GIDC DEGREE ENGINEERING COLLEGE
FACULTY PROFILE

Name of Teaching Staff	RAJIV KUMAR SINGH	
Designation	Assistant Professor	
Department	Applied Science and Humanities	
Date of Joining	2016-08-01	

Qualifications with Class/Grade	UG	PG	PhD
	B. Sc., II	M. Sc., I	Awarded, 2010 Banaras Hindu University
	CSIR UGC NET 2005		

Total Experience in Years	Teaching	Industry	Research
	8	0	8

Area Of Interest	Fluid Mechanics, Magnetohydrodynamics.

Papers Published in Journals	National	01	International	15
Detail Of Publications	➢ Hydromagnetic mixed convection between two vertical walls, ***Journal of Energy Heat and Mass Transfer***, 31, 111-123, 2009. ➢ Transient hydromagnetic natural convection between two vertical walls heated/cooled asymmetrically, ***Journal of Magnetohydrodynamics Plasma, Space Research,*** 14(3), 247-262, 2009. ➢ Effect of Induced magnetic field on hydromagnetic free convective flow between vertical walls, ***Heat and Mass transfer (Springer)***, 46, 523-529, 2010. ➢ MHD flow of a Micropolar fluid with asymmetric wall temperatures, ***Journal of Magnetohydrodynamics Plasma, Space Research (Nova)***, 15 (1), 101-110, 2011. ➢ Transient MHD free convective flow near a semi-infinite vertical wall having ramped temperature, ***International Journal of Applied mathematics and Mechanics,*** 6, 69-79, 2010. ➢ Effect of induced magnetic field on natural convection in vertical concentric annuli, ***Acta Mechanica Sinica (Springer)***, 28(2), 315-323, 2012. ➢ MHD free convective flow past a semi-infinite vertical permeable wall, *Applied Mathematics and Mechanics (**Springer**)*, 33 (9), 1207-1222, 2012. ➢ A Note on Water Transport Phenomenon by Homotopy Analysis Method, ***IOSR Journal of Mathematics (IOSR-JM), ISSN: 2278-5728.*** 4(6), 50-53, 2013. ➢ Transient free convective flow of a micropolar fluid between two vertical walls, ***Int. J. Industrial Mathematics,*** 5(2), 87-95, 2013. ➢ *Induced Magnetic Field Effects on Mixed Convection, **IOSR Journal of Mathematics (IOSR-JM)**, 10, 76-85, Nov-Dec 2014* ➢ Magnetohydrodynamic transient natural convective flow of a micropolar fluid between vertical walls, *Ain Shams Engineering Journal (**Elsevier**), XXX, 2015.* ➢ *Transient free convective MHD flow through porous medium in slip flow regime, **IOSR Journal of Mathematics (IOSR-JM)**,11, 52-58, 2015* ➢ *An Approximate Solution of Fingering Phenomenon arising in Porous Media by Successive Linearisation Method, Proceeding International Conference Numerical Heat Transfer and Fluid Flow, 2018* ➢ *Magnetohydrodynamic natural convection of micropolar fluid throughconcentric vertical annuli, communicated in Propulsion and Power Research (**Elsevier**),2018* ➢ *Study on review of the crop yield forecasting methods, Journal of Agriculture Studies (Communicated) (Elsevier) on 22 May, 2018* ➢ *Study on the homotopy analysis method, Ain Shams Engineering Journal (Elsevier), Communicated on 18, June, 2018.*				
Papers Presented in Conferences	National	08	International	01

		- *"MHD mixed convection between two parallel walls", National Conference on Modern Analysis and Allied Area, 23-24, Feb, 2007, Department of Mathematics,Banaras Hindu University, Varanasi.* - *"Transient hydromagnetic natural convection between two vertical walls heated/cooled asymmetrically", National Conference on Mathematical Modeling and Simulation,January, 9-11, 2009 Jiwaji University, Gwalior, ABV Indian institute of information technology & management, Gwalior.* - *"Transient natural convection flow between two vertical walls filled with porous material having a variable porosity in presence of induced magnetic field, Mathematical Modeling of Real Life Problems, Dec, 22-24, 2009, Mathematical Society, Banaras Hindu University, Varanasi.* - *"Effect of induced magnetic field on natural convection in vertical concentric annuli". Mathematical Modeling of Real Life Problems, Dec, 22-24, 2009, Mathematical Society, Banaras Hindu University, Varanasi.* - *"MHD free convective flow past infinite vertical permeable walls", Recent Trends in Analysis and Modeling, 28-29, Nov, 2010, 26 th Annual Conference of the Mathematical Society Banaras Hindu University, Varanasi.* - *"MHD transient free convective flow of a micropolar fluid between two vertical walls, Analysis, Geometry, and Application, 7-8, March, 2013, Department of Mathematics, Sardar Patel University, Vallabh Vidyanagar.* - *A Note on Magnetohydrodyamic Mixed Convective Flow", 30th Annual National Conference of the Mathematical Society-BHU, Varanasi January 30-31, 2015, Mathematical Society, Banaras Hindu University, Varanasi, India.* - *Note on the Nonlinear Fokker-Planck Diffusion-Convection Model Arising in Ground Water Recharge Problem by Spreading in Fluid Flow Through Porous Media (: ISCASE-521), International Scientific Conference on applied Sciences and Engineering, 20-21December, 2014 at Kuala Lumpur, Malasiya.* **Invited Talk:** - " Summer school-2011 on linear Algebra" 30, May to 11, June, 2011, School of Mathematics, Statistics and Computer Science, Central University of Bihar, Patna. - "Short Term Training Program (STTP) on Computational Fluid Dynamics for Engineers and Scientists (CFDFES)", 08-12, July, 2013, Department of Applied Mathematics & Humanities Sardar Vallabhbhai National Institute of Technology, Surat. - "National Workshop on Problem Solving Techniques in Mathematics (NWOPST -2015)" February 21-26, 2015, Department of Mathematics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara-390002. - Recent trend in Mathematics of Mathematics in Science & Technology (RTMST-2017), 2-6, January, 2017, Department of Applied Science and Humanities, GIDC Degree Engineering College, Navsari.

