. R.K. Arun, K. Chaudhury, M. Ghosh, G. Biswas, N. Chanda and S. Chakraborty, Controlled splitting and focusing of a stream of nanoparticles in a converging-diverging microchannel, ***Lab on a Chip***, Vol. 14, pp. 3800-3808, (2014).

48. A. Hens, G. Biswas and S. De, Analysis of interfacial instability and multimode bubble formation in saturated pool boiling using Coupled Level Set and Volume- of- Fluid approach, ***Physics of Fluids***, Vol. 26, pp. 012105-1 – 012105-14, (2014)

49. A. Hens, R. Agarwal and G. Biswas, Nanoscale study of boiling and evaporation in a liquid Ar film on a Pt heater using molecular dynamics simulation, ***International Journal of Heat and Mass Transfer****,* Vol. 71, pp. 303-312 (2014)

50. S. Sarkar, S. Ganguly and G. Biswas, Buoyancy driven convection of nanofluids in an infinitely long channel under the effect of a magnetic field, ***International Journal of Heat and Mass Transfer***, Vol. 71, pp. 328-340, (2014)

51. B. Ray, D. Bandyopadhyay, A. Sharma, S. W. Joo, S. Qian and G. Biswas, Long-wave interfacial instabilities in a thin electrolyte film undergoing coupled electrokinetic flows: a nonlinear analysis, ***Microfluidics and Nanofluidics***, Vol. 15, pp. 19-33, (2013).

52. S. P. Singh and G. Biswas, Vortex induced vibrations of a square cylinder at subcritical Reynolds numbers, ***Journal of Fluids and Structures***, Vol. 41, pp. 146-155, (2013)

53. S. P. Singh, G. Biswas and P. Nithiarasu, A numerical study of vortex shedding from a circular cylinder vibrating in the in-line direction, ***International Journal of Numerical Methods for Heat & Fluid Flow,*** Vol. 23, pp. 1449 - 1462, (2013)

54. I. Chakraborty, G. Biswas and P.S. Ghoshdastidar, A coupled level-set and volume-of-fluid method for the buoyant rise of gas bubbles in liquids, ***International Journal of Heat and Mass Transfer***, Vol. 58, pp. 240–259, (2013).

55. A. Sinha, K. A. Raman, H. Chattopadhyay and G. Biswas, Effects of different orientations of winglet arrays on the performance of plate-fin heat exchangers, ***International Journal of Heat and Mass Transfer***, Vol. 57, pp. 202–214, (2013).

56. B. Ray, G. Biswas, A. Sharma, and S.W.J. Welch, CLSVOF method to study consecutive drop impact on liquid pool, ***International Journal of Numerical Methods for Heat & Fluid Flow,*** Vol. 23, pp. 143 - 158, (2013).

57. B. Ray, G. Biswas and A. Sharma, Bubble pinch-off and scaling during liquid drop impact on liquid pool, ***Physics of Fluids*****,** Vol. 24, pp. 082108-1 – 082108-11, (2012)

58. A Pal, D. Bandyopadhyay, G. Biswas and V. Eswaran, Enhancement of Heat Transfer Using Delta-Winglet Type Vortex Generators with a Common Flow Up Arrangement, ***Numerical Heat Transfer Part A*****,** Vol. 61, pp. 912-928, (2012).

59. D. Chatterjee, G. Biswas and S. Amiroudine, Mixed Convection Heat Transfer from an In-line Row of Square Cylinders in Cross-Flow at Low Reynolds Number, ***Numerical Heat Transfer Part A*****,** Vol. 61, pp. 891-911, (2012).

60. S. Sarkar, S. Ganguly and G. Biswas, Mixed Convective Heat Transfer of Nanofluids Past a Circular Cylinder in Cross Flow in Unsteady Regime, ***International Journal of Heat and Mass Transfer***, Vol. 55, pp. 4783 – 4799, (2012)

61. G. Biswas, H. Chattopadhyay and A. Sinha, Augmentation of Heat Transfer by Creation of Streamwise Longitudinal Vortices using Vortex Generators, ***Heat Transfer Engineering*****,** Vol. 33, pp. 406 – 424, (2012).

62. B. Ray, G. Biswas and A. Sharma, Oblique Drop Impact on Deep and Shallow Liquid, ***Commun. Comput. Phys*****.,** Vol. 11, pp. 1386 – 1396, (2012).

63. K. Arul Prakash, B. V. Ratish Kumar and G. Biswas**,** Parallel numerical simulation of conjugate heat transfer in the target system of an ADS by domain decomposition method, ***International Journal of Numerical Analysis and Modeling*****,** Series B, 3 (3), 259 – 269, (2012).

64. B. Ray, P.D.S. Reddy, D. Bandyopadhyay, S.W. Joo, A. Sharma, S. Qian and G. Biswas, Instabilities in Free-surface Electroosmotic Flows, ***Theor. Comput. Fluid Dyn***., Vol. 26, pp. 311-318, (2012).

65. B. Ray, P.D.S. Reddy, D. Bandyopadhyay, A. Sharma, S. Qian and G. Biswas, Surface Instability of a Thin Electrolyte Film Undergoing Coupled Electroosmotic and Electrophoretic Flows in a Microfluidic Channel, ***Electrophoresis*****,** Vol. 32, pp. 3257 - 3267, (2011).

66. S. Sen, S. Mittal, and G. Biswas, Flow past a Square Cylinder at Low Reynolds Numbers, ***International Journal for Numerical Methods in Fluids*****,** Vol. 67, pp. 1160–1174, (2011).

67. I. Chakraborty, G. Biswas, and P. S. Ghoshdastidar, Bubble generation in quiescent and co-flowing liquids, ***International Journal of Heat and Mass Transfer*** , Vol. 54, pp. 4673 – 4688, (2011).

68. A. Patra, D. Bandyopadhyay, G. Tomar, A. Sharma, and G. Biswas, Instability and dewetting of ultrathin solid viscoelastic films on homogeneous and heterogeneous substrates, ***The Journal of Chemical Physics***, Vol. 134, 064705-1 - 064705-11, (2011).

69. D. Chatterjee and G. Biswas, The Effects of Reynolds and Prandtl Numbers on Flow and Heat Transfer Across Tandem Square Cylinders in the Steady Flow Regime, ***Numerical Heat Transfer, Part A,*** Vol. 59, pp. 421–437, (2011).

70. S. Sarkar, A. Dalal and G. Biswas, Unsteady wake dynamics and heat transfer in forced and mixed convection past a circular cylinder in cross flow for high Prandtl numbers, ***International Journal of Heat and Mass Transfer,*** Vol. 54, pp. 3536–3551 (2011).

71. B. Ray, G. Biswas and A. Sharma, Generation of secondary droplets in coalescence of a drop at a liquid/ liquid interface, ***Journal of Fluid Mechanics,*** Vol. 655, pp. 72-104, (2010)

72. P. Saha and G. Biswas, Assessment of a Shear-Improved Subgrid Stress Closure for Turbulent Channel Flows, ***International Journal of Heat and Mass Transfer***, Vol. 53, 4856 – 4863, (2010)

73. S. Jayavel, S. Tiwari, G. Biswas and M. Sen, Kinematics of a fluid particle due to interaction of fixed inviscid vortex filaments in presence of external translation and pulsation, ***International Journal of Fluid Mechanics Research***, Vol. 37, pp.127-148, 2010.

