

Faculty Profile

Sonal Jain

Designation: Assistant Professor
Teaching Area: Mathematics
Research Interest: Fractional Calculus and Special Function.
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Education

Qualifications:

- 2013- Ph.D. from Department of Mathematics, Malaviya National Institute of Technology, Jaipur.
- 2011- M.Sc. from Department of Mathematics, Mohanlal Sukhadia University, Udaipur, India.
- 2010- B.Ed. from Janardan Rai Nagar Rajasthan Vidyapeeth University, Udaipur.
- 2007- B.Sc. from Mohanlal Sukhadia University, Udaipur, India.

Experience

- Lecture at Apex Engineering & Technology, Jaipur (2011-2013).
- Lecturer at Vivekananda Institute of Technology, Jaipur (2013).
- Assistant Professor at The ICFAI University, jaipur from March 2017 to till date.

Research

Outcomes:

- R. Agarwal, **S. Jain** and R. P. Agarwal, Solution of fractional Volterra integral equation and non-homogeneous time fractional heat equation using integral transform of pathway type, Progr. Fract. Differ. Appl, 1(3), 145-155, (2015).
- R. Agarwal and **S. Jain**, Certain Properties of Some Special Matrix Functions via Lie Algebra, International Bulletin of Mathematical Research, 2(1), 9-15, (2015).
- R. Agarwal, **S. Jain** and R. P. Agarwal, Analytic Solution of Generalized Space time Advection-Dispersion Equation with Fractional Laplace Operator, Journal of Nonlinear Science and Applications, (SCI Extended) , 9(6), 3545-3554, (2016).
- H. M. Srivastava, R. Agarwal, **S. Jain**, Integral transform and fractional derivative formulas involving the extended generalized

hypergeometric functions and probability distributions, *Mathematical Methods in the Applied Sciences*, (Wiley Online Library, SCI Extended), 40, 255-273, (2017), DOI: 10.1002/mma.3986.

- M. A. Pathan, R. Agarwal, **S. Jain**, A Unified Study of orthogonal Polynomials via Lie Algebra, *Reports on Mathematical Physics*, Elsevier, SCI Extended, 79(1), 1-14, (2017).
- R. Agarwal, **S. Jain** and R. P. Agarwal, Analytic Solution of Generalize Space Time fractional Reaction Diffusion Equation, *Fractional Differential Calculus*, *Fractional Differential Calculus*, 7(2), 169-184, (2017).
- R. Srivastava, R. Agarwal and **S. Jain**, A Family of the Incomplete Hypergeometric Functions and Associated Integral Transform and Fractional Derivative Formulas, *Filomat (SCI)*, 31(1), 125-140, (2017).

Poster Presentation:

- Poster presentation in Bluenose Applied and Computational Math Days Workshop at Saint Mary's University, Halifax, Nova Scotia, Canada.

Attended Summer Schools:

- 11th SERB School on Matrix Methods and Fractional Calculus held at Centre for Mathematical and Statistical Sciences (CMSS) Peechi, Trichur, Kerala, 28th April- 24th May 2014.
- AARMS-PIMS Summer School in Differential Equations and Numerical Analysis, Dalhousie University, Halifax, Canada, 6th July- 31st July 2015.

Professional Membership:

Life member of Society for Special Functions and their Applications (SSFA), India.

Travel Grant Received:

International Travel Grant From National Board of Higher Mathematics (NBHM) for AARMS-PIMS Summer School.

Sonal Jain