		- Invited Talk: Real Life Application of Mathematic in Science & Technology, Department of Applied Science and Humanities, GIDC Pacific School of Engineering College, Palsana, Surat, 3 January, 2018 - Designing of Mathematical Model in Different fields Of Engineering'' Department of Applied Science and Humanities, GIDC Degree Engineering College, Navsari March 19th- 23rd, 2018.
	STTP/WORKSHOP/ CONFERENCE / SEMINAR Organized or Participated	**Workshop (two weeks)** ***BHU summer School of Computing 2008***, 07-19, April, 2008, Department of Physics, Banaras Hindu University, Varanasi. ***National Workshop Com Training Program on Advanced Numerical Techniques and Applications***, 29, June, 11, July, DST- Central for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi. **Workshop (one week)** ***LATEX and Other Open Source Software***, 01-07, April, 2009, DST-Central for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi. ***Computational Thermal and Fluid Science & Its Engineering Applications***, 25-30, May, 2009, Institute of Technology, Banaras Hindu University, Varanasi. ***National Workshop Com Training Program on Recent Trends in Fluid Mechanics***, 06-12, July, 2010, DST- Central for Interdisciplinary Mathematical Sciences, Banaras Hindu University, Varanasi. ***National Workshop Cum Training Program on Computing Technique and Application***, **0**1-07, July, 2012, DST- Central for Interdisciplinary Mathematical Sciences and Department of Mathematics, Faculty of Science, Banaras Hindu University, Varanasi. ***Mathematical Methods for Physical Sciences and Engineering***, 6-10, May, 2013, Department of Applied Mathematics & Humanities and Department of Applied Physics, Sardar Vallabhbhai National Institute of Technology, Surat. ***Short Term Training Program (STTP) on Computational Fluid Dynamics for Engineers and Scientists (CFDFES)***, 08-12, July, 2013, Applied Mathematics and Humanities, SVNIT, Surat. ***Current Trends in Computational Method for PDE and fluid Mechanics***, 19-23, August, 2013, Applied Mathematics and Humanities, SVNIT, Surat.

		International Conference & Seminar ➢ *Optimization and Its Applications*, 16-18, Feb, 2010, Department of Mathematics, Faculty of Science, Banaras Hindu University, Varanasi. ➢ *Indian Society of Theoretical and Applied Mechanics*, 19-21, Dec, 2011, Department of Applied Mathematics & Humanities, Sardar Vallabhbhai National Institute of Technology, Surat. ➢ *Indian Society of Theoretical and Applied Mechanics*, 17-20, Dec, 2012, Department of Applied Mathematics & Department of Mechanical Engineering, Humanities, Defence Institute of Advanced Technology, Pune. **National Conference & Seminar** ➢ *XXI Annual Conference of the Mathematical Society*, 23-24, January, 2006, Banaras Hindu University, Varanasi. ➢ *National Conference & Workshop on High Performance Computing & Applications HPCA-2009*, 09-11, Feb, 2009, Department of Computer Science, Banaras Hindu University, Varanasi. ➢ *Analysis and Its Applications(AA-BHU-2009)*, 19-21, March, 2009, Department of Mathematics, Faculty of Science, Banaras Hindu University, Varanasi.
	Projects Guided	➢ Minor research project is ongoing on "*A study on magnetohydrodynamic flow under different physical conditions*" funded by *GUJCOST, Gandhinagar*.

	Books Published / IPRs/ Patents	**Book:**
		
		➢ "*A magnetohydrodynamic free/mixed convective flow*"
		   Publisher: Lambert Academic Publishing
		
		   ISBN: 9786138270010 6138270010
		Chapters:
		
		➢ *MHD Flow of a Micropolar Fluid with Asymmetric Wall Temperatures,*

		Chapter 4, 2012. (Authors: S.K. Ravi, A.K. Tiwari and R.K. Singh), **Book Name:** *Journal of Magnetohydrodynamics Plasma, Space Research* **ISSN No.** 978-1- 61942-079- 3 **Publisher:** *Nova* ➤ *Transient Hydromagnetic Natural Convection Between Two Vertical Walls Heated/Cooled Asymmetrically, pp. 57-74 (R.K. Singh and A.K. Singh)* https://www.novapublishers.com/catalog/product_info.php?products_id=20504 **Book Name:** *Perspectives in Magnetohydrodynamics Research* **ISSN No.** 978-1- 61209-087- 0 **Publisher:** *Nova*
	Professional Memberships	*Mathematical Society of BHU*, Varanasi
	Consultancy Activities	NA
	Awards	➤ **First prices** on *Hindi essay writing, Central University of Bihar*, 2012 ➤ **Best paper award**, *International Scientific Conference on applied Sciences and Engineering, 20-21, December, 2014 at Kuala Lumpur, Malasiya*
	Grants Fetched	₹ 2,00000 by **GUJCOST, Gandhinagar**
	Interaction with Professional Institutions	NA