74. S. Sarkar, A. Dalal and G. Biswas, Mixed Convective Heat Transfer from Two Identical Square Cylinders in Cross Flow at Re=100, ***International Journal of Heat and Mass Transfer***, Vol. 53, pp. 2628-2642, (2010)

75. D. Chatterjee, G. Biswas and S. Amiroudine, Numerical simulation of flow past row of square cylinders for various separation ratios, ***Computers and Fluids,*** Vol. 39 pp. 49–59, (2010)

76. G. Gandikota, S. Amiroudine, D. Chatterjee and G. Biswas, The Effect of Aiding/ Opposing Buoyancy on Two-Dimensional Laminar Flow Across a Circular Cylinder, ***Numerical Heat Transfer, Part A***, Vol. 58, pp. 385-402, (2010)

77. D. Chatterjee, G. Biswas and S. Amiroudine, Numerical Investigation of Forced Convection Heat Transfer in Unsteady Flow Past a Row of Square Cylinders, ***International Journal of Heat and Fluid Flow***, Vol. 30 pp. 1114–1128, (2009)

78. I. Chakraborty, B. Ray, G. Biswas, F. Durst, A. Sharma, and P. S. Ghoshdastidar, Computational Investigation on Bubble Detachment from Submerged Orifice in Quiescent Liquid under Normal and Reduced Gravity, ***Physics of Fluids*****,** Vol. 21, pp. 062103-1 – 062103-17, (2009)

79. G. Tomar, G. Biswas, A. Sharma and S.W.J. Welch, Influence of Electric Field on Saturated Film Boiling, ***Physics of Fluids***, Vol. 21, 032107-1 – 032107-8 (2009).

80. G. Biswas and S. Sarkar, Effect of Thermal Buoyancy on Vortex Shedding Past a Circular Cylinder in Cross Flow at Low Reynolds Numbers, ***International Journal of Heat and Mass Transfer****,* Vol. 52, pp. 1897-1912, (2009).

81. R.M. Bhatnagar, B. Bhattacharya and G. Biswas, Analysis of Pilot Valve and Taper Groove Based Damper, ***Proceedings of I Mech E London Part C, J. Mechanical Engineering Science***, Vol. 223 (C4), pp 859-871, (2009).

82. S. Sen, S. Mittal and G. Biswas, Steady Separated Flow Past a Circular Cylinder at Low Reynolds Numbers, ***Journal of Fluid Mechanics,*** Vol. 620, pp. 89-119, (2009).

83. G. Tomar, G. Biswas, A. Sharma and S.W.J. Welch, Multi-mode Analysis of Bubble Growth in Saturated Film Boiling, ***Physics of Fluids***, Vol. 20, 092101-1 – 092101-7, (2008).

84. M. Nishi, B. Uensal, F. Durst and G. Biswas, Laminar-to-Turbulent Transition of Pipe Flows through Puffs and Slugs, ***Journal of Fluid Mechanics***, Vol. 614, pp. 425-446, (2008)

85. R. Ranjan, A. Dalal and G. Biswas, A Numerical Study of Fluid flow and Heat Transfer around a Square Cylinder at Incidence using Unstructured Grids, ***Numerical Heat Transfer Part A***, Vol. 54, pp. 890-913, (2008).

86. N. Senthil Kumar and G. Biswas, A Finite Element Study of the Onset of Vortex Shedding in a Flow Past Two-dimensional Circular Cylinder, ***Progress in Computational Fluid Dynamics***, Vol. 8, pp. 288-298, (2008).

87. A. Dalal, V. Eswaran and G. Biswas, A Finite Volume Method for Navier-Stokes Equations on Unstructured Meshes, ***Numerical Heat Transfer Part B***, Vol. 54, pp. 238-259, (2008).

88. G. Tomar, D. Gerlach, G. Biswas, N. Alleborn, A. Sharma, F. Durst S. W. J. Welch, and A. Delgado, Two-phase Electrohydrodynamic Simulations Using a Volume-of-Fluid Approach, ***Journal of Computational Physics,*** Vol. 227, pp 1267-1285, (2007).

89. S.W.J. Welch and G. Biswas, Direct Simulation of Film Boiling Including Electrohydrodynamic Forces, ***Physics of Fluids,*** Vol. 19, 012106-1 – 012106-11, (2007).

90. G. Tomar, A. Sharma, V. Shenoy and G. Biswas, Surface Instability of Confined Elastic Bilayers: Theory and Simulations, ***Physical Review E***, Vol. 76, 011607, (2007).

91. S.R. Hiravennavar, E.G. Tulapurkara, G. Biswas, A Note on the Flow and Heat Transfer Enhancement in a Channel with Built-in Winglet Pair, ***Int. J. Heat and Fluid Flow*** , Vol. 28, pp. 299–305, (2007).

92. K. Arul Prakash, G. Biswas and B.V. Rathish Kumar, Numerical Prediction of Fluid Flow and Heat Transfer in the Target System of an Axisymmetric Accelerator Driven Subcritical System, ***Journal of Heat Transfer (ASME)***, Vol. 129, pp. 582-588, (2007).

93. G. Tomar, V. Shankar, A. Sharma and G. Biswas, Electrohydrodynamic Instability of a Confined Viscoelastic Liquid Film, ***Journal of Non-Newtonian Fluid Mechanics***, Vol. 143, pp. 120-130, (2007).

94. K. Arul Prakash, G. Biswas and B.V. Rathish Kumar, Thermal Hydraulics of the Spallation Target Module of an Accelerator Driven Sub-critical System: A Numerical Study, ***International Journal of Heat and Mass Transfer,*** Vol. 49, pp. 4633-4652, (2006).

95. K. Arul Prakash, G. Biswas and B.V. Rathish Kumar, Numerical Simulation of the Target System of an ADSS, ***International Journal of Computational Fluid Dynamics,*** Vol. 20, pp. 513-520, (2006).

96. A. Maheshwari, R.P. Chhabra and G. Biswas, Effect of Blockage on Drag and Heat Transfer from a Single Sphere and an In-line Array of Three Spheres, ***Powder Technology***, Vol. 168, pp. 74-83, (2006).

97. G. Tomar, V. Shankar, S.K. Shukla, A. Sharma, G. Biswas, Instability and Dynamics of Thin Viscoelastic Liquid Films, ***European Physical Journal E***, Vol. 20, pp. 185-200, (2006).

98. K. Arul Prakash, S. De, B.V. Rathish Kumar and G. Biswas, A SUPG – Finite Element Study of an ADSS, ***Finite Element in Analysis and Design***, Vol. 42, pp. 1123-1136, (2006).

99. Y. Srinivas, G. Biswas, A.S. Parihar and R. Ranjan, Large-Eddy Simulation of High Reynolds Number Turbulent Flow Past a Square Cylinder, ***Journal of Engineering Mechanics (ASCE*)**, Vol. 132, pp. 327-335, (2006).

100. D. Gerlach, G. Tomar, G. Biswas, and F. Durst, Comparison of Volume-of-Fluid Methods for Computing Surface Tension-Dominant Two-Phase Flows, ***International Journal of Heat and Mass Transfer,*** Vol. 49, pp. 740-754, (2006).

101. G. Tomar, G. Biswas, A. Sharma and A. Agrawal, Numerical Simulation of Bubble Growth in Film Boiling Using CLSVOF Method, ***Physics of Fluids,*** Vol. 17, 112103-1 – 112103-13, (2005).

