

Dr. Manish Kumar Khandelwal
Assistant Professor
Department of Mathematics
Indira Gandhi National Tribal University (IGNTU)
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Experiences

Sept. 07, 2017- Present : Assistant Professor, Department of Mathematics, IGNTU (MP)
Jan. 29, 2017 to Sept. 05, 2017: Postdoctoral Fellow, Institute of Fluid Dynamics, Tohoku University, Japan
Sept. 14, 2016 – Dec. 31, 2016: Postdoctoral Fellow, Southern University of Science of Technology China, China
Jan. 09, 2015 – March 31, 2016: Research Associate, Indian Institute of Technology Roorkee, India

Academic Details

2005-2007: M.Sc. (Mathematics), University of Rajasthan Jaipur
2009-2014: Ph.D. (Mathematics), Indian Institute of Technology Roorkee (IIT Roorkee)

Title of Thesis: Stability of Non-isothermal Poiseuille Flow in a Vertical Channel.

Awards & Honors:

SERB-Overseas Postdoctoral Fellowship 2015-2016 to work in Institute of Fluid Science, Tohoku University Japan
CSIR-JRF in Mathematical Science (June 2008)
GATE-2010 with All India Rank 089, GATE-2011 with All India Rank 309 in Mathematical Science
DST Travel Award to attend a conference in Paris, France
CSIR-Travel Award to attend a conference in Sendai, Japan

Research Interests:

Computational Fluid Dynamics, Linear and Nonlinear Hydrodynamic Stability, Convection in porous media, Stability of Taylor-Couette Flow, Vortex Dynamics, Geophysical Flow, CFD using Spectral/Spectral Element Methods and Galerkin method

Research Publications:

• *Papers published in Journals*

1. P. Bera and **Manish K. Khandelwal**, A thermal non-equilibrium perspective on instability mechanism of non-isothermal Poiseuille flow in a vertical porous-medium channel, *International Journal of Thermal Sciences*, Vol. 105, 159-173 (2016) (IF: 3.615) .
2. **Manish K. Khandelwal**, P. Bera, Weakly nonlinear stability analysis of non-isothermal Poiseuille flow in a vertical channel, *Physics of Fluids*, Vol. 27 pp 064103-1-24 (2015). (IF: 2.232)
3. **Manish K. Khandelwal** and P. Bera, A thermal non-equilibrium perspective on mixed convection in a vertical channel, *International Journal of Thermal Sciences*, Vol. 56 pp 23-34 (2012). (IF: 3.615)
4. **Manish K. Khandelwal**, P. Bera and A. Chakrabarti, Influence of periodicity of sinusoidal bottom boundary condition on natural convection in porous enclosure, *International Journal of Heat and Mass Transfer* Vol. 55 pp. 2889-2900 (2012). (IF: 3.458)
5. P. Bera, S. Kapoor and **Manish K. Khandelwal**, Double-diffusive mixed convection in a vertical pipe: A thermal non-equilibrium approach, *International Journal of Heat and Mass Transfer*, Vol. 55 pp. 7079 -7092 (2012). (IF: 3.458)
6. **Manish K. Khandelwal** and P. Bera, Influence of non-uniform sinusoidal periodic bottom boundary condition on natural convection in an isotropic porous enclosure, *Applied Mechanics and Materials(Periodic Journal)*, vols. 110-116, pp. 1576-1581 (2012) (Periodical Journal)

• *Papers published in Conferences*

1. P. Bera and **Manish K. Khandelwal**, Bifurcation and Pattern Variation of Mixed Convection in a Vertical Channel, Published in in Proceedings of the World Congress on Mechanical, Chemical, and Material Engineering (MCM 2015, HTFF-15), Barcelona, Spain, July 20-21, 2015
2. P. Bera and **Manish K. Khandelwal**, A Non-equilibrium approach on stability of mixed convection in a vertical channel: Effect of Prandtl number, Published in Topical Problems of Fluid Mechanics 2014, 19-21 Feb, 2014, Prague, Czech Republic
3. **Manish K. Khandelwal**, P. Bera and A. Chakrabarti, Combined influence of form drag and thermal non-Equilibrium state on the stability of mixed convection in a vertical channel, published in 10th International Conference on Flow Dynamics-2013, November 25-27, 2013, Sendai Japan.
4. **Manish K. Khandelwal**, P. Bera and A. Chakrabarti, Effect of buoyancy ratio on non-Darcy mixed convection in a vertical channel: A thermal non-equilibrium approach, Published in World Academic of Science, Engineering and Technology (WASET) and Presented in ICCFD, 22-23 August 2012 Paris, France.
5. **Manish K. Khandelwal**, P. Bera and A. Chakrabarti, Natural convection in porous Enclosure due to non-uniform sinusoidal heating and cooling from the bottom wall, Published in Proceeding to 21st National and 10TH ISHMT-ASME Heat and Mass Transfer Conference December 27-30, 2011, IIT Madras, India