

Profile Page



Name : Dr Mohammad Zafar

Designation : Assistant Professor Grade-i

Department : Mathematics

Qualification : Ph.D. Mathematics (IIT Bombay)
M.Sc. Mathematics (Kumaun University, Nainital)
B.Sc. Mathematics, Physics, Chemistry (Kumaun University, Nainital)

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Research Interests :

Quasilinear Systems of Partial Differential Equations; Hyperbolic Conservation Laws and Nonlinear Waves

Other Profile Links :

Google Scholar Link :

M. Zafar [Click Here](#)

Personal Web Link :

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Journal Publications :

Year	Journal	Publication
2022	Mathematical Methods in the Applied Sciences (Wiley)	H. Srivastava and M. Zafar, Three pieces Riemann problem for 2D full Euler system in the Noble–Abel gas
2022	Journal of Mathematical Physics (AIP, USA)	Priyanka and M. Zafar, Delta Shocks and vacuum states in the Riemann solutions of Chaplygin Euler equations as pressure and magnetic field drop to zero
2018	Nonlinear Analysis: Real World Applications (Elsevier)	M. Zafar and V. D. Sharma, Classification of the Riemann problem for compressible two-dimensional Euler system in non-ideal gas
2016	Nonlinear Analysis: Real World Applications (Elsevier)	M. Zafar and V. D. Sharma, Expansion of a wedge of non-ideal gas into vacuum
2016	International Journal of Non-Linear Mechanics (Elsevier)	M. Zafar, A note on characteristic decomposition for two-dimensional Euler system in van der Waals fluids
2014	Journal of Mathematical Physics (AIP, USA)	M. Zafar and V. D. Sharma, Characteristic decomposition of compressible Euler equations for a non-ideal gas in two-dimensions

Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Principal Investigator		Existence of global classical solution to the interaction of bi-symmetric four planar rarefaction waves	The National Board for Higher Mathematics (Govt. of India)	08-07-2021	07-07-2024	17.50 Lakhs	Ongoing	NIL

Events Organized :

Category	Type	Title	Venue	From	To	Designation
STC	International	Numerical Solutions of Differential Equations	NIT Jalandhar	16-09-2020	20-09-2020	Co-ordinator

Professional Affiliations :

Designation	Organization
Life Member	Indian Mathematical Society
Life Member	Ramanujan Mathematical Society
Life Member	Indian Society of Theoretical and Applied Mechanics

PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
Priyanka	Certain aspects of delta-shock waves	Ongoing		NIL
Shailee Sharma		Ongoing		NIL
Harsita Srivastava	A Study on Two-Dimensional Riemann Problems for Conservation Laws	Ongoing		NIL