102. J. Srikanth, E.G. Tulapurkara and G. Biswas, Large Eddy Simulation of Flow Past Built-In Winglet-Pair in a Rectangular Channel, ***International Journal of Fluid Mechanics Research,*** Vol. 32, pp. 310-326, (2005).

103. K. Senthil Kumar, E. G. Tulapurkara, G. Biswas and B.H.L. Gowda, Reverse Flow in Channel with Obstruction at Entry, ***Fluid Dynamics Research,*** Vol. 37, pp. 387-398, (2005).

104. D. Gerlach, G. Biswas, F. Durst and V. Kolobaric, Quasi-Static Bubble Formation on Submerged Orifices, ***International Journal of Heat and Mass Transfer,*** Vol. 48, pp. 425-438, (2005).

105. S. Tiwari, D. Chakraborty, G. Biswas and P.K. Panigrahi, Numerical Prediction of Flow and Heat Transfer in a Channel in the Presence of a Built-in Wake Splitter, ***International Journal of Heat and Mass Transfer***, Vol. 48, pp. 439-453, (2005).

106. J. M. Shi, D. Gerlach, M. Breuer, G. Biswas and F. Durst, Heating Effect on Steady and Unsteady Horizontal Laminar Flow of Air Past a Circular Cylinder, ***Physics of Fluids***, Vol. 16, pp. 4331-4345, (2004).

107. D. Agarwal, S.W.J. Welch, G. Biswas, and F. Durst, Planar Simulation of Bubble Growth in Film Boiling in Near-Critical Water Using a Variant of the VOF Method, ***Journal of Heat Transfer (ASME)***, Vol. 126, pp. 329-338, (2004).

108. G. Biswas, M. Breuer and F. Durst, Backward-Facing Step Flows for Various Expansion Ratios at Low and Moderate Reynolds Numbers, ***Journal of Fluids Engineering (ASME)***, Vol. 126, pp. 362-374, (2004).

109. A. K. Saha, K. Muralidhar and G. Biswas, Investigation of Two-and Three-Dimensional Models of Transitional Flow Past a Square Cylinder, ***Journal of Engineering Mechanics (ASCE)***, Vol. 129, pp. 1320-1329, (2003).

110. S. Tiwari, G. Biswas, P.L.N. Prasad and S. Basu, Numerical Prediction of Flow and Heat transfer in a Rectangular Channel with a Built-in Circular Tube, ***Journal of Heat Transfer (ASME)***, Vol. 125, pp. 413-421, (2003).

111. S. Tiwari, P.L.N. Prasad and G. Biswas, A Numerical Study of Heat Transfer in Fin-Tube Heat Exchangers using Winglet-Type Vortex Generators in Common-Flow-Down Configuration, ***Progress in Computational Fluid Dynamics***, Vol. 3, pp. 32-41, (2003).

112. T. Cziesla, H. Chattopadhyay, N.K. Mitra and G. Biswas, Prediction of Heat Transfer from Impinging Knife-Jets Using a Dynamic Subgrid Stress Model, ***Progress in Computational Fluid Dynamics***, Vol. 3, pp. 22-31, (2003).

113. S. Tiwari, D. Maurya, G. Biswas and V. Eswaran, Heat Transfer Enhancement in Crossflow Heat Exchangers using Oval Tubes and Multiple Delta Winglets, ***International Journal of Heat and Mass Transfer***, Vol. 46, pp. 2841-2856, (2003).

114. V. Prabhakar, G. Biswas and V. Eswaran, Numerical Prediction of Heat Transfer in a Channel with a Built-in Oval Tube and Various Arrangements of the Vortex Generators, ***Numerical Heat Transfer***, ***Part A***, Vol. 44, pp. 315-333, (2003).

115. V. Kumar, G. Biswas, G. Brenner and F. Durst, Effect of Thermocapillary Convection in an Industrial Czochralski Crucible: Numerical Simulation, ***International Journal of Heat and Mass Transfer***, Vol. 46, pp. 1641-1652, (2003).

116. A. Jain, G. Biswas and D. Maurya, Winglet-Type Vortex Generators with Common-Flow-Up Configuration for Fin-Tube Heat Exchangers, ***Numerical Heat Transfer***, ***Part A***, Vol. 43, pp. 201-219, (2003).

117. A. K. Saha, G. Biswas, and K. Muralidhar, Three-dimensional Study of Flow Past a Square Cylinder at Low Reynolds Numbers, ***Int. J. Heat and Fluid Flow***, Vol. 24, pp. 54-66, (2003).

118. H. Chattopadhyay, G. Biswas and N.K. Mitra, Heat Transfer from a Moving Surface due to Impinging Slot Jets, ***Journal of Heat Transfer (ASME)***, Vol. 124, pp. 433-440, (2002).

119. V. Prabhakar, G. Biswas and V. Eswaran, Numerical Prediction of Heat Transfer in a Channel with Built-in Oval Tube and Two Different Shaped Vortex Generators, ***Numerical Heat Transfer***, ***Part A***, Vol. 41, pp. 307-329, (2002).

120. A.K. Saha, G. Biswas, and K. Muralidhar, Two-Dimensional Study of the Turbulent Wake Behind a Square Cylinder Subject to Uniform Shear, ***Journal of Fluids Engineering (ASME)***, Vol. 123, pp. 595-603, (2001).

121. T. Cziesla, G. Biswas, H. Chattopadhyay and N.K. Mitra, Large-Eddy Simulation of Flow and Heat Transfer in an Impinging Slot Jet, ***Int. J. Heat and Fluid Flow***, Vol. 22, pp. 500-508, (2001).

122. P. Sandilya, D.P. Rao, A. Sharma and G. Biswas, Gas-Phase Mass Transfer in a Centrifugal Contractor, ***Ind. Eng. Chem. Res.,*** Vol. 40, pp. 384-392, (2001).

123. P. Sandilya, G. Biswas, D.P. Rao and A. Sharma, Numerical Simulation of the Gas Flow and Mass Transfer between Two Coaxially Rotating Disks, ***Numerical Heat Transfer***, ***Part A***, Vol. 39, pp. 285-305, (2001).

124. R. Vasudevan, V. Eswaran, and G. Biswas, Winglet Type Vortex Generators for Plate-Fin Heat Exchangers Using Triangular Fins, ***Numerical Heat Transfer***, ***Part A***, Vol. 38, pp. 533-555, (2000).

125. A.K. Saha, K. Muralidhar,and G. Biswas, Experimental Study of Flow Past a Square Cylinder at High Reynolds Numbers, ***Experiments in Fluids***, Vol. 29, pp. 553-563, (2000).

126. P.K. Maji and G. Biswas, Analysis of Flow in the Plate-Spiral of a Reaction Turbine Using a Streamline Upwind Petrov-Galerkin Method, ***International Journal for Numerical Methods in Fluids****,* Vol. 34, pp. 113-144, (2000).

127. A.K. Saha, K. Muralidhar,and G. Biswas, Transition and Chaos in Two-Dimensional Flow Past a Square Cylinder, ***Journal of Engineering Mechanics (ASCE)***, Vol. 126, pp. 523-532, (2000).

128. A.K. Saha, G. Biswas and K. Muralidhar, Numerical Study of the Turbulent Unsteady Wake Behind a Partially Enclosed Square Cylinder using RANS**,** ***Computer Methods in Applied Mechanics and Engineering***, Vol. 178, pp. 323-341, (1999).

