

**Name:** DR. JOGINDER SINGH DHIMAN

**Designation:** Associate Professor

**Date of Birth:** 13.02.1966

**Area of Specialization:** Hydrodynamic Stabilities of Continuum Media

**Areas of Interest:** Operations Research, Differential Equations, Fluid Mechanics

**Academic Qualifications:** M. Sc., M. Phil., Ph.D. (Mathematics)

<b>LIST OF STUDENTS WHO COMPLETED PH.D. UNDER THE SUPERVISION/GUIDANCE</b>			
<b>Sr.No.</b>	<b>Candidate</b>	<b>Title</b>	<b>Year</b>
1.	Jayant Thakur	On the Stability of Oscillatory Motions in Some Thermohaline Convection Problems	2001
2.	Deepak Gupta	Some Generalized Double-Diffusive Convection Problems	2003
3.	Praveen Kumar Sharma	$\pi 2Q$ Law <i>vis-à-vis</i> Magneto Thermal and Thermohaline Convection	2003
4.	Megh Raj	Stability Analysis of Double-Diffusive Convection Problems with Soret Effect	2006
5.	Gurdeep Singh	On Stability Investigations of Some Stability Problem in Continuum Mechanics	2006
6.	Sanjeev Kumar	Some Hydromagnetic Stability Problems in Porous Medium (Submitted)	2007
7.	Rekha Dadwal	On Jean's Criterion in Some Gravitational Instability Problems with Non-Uniform Rotation and Magnetic Fields (Submitted)	2010

<b>LIST OF PUBLICATIONS</b>	
1.	Some Characterization Theorems in Rotatory Magneto Thermohaline Convection, <b>Proc.Indian Acad. Sci.(Math. Sci.)</b> Vol. 105, No.4,(1995) 461-469.
2.	Suppression of Banerjee-Gupta et.al's Instability in Hydromagnetics, <b>Ganita</b> , Vol. 47, No.1, (1996) 17-24.
3.	On Reducing Banerjee-Shandil Semi-Circle, <b>Ganita</b> , Vol. 50, No.1, (1999) 5- 8. (with Rajesh Sharma and Manjushri Pathnayak)
4.	Suppression of Instability in Rotatory Hydromagnetic Convection, <b>Proc. Indian Acad. Sci.(Math. Sci.)</b> Vol. 110, No.3, (2000), 335-345.
5.	On Rotatory Hydromagnetic Thermohaline Convection, <b>Ganita</b> , 51(1),(June 2000), 59-68.

