




ARYABHATTA COLLEGE (UNIVERSITY OF DELHI)
Faculty Details



Title	Dr.	First Name	Manoj	Last Name	Singh	Photograph
Designation	Assistant Professor					
Address	Department of Mathematics Aryabhatta College, University of Delhi, Benito Juarez Road, New Delhi, 110021					
Phone No	Office					
	Residence					
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Educational Qualifications						
Degree	Institution				Year	
Ph.D.	Department of Mathematics, University of Delhi				2020	
B.Ed.	C.C.S. University, Meerut				2008	
M.Sc.	D.D.U. Gorakhpur University, Gorakhpur				2007	
B.Sc.	D.D.U. Gorakhpur University, Gorakhpur				2005	
Career Profile						
<ul style="list-style-type: none">• Assistant Professor in Aryabhatta College, University of Delhi, from 04 July 2023 to date.• Assistant Professor (Guest) in Shyamlal College (Mor.), University of Delhi, from 28 February 2020 to 27 March 2023.• Assistant Professor (Guest) in Zakir Husain Delhi College (Eve.), University of Delhi, from 10 February 2020 to 27 April 2020.• Assistant Professor (Guest) in Satyawati College (Mor.), University of Delhi, from 14 August 2019 to 15 November 2019.• Assistant Professor (NCWEB) in Bhagini Nivedita College, University of Delhi, from 28 September 2018 to 27 April 2019.						
Administrative Assignments						
Areas of Interest / Specialization						
Fluid Dynamic, Shock Waves, Non-Linear Waves, Gas Dynamics						
Subjects Taught						
<ul style="list-style-type: none">• Real Analysis• Linear Algebra• Abstract Algebra• Calculus						

- Probability and Statistics
- Numerical Methods
- Differential Equations
- Complex Analysis
- Mathematical typesetting System Latex
- Business Mathematics and Statistic

Research Guidance

List of Publications in Journals:

1. Singh, Manoj, Patel, Arvind and Bajargaan, Ruchi; "Similarity solution for the flow behind a magneto-gas-dynamic exponential shock wave in a perfect gas with varying density, heat conduction and radiation heat flux". *J. Eng. Phys. Thermophy.* 94 (1), (2021) (**Springer**) SCImago, SCOPUS, UGC-CARE List (India)
2. Patel, Arvind and Singh, Manoj, "Exact solution of shock wave structure in a non-ideal gas under constant and variable coefficient of viscosity and heat-conductivity". *Shock Waves* 29 (2019), 427–439, (I.F. 1.903) (**Springer**) SCIE, SCImago, SCOPUS, UGC-CARE List (India)
3. Singh, Manoj and Patel, Arvind, "Shock wave structure in a vis cous non-ideal gas under temperature and density dependent viscosity and heat-conduction". *Theor. Comput. Fluid Dyn.* 33 (2019), 537–559, (I.F. 2.892) (**Springer**) SCI, SCIE, SCImago, SCOPUS, UGC-CARE List (India)
4. Singh, Manoj; Patel, Arvind and Bajargaan, Ruchi, "Traveling wave solution of a Riemann problem and structure of shock wave in unsteady flow of a perfect gas under viscosity". *Int. J. heat and Technology* 37 (2019), 909–917 Web of Science, ESCI, SCImago, SCOPUS, UGC-CARE List (India)
5. Singh, Manoj and Patel, Arvind, "Traveling wave solution of shock structure in an unsteady flow of a viscous non-ideal gas". *GANITA* 68 (2018), 165–179 UGC-CARE List (India), Mathematical Review
6. Singh, Manoj; Patel, Arvind and Banjargaan Ruchi, "Homotopy analysis method for one dimensional unsteady adiabatic gas flow". *Int. J. Pure and Applied Mathematics* 115 (4), (2018), 673–692 SCOPUS, UGC-CARE List (India)
7. Singh, Manoj; Patel, Arvind and Banjargaan Ruchi, "Study of a one-dimensional unsteady gas dynamic problem by Adomian decomposition method". *Int. J. Applied Mathematics* 29 (6), (2016), 775–794 SCOPUS, MathSciNet, zbMATH

Conferences/Seminars Participation

- Participated and presented a paper entitled 'Exact solution of shock wave structure in a non-ideal gas under constant and variable coefficient of viscosity and heat-conductivity' in 33rd Annual Conference of The Ramanujan Mathematical Society (Delhi) held at Department of Mathematics, University of Delhi, Delhi during June 01-03, 2018.
- Presented a paper entitled 'Shock wave structure in a viscous non-ideal gas under heat-conduction and radiation heat flux' in the Research Scholar Seminar & Annual Conference of the

<p>Society of Mathematical Sciences (Delhi) organized by Department of Mathematics, University of Delhi, Delhi during May 01-02, 2017</p> <ul style="list-style-type: none"> • Participated in Research Scholar Seminar & Annual Conference of the Society of Mathematical Sciences (Delhi) organized by the Department of Mathematics, University of Delhi, Delhi during May 01-02, 2017. • Participated in National Seminar for Research Scholars held at the Department of Mathematics, University of Delhi during September 20-21, 2013. • Participated in The Legacy of Srinivasa Ramanujan held at University of Delhi during December 17-22, 2012.
Research Projects (Major Grants/Research Collaboration)
NA
Awards and Distinctions
<ul style="list-style-type: none"> • CSIR/UGC- NET/JRF in Mathematical Sciences 12 June 2012. • Senior Research Fellowship (SRF) from 2014 to 2017. • Junior Research Fellowship (JRF) from 2012 to 2014.
Association With Professional Bodies
NA
Other Activities