129. T. Cziesla, G. Biswas and N.K. Mitra, Large Eddy Simulation in a Turbulent Channel Flow Using Exit Boundary Conditions, ***International Journal for Numerical Methods in Fluids***, Vol. 30, pp. 763-773, (1999).

130. P.K. Maji and G. Biswas, Analysis of Flow in the Spiral Casing Using a Streamline Upwind Petrov-Galerkin Method, ***International Journal for Numerical Methods in Engineering***, Vol. 45, pp. 147-174, (1999).

131. A.K. Saha, G. Biswas, and K. Muralidhar, Influence of Inlet Shear on the Structure of Wake behind a Square Cylinder, ***Journal of Engineering Mechanics (ASCE)***, Vol. 125, pp. 359-363, (1999).

132. A.K. Saha, K. Muralidhar,and G. Biswas, Vortex Structures and Kinetic Energy Budget in Two-Dimensional flow Past a Square Cylinder, ***Computers and Fluids*** , Vol. 29, pp. 669-694, (2000).

133. A.A. Bastani Jahromi, N.K. Mitra and G. Biswas, Numerical Investigations on Enhancement of Heat Transfer in a Compact Fin-and-Tube Heat Exchanger Using Delta Winglet Type Vortex Generators, ***Enhanced Heat Transfer***, Vol.6, pp. 1-11, (1999).

134. S. Singh, G. Biswas, and A. Mukhopadhyay, Effect of Thermal Buoyancy on the Flow through a Vertical Channel with a built-in Circular Cylinder**, *Numerical Heat Transfer, Part A***, Vol. 34, pp. 769-789, (1998).

135. P.K. Maji and G. Biswas, Three-dimensional Analysis of Flow in the Spiral Casing of a Reaction Turbine using a Differently Weighted Petrov Galerkin Method**, Computer *Methods in Applied Mechanics and Engineering***, Vol. 167/ 1-2, pp 167-190, (1998).

136. G. Biswas, V. Eswaran, G. Ghai and A. Gupta, A Numerical Study on Flow Through the Spiral Casing of a Hydraulic Turbine, ***International Journal for Numerical Methods in Fluids***, Vol. 28, pp. 143-156, (1998).

137. B.L. Owsenek, T. Cziesla, N.K. Mitra and G. Biswas, Numerical Investigation of Heat Transfer in Impinging Axial and Radial Jets with Superimposed Swirl, ***International Journal of Heat and Mass Transfer***, Vol. 40, pp. 141-147, (1997).

138. H. Laschefski, T. Cziesla, G. Biswas and N.K. Mitra, Numerical Investigation of Heat Transfer by Rows of Rectangular Impinging Impinging Jets, ***Numerical Heat Transfer, Part A***, vol. 30, pp. 87 - 101, (1996).

139. G. Biswas, K. Torii, D. Fujii and K. Nishino, Numerical and Experimental Determination of Flow Structure and Heat Transfer Effects of Longitudinal Vortices in a Channel Flow**, *International Journal of Heat and Mass Transfer***, vol. 39, pp. 3441-3451, (1996).

140. P. Deb, G. Biswas and N.K. Mitra, Heat Transfer and Flow Structure in Laminar and Turbulent Flows in a Rectangular Channel with Longitudinal Vortices, ***International Journal of Heat and Mass Transfer***, vol. 38, pp. 2427-2444, (1995).

141. S. Chakraborty, S.P.Sengupta and G. Biswas, Fluid Flow and Heat Transfer in a Laminar Radial Impinging Jet, ***Int. Journal of Numerical Methods for Heat and Fluid Flow***, vol. 4, pp. 173-185, (1994).

142. F. Potthast, H. Laschefski, N.K. Mitra and G. Biswas, Numerical Investigation of Flow Structure and Mixed Convection Heat Transfer of Impinging Radial and Axial Jets, ***Numerical Heat Transfer, Part-A***, vol. 26, pp 123-140, (1994).

143. G. Biswas, N.K. Mitra and M. Fiebig, Heat Transfer Enhancement in Fin-Tube Heat Exchangers by Winglet Type Vortex Generators, ***International Journal of Heat and Mass Transfer***, vol.37, pp. 283-291, (1994).

144. G. Biswas, P. Deb and S. Biswas, Generation of Longitudinal Streamwise Vortices - A Device for Improving Heat Exchanger Design, ***Journal of Heat Transfer (ASME)***, Vol. 116, pp. 588-597, (1994).

145. A. Mukhopadhyay, T. Sundararajan and G. Biswas, An Explicit Transient Algorithm for Predicting Incompressible Viscous Flows in Arbitrary Geometry, ***International Journal for Numerical Methods in Fluids***, vol. 17, pp. 975-993, (1993).

146. A. Mukhopadhyay, G. Biswas and T. Sundararajan, Numerical Investigation of Confined Wakes Behind a Square Cylinder in a Channel***, International Journal for Numerical Methods in Fluids***, vol. 14, pp. 1473-1484, (1992).

147. G. Biswas and H. Chattopadhyay, Heat Transfer in a Channel Flow with Built-in Wing-Type Vortex Generators, ***International Journal of Heat and Mass Transfer***, vol. 35, pp. 803-814, (1992).

148. G. Biswas, H. Laschefski, N.K. Mitra and M. Fiebig, Numerical Investigation of Mixed Convection Heat Transfer in a Horizontal Channel with a Built-in Square Cylinder***, Numerical Heat Transfer - Part A***, vol. 18, pp. 173-188, (1990).

149. G. Biswas, N.K. Mitra and M. Fiebig, Computation of Laminar Mixed Convection Flow in a Channel with Wing-Type Built-in Obstacles, ***Journal of Thermophysics and Heat Transfer (AIAA)***, vol. 3, pp. 447-453, (1989).

150. G.Biswas, N.K.Mitra and M.Fiebig, Mixed Convection Flows in a Channel with a Vortex Generator, ***ZAMM***, vol. 69, pp. T 643-645, (1989).

151. G.Biswas and A.S.Gupta, Spreading of non-Newtonian Liquid Drop on a Horizontal Plane, ***Mechanics Research Communications***, vol. 14, pp. 361-370, (1987).

152. P. Mukherjee, G. Biswas and P.K. Nag, Second Law Analysis of Heat Transfer in Swirling Flow through a Cylindrical Duct, ***Journal of Heat Transfer (Trans ASME)***, vol. 109, pp. 308-313,(1987).

153. G. Biswas, P.K. Nag and A.S. Gupta, Heat Transfer in a Corner Flow*,* ***Warme und Stoffubertragung***, vol. 21, pp. 13-14, (1987).

154. S.K. Som and G. Biswas, Dispersion of Spray from Swirl Nozzles, ***Chemical Engineering and Processing***, vol. 20, pp. 191-200, (1986).

155. G. Biswas and S. K. Som, Coefficient of Discharge and Spray Cone Angle of a Pressure Nozzle with Combined Axial and Tangential Entry of Power-Law Fluids, ***Applied Sci Res***, vol. 43, pp. 3-22, (1986).

156. G. Biswas, S. K. Som and A. S. Gupta, Instability of a Moving Cylindrical Liquid Sheet, ***Journal of Fluids Engineering (ASME)***, vol. 107, pp. 451-454, (1985).

157. S. K. Som and G. Biswas, Convective Heat Transfer in a Superimposed Streaming and Swirling Flow Through a Cylindrical Duct**,** ***Warme und Stoffubertragung***, vol.19, pp. 31-39, (1985).

