Curriculum Vitae

Sourav Das

Personal Information

Assistant Professor
Department of Mathematics
National Institute of Technology Jamshedpur
Jamshedpur-831014, Jharkhand, India

Email: souravdasmath@gmail.com
Webpage: www.sourav.c1.biz
Mobile: +91-8637580923

Research Interests

Complex Analysis, Special Functions, Geometric Function Theory

Academic Qualifications

Indian Institute of Technology Roorkee, India

- **Ph.D.** in Mathematics from 2012 to 2017.
- **M.Sc.** in Applied Mathematics from 2010 to 2012.

University of Kalyani, India

- **B.Sc. Honours in Mathematics** from 2007 to 2010

Scholarships/Awards

1. 2018: Dr. D. S. Kothari Postdoctoral Fellowship (IISc) (Not availed)
2. 2017: A. K. Agarwal Prize for **Best Publication of the Year 2017** by Society for Special Functions & their Applications in ICSFA-2017, India.
3. 2017: Support from **London Mathematical Society** to attend "LMS Research School (RS-31): Orthogonal Polynomials & Special Functions" at **University of Kent, UK**.
4. 2011 – 2012: Dr. Gorakh Prasad Trust Scholarship, IIT Roorkee

Editor

- Mathematical Analysis and Applications (MAA 2020), Springer Proceedings in Mathematics and Statistics, Springer, Singapore, 2021 (To appear).
- Far East Journal of Mathematical Sciences

Reviewer

- The Ramanujan Journal
- Journal of Mathematical Analysis and Applications
- Indian Journal of Pure and Applied Mathematics
- Advances in Difference Equations
- Mathematical Reviews (AMS)

Memberships

- American Mathematical Society (AMS)
- Society for Special Functions and their Applications (SSFA)
- Foundations of Computational Mathematics (FoCM)
- International Association of Engineers (IAENG)

Professional Experience

Period	Position	Institution
2018–Present	Assistant Professor	National Institute of Technology Jamshedpur
2017–2018	Lecturer	National Institute of Technology Hamirpur

Scientific Programme Organized as Coordinator / Secretary / Convener

- International Conference on Mathematical Analysis & Applications (MAA 2020) during November 02-04, 2020.
- Short Term Course on LaTeX Programming during July 08-13, 2019 at NIT Jamshepur.

List of Publications

Journal Articles

1. **Sourav Das** and Khaled Mehrez, *Geometric properties of the four parameters Wright function*, Journal of Contemporary Mathematical Analysis, (Accepted) (2021).
2. Khaled Mehrez, **Sourav Das** and Anish Kumar, *Geometric properties of the products of modified Bessel functions of the first kind*, Bulletin of the Malaysian Mathematical Sciences Society, **44** (2021), 2715–2733.
3. **Sourav Das** and Khaled Mehrez, *On geometric properties of the Mittag-Leffler and Wright functions*, Journal of the Korean Mathematical Society, **58** (2021), no. 4, 949–965.
4. **Sourav Das**, *A complete monotonicity property of the multiple gamma function*, C. R. Acad. Sci. Paris, Ser. I, 358 (2020), no. 8, 917–922.
5. **Sourav Das**, *Inequalities involving q-analogue of multiple psi functions*, C. R. Acad. Sci. Paris, Ser. I, 358 (2020), no. 3, 327–332.
6. **Sourav Das** and A. Swaminathan, *A harmonic mean inequality for the polygamma function*, Mathematical Inequalities and Applications, 23 (2020), no. 1, 71–76.

7. **Sourav Das**, *Inequalities for q-gamma function ratios*, Analysis and Mathematical Physics, **9** (2019), 313–321.

8. **Sourav Das** and A. Swaminathan, *Limit formulas related to q-gamma and q-digamma functions at their singularities*, Journal of Combinatorics, Information & System Sciences, **44** (2019), No. 1-4, 63–70.

9. **Sourav Das**, *Inequalities involving the multiple psi function*, C. R. Acad. Sci. Paris, Ser. I, 356 (2018), 288–292.

10. **Sourav Das**, Henrik L. Pedersen and A. Swaminathan, *Pick functions related to the triple gamma function*, Journal of Mathematical Analysis and Applications, 455 (2017), 1124–1138.

11. **Sourav Das** and A. Swaminathan, *Bounds for triple gamma functions and their ratios*, Journal of Inequalities and Applications, 2016, 2016:210, 11 pp.

Conference Proceedings / Book Chapters

1. **Sourav Das** and A. Swaminathan, *Some new inequalities for the ratio of gamma functions*, Modern Mathematical Methods and High Performance Computing in Science and Technology, 239–247, Springer Proc. Math. Stat., 171, Springer, Singapore, 2016.

2. **Sourav Das** and A. Swaminathan, *Higher order derivatives of R-Jacobi polynomials*, AIP Conf. Proc., 1739, 020058 (2016).