6. On Oscillatory Motions of Growing Amplitude in Rotatory Thermohaline Convection, <b>Proc. International Conf. On Mathematical Modelling, Tata Mc-Graw Hill</b> , 2001, 146-149.
7. On Arresting the Linear Growth Rate for the MHD Thermal Stability Problem in Completely Confined Fluids, <b>J. Mathematical Anal. &amp; Applns.</b> , (U.S.A.), (2001), 262, 221-228. (with J.R.Gupta)
8. “Thermohaline Convection of Veronis and Stern Types Revisited”, <b>J. Mathematical Anal. &amp; Applns.</b> , (U.S.A.) .), (2001), 264, 398-407. (with J.R.Gupta and Jayant Thakur)
9. “On Hydromagnetic Double-Diffusive Convection”, <b>Ganita</b> , (2001), 52(2), 179-188. (with J.R.Gupta and Jayant Thakur)
10. “On Arresting the Linear Growth Rate for the Magnetohemohaline Stability Problem in Completely Confined Fluids, <b>J. Mathematical Anal. &amp; Applns.</b> , (2002), (with J.R.Gupta and M.G.Gorla)
11. Semi-Circle theorems for magnetorotatory double-diffusive convection (MRDDC) problems of Veronis and Stern types, <b>Proc. National Academy of Sciences</b> , INDIA, 74 (A), IV, 2004, pp. 413-427 (With J.R. Gupta & Jayant Thakur).
12. On the Gravitational Instability of a Medium in Non-Uniform Rotation and Magnetic Field, <b>Astrophysics and Space Science</b> , (2010), <b>325</b> ,195(with Rekha Dadwal) .
13. Unsteady Free convective MHD flow through porous medium between two parallel vertical porous walls with Heat Source, <b>Bulletin of the Calcutta Mathematical Society</b> , (under review), (2008).
14. On Arresting the Frequency of Oscillations for the Rotatory Magnetohydrodynamic Thermal Stability Problem in Completely Confined Fluids, <b>Proc. Indian Acad. Sci.(Math. Sci.)</b> , (2009), (under review)
15. On the Exact Solution for the Magnetohydrodynamic Thermal Stability Problem, <b>Bulletin of the Calcutta Mathematical Society</b> , (under review)
16. ON THE GRAVITATIONAL INSTABILITY OF A HOMOGENEOUS AND HEAT CONDUCTING MEDIUM UNDER THE EFFECT OF NON UNIFORM ROTATION AND MAGNETIC FIELD, <b>Journal of Combinatorics, Information and System Sciences</b> , submitted
17. Positive operator method and validity of principle of exchange of stabilities in some non-newtonian convective problems, <b>Journal of Combinatorics, Information and System Sciences</b> , submitted
18. ON THE GRAVITATIONAL INSTABILITY OF A MEDIUM UNDER THE EFFECT ON-UNIFORM ROTATION AND MAGENRTIC FIELD , published in a CD form by CIET, Punjab(2010).
19. On the Stationary Convection of Thermohaline Convection Problems of Veronis and Stern Types”, <b>J. Mathematical Anal. &amp; Applns.</b> , Submitted.
20. <b>On the Gravitational Instability of a Heat Conducting Medium in Non-Uniform Rotation and Magnetic Field</b> , <b>Astrophysics and Space Science</b> , Submitted.
21. <b>On the Jeans Instability of a Ferrofluid in Non-Uniform Rotation and Magnetic Field</b> , <b>Astrophysics and Space Science</b> , Submitted.
22. On the Principle of Exchange of Stabilities in Thermal Convection of Couple –Stress Fluid in Porous medium with variable gravity to appear as a chapter in the book to be

published by Regal Publications, New Delhi.
23. The Gravitational Instability Of A Homogeneous And Heat Conducting Medium Under The Effect Of Non Uniform Magnetic Field, to appear as a chapter in the book to be published by Regal Publications, New Delhi.
24. On a necessary condition for principle of Exchange of Stability for thermohaline Convection Problem, to appear as a chapter in the book to be published by Regal Publications, New Delhi.

**LIST OF STUDENTS WHO COMPLETED M. Phil. UNDER THE SUPERVISION/GUIDANCE**

**Total Number 12**

**Seminars, Conferences, Symposia Workshops etc. Attended**

1. Attended National Conference on Mathematical Analysis & Applications held at H.P. University, Shimla, 7-9 Nov. 2000.
2. Delivered an 'Invited Lecturer', in the International Conference on Mathematical Modelling, in the University of Roorkee, Roorkee, 29-31, Jan 2001.
3. Delivered an 'Invited Lecturer', in the National Conference on Mathematics for Engineer, in Institute of Engineering & Technology, Baddal, Ropar (Pb), Punjab Technical University, Jalandhar, 06-07 April 2001.
4. Delivered an Invited Talk in the "National Conference on Industrial Mathematics and Engineering Computation" held on 28th to 29th March, 2003 at IET Bhaddal (Pb).
5. Chaired a Session in the "First National Conference on Applied Mathematics" (NCAM-07) held during 30th Nov. to 01 Dec. 2007 at Guru Nanak Dev Engineering College, Ludhiana(Pb).

**Conferences Organized**

1. Member Organizing committee, National Conference on Mathematics for Engineer, in Institute of Engineering & Technology, Baddal, Ropar (Pb), Punjab Technical University, Jalandhar, 06-07 April 2001.
2. Member Organizing committee, National Conference on Mathematical Analysis &

Applications held at H.P. University, Shimla, 7-9 Nov. 2000.

3. Member Organizing committee, "First National Conference on Applied Mathematics" (NCAM-07) held during 30th Nov. to 01 Dec. 2007 at Guru Nanak Dev Engineering College, Ludhiana(Pb).

4. Organized a National Conference on Continuum Mechanics and Algebra at H.P. University, Shimla, 8-9 August. 2009( as Organizing Secretary).