158. S. K. Som and G. Biswas, Initiation of Air Core in a Swirl Nozzle Using Time-Independent Power-Law Fluids, ***Acta Mechanica***, vol. 51, pp. 179-197, (1984).

(b) International Monographs/ Reports

159. T. Cziesla, H. Braun. G. Biswas and N.K. Mitra, Large Eddy Simulation in a Channel with Exit Boundary Conditions, ***ICASE Report No. 96-18****, NASA Contract No. NASI-19480*, Langley Research Center, Hampton, Virginia, USA, (1996)

(c) National Journals

160. K Arul Prakash, B V Rathish Kumar and G Biswas, A Numerical Study of the Target System of an ADSS with Different Flow Guides, ***PRAMANA***, Vol. 68, pp. 365-376, (2007).

161. G. Biswas, Heat Transfer and Fluid Mechanics related to Turbulent Flow, ***Annals of the Indian National Academy of Engineering***, Vol. II, pp. 19-25, (2005).

162. G. Biswas and P. Deb, Heat Transfer and Flow Structure in a Turbulent Channel flow with Embedded Longitudinal Vortices, ***Journal of Energy Heat and Mass Transfer****,* Vol. 22, pp. 141-148, (2000).

163. A.K. Saha, and G. Biswas, Application of a Multigrid Method for Flows Behind Bluff Bodies in a Channel, ***Journal of Institution of Engineers (Aerospace)***, Vol. 77, pp. 13-21, (1996).

164. H. Chattopadhyay and G.Biswas, Augmentation of Heat Transfer Using Wing-Type Vortex Generators, ***Journal of Energy Heat and Mass Transfer***, Vol. 15, pp. 325-330, (1993).

165. G. Biswas, N. K. Mitra, and M. Fiebig, Computation of Laminar Mixed Convection Flows in a Duct with a Built-in Wing Generator, ***Journal of Energy Heat and Mass Transfer***, Vol. 13, pp. 47-55, (1991).

166. A. K. Chattopadhyay, D. N. Roy and G. Biswas, Radial Flow of a Viscous Fluid Between Two Co axially Rotating Discs, ***Indian Journal of Technology***, Vol. 29, pp. 221-227, (1991).

167. G. Biswas and S. G. Mukherjee, An Investigation on the Abrasive Properties of Low Grade Solid Fuels for Power Generation, ***J. Inst. of Engg***. (Mechanical Engineering), Vol. 64, ME 4, pp. 154-158, (1984).

(d) BOOKS:

1. Two Major Chapters in "*Computational Fluid Flow and Heat Transfer*", Edited by K. Muralidhar and T. Sundararajan under the auspices of IIT Kanpur Series, Narosa, India (1995), Revised Edition (2003).

2. K. Muralidhar and G. Biswas, *Advanced Engineering Fluid Mechanics* , Narosa, New Delhi and London (1996).

3. G. Biswas, S. Srinivasa Murthy, K. Muralidhar and V.K. Dhir, *Heat and Mass Transfer 97*, Proceedings of the Third ISHMT-ASME Heat and Mass Transfer Conference and 14th National Heat and Mass Transfer Conference-IIT Kanpur, Narosa, New Delhi and London (1997).

4. S.K. Som and G. Biswas, *Introduction to Fluid Mechanics and Fluid Machines,* Tata McGraw-Hill Publishing Company, New Delhi, 1998.

5. G. Biswas and V. Eswaran, *Turbulent Flows: Fundamentals, Experiments and Modeling,* Narosa Publishing House, New Delhi, 2002.

6. S.K. Som and G. Biswas, *Introduction to Fluid Mechanics and Fluid Machines,* **Second Edition**, Tata McGraw-Hill Publishing Company, New Delhi, 2004.

7. K. Muralidhar and G. Biswas, *Advanced Engineering Fluid Mechanics*, **Second Edition**, Narosa, New Delhi and London (2005).

8. S.K. Som, G. Biswas and S. Chakraborty, *Introduction to Fluid Mechanics and Fluid Machines,* **Third Edition**, Tata McGraw-Hill Publishing Company, New Delhi, 2011

9. G. Biswas, K.L. Chopra, C.J. Jha and D.V. Singh, **Profile of Engineering Education in India: Status, Concerns and Recommendations**, Indian National Academy of Engineering and Narosa, 2010

10. G. Biswas and S. Mukherjee, **Computational Fluid Dynamics**, Narosa, 2014

11. G. Biswas, A. Dalal and V.K. Dhir, **Fundamentals of Convective Heat Transfer**, CRC Press (Taylor and Francis Group), Boca Raton, Florida, USA, 2019

(f) WEB-BASED COURSES:

1. Created Web-based Course on **Fluid Mechanics** for the sophomore students (**under the auspices of MHRD sponsored NPTEL-I Project**)

2. Created Web-based Course on **Fluid Machinery** for the senior students (**under the auspices of MHRD sponsored NPTEL-I Project**)

3. Created Web-based Course on **Thermodynamics** for the senior students (**under the auspices of MHRD sponsored NPTEL-I Project**

4. Created Web-based Course on **Turbulence** for the senior students (**under the auspices of MHRD sponsored NPTEL-I Project**

5. Created Web-based Course on **Computational Fluid Mechanics and Heat Transfer** for the post-graduate and advanced undergraduate students (**under the auspices of MHRD sponsored NPTEL-II Project**

6. Created Web-based Course on **Convective Heat and Mass Transfer** for the post-graduate and advanced undergraduate students (**under the auspices of MHRD sponsored NPTEL-II Project**

D. PROJECTS:

SPONSORED RESEARCH:

1. Computation of Three Dimensional Flow Field in a Spiral Casing of a Hydraulic Turbine, Sponsored by BHEL (Bhopal), India; Other Investigators: Dr. V. Eswaran (Completed).

2. Development of a Computational Fluid Dynamics Code, Sponsored by DRDL (Hyderabad), India; Other Investigators: Dr. V.Eswaran, Dr. K. Muralidhar, and Dr.S.G.Dhande (Completed).

3. Noise Removal, Three Dimensional Reconstruction and Data Retrieval for Optical Images of Stratified Fluids, Sponsored by Department of Science and Technology (New Delhi), India; Other Investigators: Dr. K. Muralidhar (Completed).

4. Modeling and Simulation of Enhanced Oil Recovery using Parallel Computers, Department of Science and Technology (New Delhi), India; Other Investigators: Dr. K. Muralidhar (Completed).

5. Unsteady Separated Flow in the Wake of a Square Cylinder in a Channel: Numerical and Experimental Study, AR& DB, India (Completed).

6. APPLICATION OF VORTEX GENERATORS AND OVAL TUBES TO ENHANCE PERFORMANCE OF AIR-COOLED CONDENSERS FOR GEOTHERMAL POWER PLANT AND OTHER HEAT EXCHANGERS, NEDO-JAPAN; OTHER INVESTIGATORS: DR. M.S. SOHAL AND DR. J.E. O'BRIEN (IDAHO NATIONAL LABORATORY, USA) AND PROF. KAHORU TORII (YOKOHAMA NATIONAL UNIVERSITY, JAPAN). ***The project report is available on the INL website and can be accessed by anyone with web access. The Websites is*** **[*https://inldigitallibrary.inl.gov/sti/3395026.pdf*] (Completed).**

7. CFD Code for Thermal Hydraulics of Neutron Spallation Target for Accelerator Driven Sub-critical System, Other Investigators: Dr. B.V. Rathish Kumar, BRNS (Mumbai), India, (Completed).