Research Supervision

Doctoral Students

1. Anish Kumar (Ongoing)
   Topic: Geometric properties, integral representations and fractional calculus for some special functions

2. Samanway Sarkar (Ongoing)
   Topic: Radius problem and its applications

Masters Degree Dissertations

1. Rashmi Singh (2019)
   Title: Finite class of orthogonal polynomials on the real line.

2. Ashutosh Kumar Karna (2020)
   Title: On fixed point results in generalized metric space.

3. Damini Gupta (2020)
   Title: Geometric Properties of Generalized Mittag-Leffler Functions.

4. Nitish Kumar Mahala (2021)
   Title: Geometric properties of the Mittag-Leffler function.

5. Manoj Kumar Meher (2021)
   Title: Geometric properties of the generalized Wright function.

Invited Talks

- *2^{nd} Short Term Training Programme (STTP) on Computational Software, (MATLAB & MATHEMATICA)*, S. V. National Institute of Technology Surat, India, May 17-21, 2021.
- *Multiple gamma functions and their applications*, International Conference on Analysis and Its Applications (ICAA_Nepal_2021), Kathmandu University, Nepal, April 09-11, 2021.
- *Academic Writing Using LaTeX*, S. V. National Institute of Technology Surat, India, January 04-08, 2021.
- *Workshop on LaTeX for Engineers & Researchers*, Maulana Azad National Institute of Technology Bhopal,India, November 03-13, 2020.
- *Short Term Training Programme (STTP) on Computational Software, (MATLAB & MATHEMATICA)*, S. V. National Institute of Technology Surat, India, October 05-09, 2020.
- *Orthogonal Polynomials & Applications*, Enrichment programme for students & Teachers (1^{st} Phase) on Linear Algebra, Analysis & Differential Equations, Garhbeta College, India, September 08 - 09, 2020.
- *Gamma Function*, International Webinar on Pure and Applied Mathematics, Sreegopal Banerjee College, India, July 22 - 23, 2020.

Contributed Talks

- *Functional inequalities for generalized Wright functions*, International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA15), Research Institute for Symbolic Computation (RISC) of the Johannes Kepler University Linz (JKU), Austria (July 22 - 26, 2019).
- *Asymptotic expansions for multiple gamma functions*, International Symposium on Orthogonal Polynomials, Special Functions and Applications (OPSFA14), University of Kent, UK (July 03 - 07, 2017).
- *Pick functions involving triple gamma function*, International Conference on Mathematical Analysis & its Applications (ICMAA-2016), Indian Institute of Technology Roorkee, India (November 28 - December 02, 2016).
- *Higher order derivatives of R-Jacobi polynomials*, International Conference on Mathematical Sciences and Statistics (ICMSS-2016), University Putra Malaysia, Malaysia (January 26 - 28, 2016).
- *Some new inequalities for the ratio of gamma functions*, International Conference on Modern Mathematical Methods and High Performance Computing in Science and Technology (M3HPCST-2015), Raj Kumar Goel Institute of Technology, India (December 27 - 29, 2015).
- *Inequalities concerning orthogonal Laurent polynomials*, 14^{th} International Conference on Special Functions & Applications, Amity University, India (September 10 - 12, 2015).
- *Lax-type differential equation and Schur flow related to orthogonal Laurent polynomials*, 13^{th} International Conference on Special Functions & Applications, Thapar University, India (October 16 - 18, 2014).

Conferences/ Workshops/ Schools Attended

- *LMS Research School in Orthogonal Polynomials and Special Functions*, University of Kent, UK (June 26-30, 2017).
- *TEQIP Short Term Course on Complex Analysis, Fourier Analysis and Special Functions (with outline on mathematical software techniques)*, Indian Institute of Technology Roorkee, India (March 06-10, 2017).
- *International Conference on Recent Trends in Mathematical Analysis and Its Applications*, (ICRTMAA-2014), Indian Institute of Technology Roorkee, India (December 21-23, 2014).
- *Workshop on Topology and Geometry*, Harish Chandra Research Institute, India (December 16-28, 2013).
- *Sixth Science Conclave*, Indian Institute of Information Technology Allahabad, India (December 8-14, 2013).
- *Annual Foundation School - I*, Chennai Mathematical Institute, India (December 3-29, 2012).

Teaching Experience

- **Complex Analysis, Functional Analysis, Topology and Measure Theory & Integration** for Post graduate students and **Engineering Mathematics** for undergraduate students at NIT Jamshedpur, 2018–2020.
- **Real Analysis and Complex Analysis** for Post graduate students and **Engineering Mathematics** for undergraduate students at NIT Hamirpur, 2017–2018.
- Teaching assistant for the courses *Complex Analysis, Advanced Engineering Mathematics* & *C++* for undergraduate students and *Computer Labs* for Post graduate students, at IIT Roorkee, 2012-2015.