8. Large Eddy Simulation of Flows in a Rectangular Channel with a Built-in Winglet Pair, AR&DB, India (Completed).

9. Development of a Computer Code on Pressure Based Solvers for the NS Equations, Fluent-India (Completed).

10. Numerical Simulation of Heterogeneous Bubble Growth (MHRD, R&D), India (Completed).

11. Numerical and Experimental Studies on Boiling Heat Transfer for Improved Heat Exchangers sponsored by (DAAD-DST Project based Exchange Programme) (Completed).

12. Enhancement of Heat Transfer using Vortex Generators in Common-Flow-Up Configuration (CSIR-India) (Completed).

CONSULTING:

1. Analysis and Modified Design of Water Cooled Roof Panels at EOF for Steel Making, Sponsored by TISCO (Jamshedpur), India; Other Investigators: Dr. P.M.Dixit and Dr. Amitabha Mukherjee.

2. Environmental Control System Analysis for the LCA, Sponsored by HAL (Lucknow), India; Other Investigators: Dr.S.G.Dhande, Dr. S. Mukherjee.

3. Development of Design Methodology & CAD Software for Centrifugal Blowers Sponsored by Singhasini Machines (Kanpur), India; Other Investigators: Dr. S.G. Dhande.

4. Analysis of KADECS Vapour Core Pump, Sponsored by HAL (Lucknow), India; Other Investigators: Dr. P.M. Dixit.

5. Vetting of Computational Fluid Dynamic Analysis of a Hydro Turbine Runner Flow Profiles thereby validating its Design (BHEL Bhopal, India), other investigators: Dr. Amaresh Dalal

E. TEACHING:

EXPERIENCE:
Dec 95 – Date: Professor, Mechanical Engineering, Indian Institute of Technology, Kanpur, 208016, India
Sept 2013 – June 2019: Director and Professor, Indian Institute of Technology Guwahati, Guwahati – 781039, India
Mar 93 - Dec 95: Associate Professor, Mechanical Engineering, Indian Institute of Technology, Kanpur (U.P.) 208016, India
May 90- Mar 93: Assistant Professor, Mechanical Engineering, Indian Institute of Technology, Kanpur (U.P.) 208016, India
Jan 84- Apr 90: Lecturer, Dept of Mechanical Engineering, Indian Institute of Technology, Kharagpur (W.B.) 721302, India

TEACHING AND RESEARCH EXPERIENCES IN ABROAD:

May 08 – June 08: Visiting Professor, Dept of Mechanical and Materials Engineering, University of Western Ontario, Canada
Nov 2008 Visiting Professor, ENSAM, Angers, France
Dec 01 – Oct 02: Guest Professor at the LSTM, University of Erlangen-Nuremberg, Germany
July 94 - Dec 94: JSPS Visiting Scientist, Dept of Mech Engg, Yokohama National University, Japan
July 92- Dec 92: Alexander von Humboldt Fellow, Inst fur Thermo und Fluiddynamik, Ruhr Universitat Bochum, Germany
Feb 87- Nov 88: Alexander von Humboldt Fellow, Inst fur Thermo und Fluiddynamik, Ruhr Universitaet Bochum, Germany
May 1999: Visiting Scientist at the Inst fur Thermo und Fluiddynamik, Ruhr Universitaet Bochum, Germany (under INSA-DFG programme)

Courses Taught:
Indian Institute of Technology Kharagpur
Basic Fluid Mechanics (UG, core level)
Advanced Fluid Mechanics (UG, professional)
Fluid Mechanics (Post Graduate level)
Applied Thermodynamics (UG, professional)
Measurements and Controls (UG, professional)
Computational Methods in Thermal Engineering (Post Graduate level)

Indian Institute of Technology Kanpur
Heat Transfer (UG, Compulsory)
Numerical Fluid Flow and Heat Transfer (Post Graduate level)
Fluid Mechanics (UG, Compulsory)
Convective Heat and Mass Transfer (Post Graduate level)
Introduction to Turbulent Fluid Mechanics (Post Graduate level)
Turbomachinery (UG, Compulsory)
Viscous Flow Theory (Post Graduate level)
Thermodynamics (UG, Core level)

Fluid Mechanics Laboratory (Laboratory)
Introduction to Computing (UG Freshmen, Tutor)
Fluid Mechanics and Rate Processes (UG, Core level)
Material Testing (Laboratory)
Computational Methods in Engineering (UG, Core level, Tutor)

Yokohama National University Japan
Numerical Simulation of Fluid Flow and Heat Transfer (Post Graduate level)

University of Erlangen-Nuremberg, Germany
Computational Fluid Dynamics (MSc Course)

University of Western Ontario, Canada
Applied Heat Transfer (Post Graduate Level)

Indian Institute of Technology Guwahati
Convective Heat Transfer (Post Graduate Level also UG Elective)

F. PERSONAL INFORMATION:

Education:

1985: PhD in Engineering, Indian Institute of Technology Kharagpur, Kharagpur-721302, India
1981: M. Tech. in Mechanical (Thermal) Engineering, Indian Institute of Technology Kharagpur, Kharagpur – 721302, India
1979: Bachelor of Engineering (BE), Calcutta University (B E College, Shibpur, presently IIEST Shibpur)
1987 and 1988: Post Doctoral (Humboldt Fellow) at the Ruhr Universitaet Bochum, Bochum, Germany

Date of Birth: May 23, 1956

Sex: Male
Marital Status: Married
Children: One daughter
Nationality: Indian (Passport Number Z4583100)

G. ADMINISTRATION:

1990-1998: Computer Coordinator of the Mechanical Engineering Dept, IIT Kanpur
1996-2001: Coordinator of the Fluid Mechanics Laboratory
1998-1999: Chairman, Students' Placement
1999-2000: Chairman, Graduate Aptitude Test in Engineering – 2000.
2000-2001: Organizing Chairman, Graduate Aptitude Test in Engineering–2001.
1999-2008: Convener, Centre for Advanced Computing, IIT Kanpur.
Jan 2003- Dec 2005: DEAN OF ACADEMIC AFFAIRS, IIT Kanpur.
2003-2008: Institute (IITK) Coordinator: National Programme on Technology Enhanced Learning (NPTEL).
2006-2007: Organizing Chairman, Graduate Aptitude Test in Engineering–2007.

2009- Aug 2013: Director, CSIR-Central Mechanical Engineering Research Institute Durgapur
2010- Aug 2013: Acting Director, Academy of Scientific and Innovative Research (AcSIR), New Delhi
Sept 2013 – June 2019: Director, Indian Institute of Technology Guwahati, Guwahati – 781039

H. GUIDANCE:

Ph.D. Students (Former and Present):

1. A. Mukhopadhyay, A Calculation Procedure for Viscous Incompressible Flows in Arbitrary Geometry and Study of Confined Wakes Behind Partially Enclosed Bluff Bodies, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, March, 1992 (Present email address: am@fluent.com).

2. P. Deb, Three Dimensional Computation of Laminar and Turbulent Flows with Heat Transfer in a Channel with Built-in Longitudinal Vortex Generators, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, April, 1994 (Present email address: pdeb@wsuhub.uc.twsu.edu).

3. P. K. Maji, Three-Dimensional Finite Element Analysis of Flow in the Spiral Casing of a Hydraulic Turbine, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, August, 1997 ((Present address: MECON (I) Ltd, Ranchi, India).

4. A. K. Saha, Dynamical Characteristics of the Wake of a Square Cylinder at Low and High Reynolds Numbers, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, February, 1999 (Present email address: aksaha@iitk.ac.in).

5. P. Sandilya, Studies on Gas-Phase Mass Transfer in a Centrifugal Contractor, Dept of Chemical Engineering, Indian Institute of Technology Kanpur-208016, July, 1999 (Present email address: pavit@hijli.iitkgp.ernet.in).

6. R. Vasudevan, Heat Transfer Enhancement in Plate-Fin Heat Exchangers Using Longitudinal Vortex Generators, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, March, 2000 (devanesque@yahoo.co.in).

7. Shaligram Tiwari, Application of Vortex Generators and the Tubes of Different Shapes to Enhance Performance of Fin-tube Heat Exchangers Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, February, 2004 (Present email address: shaligt@iitm.ac.in).

8. K Arul Prakash, Finite Element Analysis of Flow and Heat Transfer Characteristics in the Spallation Target Module of an Accelerator Driven Sub-critical System, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, June, 2006 (Present email address: arul.k.prakash@gmail.com).

9. Gaurav Tomar, Analysis of Interfacial Instabilities in Adhesion, Dewetting and Phase Change, Dept of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, January, 2008. (Present email address: gaurav.tomar03@gmail.com)

10. Daniel Gerlach, Analyse von kapillar-dominanten Zweiphasenstroemungen mit einer kombinierten Volume-of-Fluid und Level-Set Methode, Der Technischen Fakultaet der Universitaet Erlangen Nuernberg, Erlangen-91058, Germany, August, 2008. (Jointly guided with Prof. Dr. Franz Durst) (Present email address: Daniel.Gerlach@cbi.uni-erlangen.de, dagerlach@gmx.de)

11. Amaresh Dalal, Development of a Finite Volume Based Navier-Stokes Solver on Unstructured Grids and Its Application to Analyze Transport Mechanisms in Heat Exchangers, Department of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, January 2009 (Present email address: amaresh@iitg.ernet.in)

12. Subhankar Sen, Flow Past Stationary and Vibrating Cylinders of Various Cross-Sections at Low Reynolds Numbers, Department of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, June 2010 (Present email address: subhankars@gmail.com)

13. Indrajit Chakraborty, Bubble Formation and Dynamics of Rising Bubbles in Quiescent and Co-flowing Liquids from Submerged Orifices, Department of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, January 2012 (Present email address: indracster@gmail.com)

14. Bahni Ray, Free Surface Flows in Drop Impact and Microchannel Electrokinetics, Department of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, February 2012 (Present email address: bray@iitk.ac.in)

15. Pankaj Saha, Analysis of flow and heat transfer in a channel with periodically placed built-in vortex generators in laminar and turbulent regimes, Department of Mechanical Engineering, Indian Institute of Technology, Kanpur-208016, May 2013 (present email address: (pankajonline2@gmail.com).

16. Abhiram Hens, A Study on Phase Change and Instabilities using Continuum and Molecular Dynamics Simulations, Academy of Scientific and Innovative Research (AcSIR), New Delhi-Chennai, May 2016 (Present email: hens.abhiram@gmail.com).

17. Anupam Sinha, Analysis of Fluid Flow & Heat Transfer in the representative modules of heat exchangers, Department of Mechanical Engineering, Jadavpur University, Kolkata, December 2016 (Present email: anupam_cmeri@yahoo.com)

18. Ravi Kumar Arun, Paper based Microfluidics for Enhanced Mixing and Energy Conversion, Academy of Scientific and Innovative Research (AcSIR), New Delhi-Chennai, November, 2017 (Present email: rarun.iitk@gmail.com).

19. Vinod Pandey, Dynamics of vapor bubbles and associated heat transfer in various regimes of boiling, Indian Institute of Technology Guwahati, July, 2018 (email: pandeyvinod4@gmail.com).

20. Hiranya Deka, Analysis of Free Surface Flows in Formation, Coalescence and Impact of Drops on Liquid Surfaces, Indian Institute of Technology Guwahati, September, 2018 (email: hiranyadeka.mech@gmail.com).

21. Manash PratimM Borthakur, Dynamics of two immiscible and miscible fluids in two component flows, Indian Institute of Technology Guwahati, April, 2019 (email: manash.pborthakur@gmail.com).

22. Binita Nath, Migration of liquid drops through narrow passages and flow dynamics of cancer cells through constricted microchannel, Indian Institute of Technology Guwahati, May, 2019 (email: nath.bini@gmail.com)

23. Rameshwara Srinivas Gorthi, Dynamics and Control of Capillary Filling in Microfluidic Channels, Indian Institute of Technology Guwahati, June, 2020 (email: gorthi2014@gmail.com)

M. Tech Students (Former and Present):

1. R. Radhakrishnan, Some Studies of combustion in Gas Turbine Using Air Blast Atomization, Dept of Mechanical Engineering, IIT Kharagpur, 1984.

2. H. Chattopadhyay, Computation of Navier-Stokes and Energy Equations in a Channel in Presence of Wing-Type Vortex Generators, Dept of Mechanical Engineering, IIT Kharagpur, 1989.

3. S. Chakraborty, Numerical Flow Visualization and Heat Transfer in a Laminar Radial Impinging Jet, Dept of Chemical Engineering, IIT Kharagpur, 1989.

4. S. Biswas, Numerical Calculation of Velocity, Temperature and Entropy Generation in Three-Dimensional Channel Flows with Longitudinal Vortex Generators, Dept of Mechanical Engineering, IIT Kanpur, January, 1992.

5. M. Sarkar, Simulation of Velocity and Temperature Fields in a Communicating Channel, Dept of Mechanical Engineering, IIT Kanpur, May 1993.

6. A.K.Saha, A Multigrid Method for Two and Three Dimensional Flows Behind Bluff Bodies in a Channel, Dept of Mechanical Engineering, IIT Kanpur, June 1994.

7. P.K. Chaudhary, Some Aspects of Single and Multicomponent Droplet Combustion, Dept of Mechanical Engineering, IIT Kanpur, May 1994.

8. Chetan Kumar, Computation of Flow Past Delta Wings, Dept of Aerospace Engineering, IIT Kanpur, May 1994.

9. Satya Prakash, Applications of the Spectral Element Method to Buoyancy Driven Flows, Dept. Mechanical Engineering, IIT Kanpur, April 1995.

10. Sriraj K. Bhadra, Reconstruction of the Temperature Fields Using Mach Zehnder Interferometer, Dept. Mechanical Engineering, IIT Kanpur, April, 1997.

11. S. Asad Hussain, Comparison between Direct and Nonintrusive Measurements of the Temperature Fields in Rayleigh Benard Convection, Dept. Mechanical Engineering, IIT Kanpur, March, 1997.

12. Bipin. S. Lokhande, Numerical Simulation of Turbulent Flow Past a Backward Facing Step and Through a Parallel Plate Channel, Dept. Mechanical Engineering, IIT Kanpur, March 1997.

13. Praveen Chaudhary, Three-dimensional Numerical Simulation of Rayleigh-Benard Convection in Rectangular Enclosures, Dept. Mechanical Engineering, IIT Kanpur, May 1997.

14. Veerabathra Swamy K., Numerical Investigation of Heat Transfer and Passive Control of Vortex Shedding in the Wake of a Circular Cylinder, Dept. Mechanical Engineering, IIT Kanpur, May 1997.

15. Suresh Singh, The Effect of Thermal Buoyancy in the Mixed Convective Flows through a Vertical Channel with a Built-in Circular Cylinder, Dept. Mechanical Engineering, IIT Kanpur, April 1998.

16. Partha Pratim Mukherjee, Enhanced Oil Recovery from Porous Formation, Dept. Mechanical Engineering, IIT Kanpur, April 1999.

17. Meena Singh, Flow and Heat Transfer Characteristics in a Three Dimensional Ribbed Channel, Dept. Mechanical Engineering, IIT Kanpur, February, 2000.

18. Ashish A. Kulkarni, Some Aspects of Solidification Related to Rapid Tooling Applications, Dept. Mechanical Engineering, IIT Kanpur, February, 2000.

19. Vivek Rajan Singh, Experimental Studies on Flow around Circular Cylinder, Dept. Mechanical Engineering, IIT Kanpur, December, 2000.

20. Sudipta Basu, Flow and Heat Transfer in a Crossflow past a Circular Tube placed in a Channel, Dept. Mechanical Engineering, IIT Kanpur, February 2001.

21. P.L.N. Prasad, Enhancement of Heat Transfer in a Fin-Tube Heat Exchanger using Winglets in Common-Flow-Down Arrangement, Dept. Mechanical Engineering, IIT Kanpur, October, 2001.

22. Y. Srinivas, Large-eddy Simulation of High Reynolds Number Turbulent Flow Past a Square Cylinder, Dept. Mechanical Engineering, IIT Kanpur, December 2001.

23. Aseem Jain, Winglet-Type Vortex Generators with Common-Flow-Up Configuration for Fin-Tube Heat Exchangers, Dept. Mechanical Engineering, IIT Kanpur, December 2001.

24. Dalton Maurya, Enhancement of Heat Transfer using Oval Tube and Vortex Generators, Dept. Mechanical Engineering, IIT Kanpur, December, 2001.

25. Suman Basu, Analysis of Flow Structure and Heat Transfer in Tube Banks and a Tube in Rotating Configuration, Dept. Mechanical Engineering, IIT Kanpur, February 2003.

26. Debadi Chakraborty, Influence of an Integral Splitter Plate and an Annular Fin on Heat and Momentum Transport for the Case of Flow Past a Tube, Dept. Mechanical Engineering, IIT Kanpur, February 2003.

27. Deepak K. Agarwal, Planar Simulation of Bubble Growth in Film Boiling Using a Variant of VOF Method, Dept. Mechanical Engineering, IIT Kanpur, May 2004.

28. Somnath Roy, Large Eddy Simulation of Flow and Heat Transfer in a Channel with Embedded Longitudinal Vortices, Dept. Mechanical Engineering, IIT Kanpur, May 2004.

29. Santanu De, Finite Element Analysis of Flow and Heat Transfer in a Complex ADSS Geometry, Dept. Mechanical Engineering, IIT Kanpur, May 2004.

30. Akshika Maheshwari, Flow Over a Single and Multiple Spheres: Drag and Heat Transfer, Dept. Chemical Engineering, IIT Kanpur, May 2004.

31. Kedar N. Jathar, Modelling of Mixing in the LD Vessels, Dept. of Mechanical Engineering, IIT Kanpur, May 2005.

32. Siddhartha Pal, Laminar and Turbulent Analysis of Flow and Heat Transfer in the Spallation Region of the Target System, Dept. of Mechanical Engineering, IIT Kanpur, May 2005.

33. Hemant Kumar Patel, Thermal Hydraulics Analysis of Liquid Metal Cooled Fast Breeder Reactors, Dept. of Mechanical Engineering, IIT Kanpur, May 2006.

34. G. S. Chaitanya, Large Eddy Simulation of Flow and Heat Transfer in a Channel with a Built-in Winglet Pair, Dept. of Mechanical Engineering, IIT Kanpur, May 2006.

35. Prakash C. Rastogi, Flow and Heat Transfer in a Ribbed Channel, Dept. of Mechanical Engineering, IIT Kanpur, May 2006.

36. Ram Ranjan, Fluid Flow and Heat Transfer around a Square Cylinder at Incidence Using Unstructured Grids, Dept. Mechanical Engineering, May 2007.

37. N. Senthil Kumar, Finite Element Analysis of the Onset of Vortex Shedding in Flow Past a Circular Cylinder, Dept. Mechanical Engineering, IIT Kanpur, May 2007.

38. Ajoy Patra, Electrostatic and Intermolecular Interaction Induced Instabilities in Thin Viscoelastic Films, Dept. Mechanical Engineering, IIT Kanpur, May 2007.

39. M. Venkat Reddy, Vortex Induced Vibration of an Elastically Mounted Square Cylinder, Dept. Mechanical Engineering, IIT Kanpur, May, 2007.

40. S. Sarkar, Effect of Buoyancy on Vortex Shedding Past a Circular Cylinder in Cross Flow at Low Reynolds Numbers, May 2008.

41. S. Kushwaha, Lattice Boltzmann Simulation for Flow Past Single and Multiple Square Cylinders, May 2008.

42. Nitish Singh, Numerical Modeling of Gas-bubble Motion in a Liquid-filled Finite Cylinder using CLSVOF Method, Dept. Mechanical Engineering, IIT Kanpur, May 2010

43. Anikesh Pal, Enhancement of Heat Transfer by Delta Winglet-Type Vortex Generators with Common-Flow-Up Configuration for Fin tube Heat Exchangers, Dept. Mechanical Engineering, IIT Kanpur, May 2010

44. Pankaj Dumka, Confocal Study of Mixing in Microchannels, Dept. Mechanical Engineering, IIT Kanpur, June 2010

45. Prateek Sharma, Flow and Heat Transfer past a Bluff Body and Ribbed Channel with Lattice Boltzmann Modeling, IIT Kanpur, April 2011

46. Susobhan Patra, Numerical Simulation of Swimming Mechanism of Microorganisms, IIT Guwahati, June 2015

47. Pabitra Ghorai, Numerical Simulation of Bulb Turbine using Two equations Turbulent Model, IIT Guwahati, June 2016.

48. Dhrubajyoti Das, Flow Analysis of Gas Bubbles and Metastatic Cancer Cells in Capillary Tubes and Microchannels, Indian Institute of Technology Guwahati, June 2017

49. D.N. Sarkar, Fabrication of Valve less Micropump and Drop Formation in Microchannel, Indian Institute of Technology Guwahati, July 2017

50. Vishal Sethi, Comparative studies of migration and deformation profiles of HeLa, MCF-7 and MDAMB-231 cells in constricted microchannel, Indian Institute of Technology Guwahati, June 2018.

51. Nihal V Khandhar, Numerical Investigation of route to Chaos in radial impinging jet, Indian Institute of Technology Guwahati, June 2018.

52. Nitin Dashmana, Experimental Investigation of Capillary Filling Dynamics in Microscaled Capillaries, Indian Institute of Technology Guwahati, June 2018.

53. Vikash Kumar, Epithelial –Mesenchymal Transition of Metastatic Tumor Cells and Their Deformation in Constricted Microcapillary, Indian Institute of Technology Guwahati, June 2019.

54. Kishan Kumar Singh, Numerical Modelling of Microbial Fuel Cell, Indian Institute of Technology Guwahati, June 2019.