

Curriculum Vitae

Dr. SAIFUL RAHMAN MONDAL

Assistant Professor

Department of Mathematics

College of Science,

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Personal Particulars:

Date of Birth	:	18/02/1980
Father's Name	:	Mr. Saudar Rahman Mondal
Gender	:	Male
Marital Status	:	Married
Language Known	:	English, Arabic, Hindi, Urdu, Bengali
Nationality	:	Indian
Passport No	:	H 5219885.
Permanent Address	:	Vill. Rasulpur; P.O - Puinan, Dist.- Hooghly, West Bengal, India- 712305.

General Information

Education Details:

Degree	Year	University/Board	Marks(%)	Division	Subjects
Ph.D	2010	Indian Institute of Technology, Roorkee, India	-	Awarded	Geometric Functions Theory
M. Sc	2004	Aligarh Muslim University, Aligarh, India	65.32	<i>I</i>	Mathematics
B. Sc	2002	Aligarh Muslim University, Aligarh, India	66.86	<i>I</i>	Mathematics, Physic, Geology

Thesis Title: Geometric Properties of hypergeometric type functions using positivity of trigonometric sums.

Thesis Supervisor: Dr. A. Swaminathan, Associate Professor,
Indian Institute of Technology, Roorkee, India

Job Experience:

- **Assistant Professor, Department of Mathematics and Statistics, King Faisal University, AlAhsa, Hofuf, Saudi Arabia**

Duration: January-2013 to till date.

Job Description:**Academic:**

Taught Undergraduate mathematics courses: Course Taught: Calculus I, Calculus II, Multivariate Calculus, Differential Equations, Linear Algebra, Discrete Mathematics, Logic and Proof technique.

Administrative :

- Course coordinator of outside science college's mathematics courses.
- Committee member from science college for ABET assessment of Mathematics courses in college of engineering.
- Member of the annual report and assessment committee, Department of Mathematics, College of Science.

Research :

- Published several research articles in the international journals.
- Principal investigator in two research project funded by Deanship of Scientific research , King Faisal university, while co-investigator in one research project.
- Guided one master student thesis.

- **Post-doctorate research fellow, School of Mathematical Sciences, Universiti Sains Malaysia, Penang, Malaysia.**

Duration: June-2011 to December-2012.

Job Description: Devoted fulltime in research work with “ Geometric Function Theory Group”, School of Mathematical Sciences, Universiti Sains Malaysia. The member of the group are Mathematicians from various countries like India, UK, USA, South Korea. Beside Introducing new research topic to graduate and research students in the group, I have to review and evaluate there work.

- **Assistant Professor, National Institute of Science & Technology, Berham-pur, Orissa, India**

Duration: July-2010 to June-2011.

Job Description: Taught Undergraduate engineering students. The course consist of Calculus, Differential equation, Laplace and Fourier transform, Partial Differential equations, Complex Analysis, Probability. Beside teaching, set up question papers, evaluation of answer sheet and other related administrative work are also part of duty.

- **Senior Research Fellow**, University Grants Commission, India.

Duration: July-2008 to June-2010

- **Junior Research Fellow**, University Grants Commission, India.

Duration: July-2006 to July-2008.

Awards & Achievements :

- P.G merit scholarship(2002-04) on the basis of competitive examination from Department of Mathematics, Aligarh Muslim University, Aligarh.

- Cleared GATE(Graduate Aptitude Test in Engineering)- 2005 with 88.76 percentile, All India Rank- 192.
- CSIR-UGC NET(National Eligibility Test)-2005 for lecturers.
- UGC(University Grants Commission) Junior Research Fellowship.
- UGC(University Grants Commission) Senior Research Fellowship.

Research & Subject Interest :

- **Current Research topics :**

- Geometric Function Theory (Univalent functions).
- Special Functions, Hypergeometric functions, q-hypergeometric functions.
- Trigonometric series/sums.

- **Subject Interest :**

Complex analysis, Real Analysis , Functional Analysis, Linear Algebra, Special Functions, Integral Transforms, Differential Equations, Partial Differential equations.

Conferences(Symposium) & Schools & Training Attends :

- **International Conference.**

- International Symposium on Analysis and Theory of Functions, Istanbul Kültüre University,Istanbul, Turkey (24th – 26th August-2009).
- International Conference on Recent trends in mathematics and its applications, Jamia Millia Islamia, New Delhi (30th – 31st March-2009).
- International Conference on Analysis and Application, Aligarh Muslim University, Aligarh (4th – 6th November-2008).

- **Workshop**

- Study Group Meeting on Industrial Problems; Department of Mathematics, Indian Institute of Technology, Roorkee, India, (16th – 21st March-2009).
- Indo-Australian workshop on CFD Approach on Fluid Flow, Heat and Mass transfer, Indian Institute of Technology, Roorkee, India, (12th – 14th April-2007).

- **Schools**

- Advance Training School in Mathematics for lecturers On **Complex Analysis**, Bhaskaracharya Pratishthana, Pune(14th – 26th May-2007).

**Research publications
before joining
King Faisal University**

- **List of Publications**

- **Year 2012**

- (1) R. M. Ali, S. K. Lee and **Saiful R. Mondal**,: *Coefficient conditions for starlikeness of nonnegative order*, Abstr. Appl. Anal. **2012**, Art. ID 450318, 13 pp.
- (2) **Saiful R. Mondal** and A. Swaminathan,: *Geometric properties of Generalized Bessel functions*, Bull. Malays. Math. Sci. Soc. (2) 35(1) (2012), 179–194.
- (3) **Saiful R. Mondal** and A. Swaminathan: *Stable functions and an extension of Vietoris theorem*, Results in Mathematics (Birkhauser Mathematics, Springer), dResults Math. 62 (2012), no. 1-2, 33–51. MR2964755 .

- **Year 2011**

- (1) P. Malik , **Saiful R. Mondal** and A. Swaminathan: *Fractional integration of generalized bessel function of the first kind*, ASME 2011 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, 409-418.
- (2) **Saiful R. Mondal** and A. Swaminathan: *On the positivity of certain trigonometric sums and their applications*, Comput. Math. Appl. **62** (2011), no. 10, 3871–3883.

- **Year 2010**

- (1) **Saiful R. Mondal** and A. Swaminathan: *Geometric properties of generalized Polylogarithm*, Integral Transforms Spec. Funct., 21(9) (2010) 691-701.

- **Year 2009**

- (1) **Saiful R. Mondal** and A. Swaminathan: *Coefficient conditions for univalence and starlikeness of analytic functions*, J. Math. Appl. **31**(2009), 79–92.

- **Conference Proceedings:**

- (1) **Saiful R. Mondal** and A. Swaminathan, *On the order of starlikeness of generalized polylogarithm function*, International Symposium on Analysis

and Theory of Functions, **Istanbul Kültüre University, Istanbul, Turkey** (24th – 26st August - 2009).

- (2) **Saiful R. Mondal** and A. Swaminathan, *Starlikeness and Convexity of Generalized Polylogarithm* , International Conference on Recent trends in mathematics and its applications, **Jamia Millia Islamia, New Delhi**, (30th – 31st March - 2009).
- (3) **Saiful R. Mondal** and A. Swaminathan, *Geometric properties of Cesàro means*, International Conference on Analysis and its Applications, **Aligarh Muslim University, Aligarh** , (3rd – 5th November - 2008).

**Activities and Research publications
after joining
King Faisal University**

- **Administrative :**

- Course coordinator of the outside science college's mathematics courses.
- Committee member from the science college for ABET assessment of Mathematics courses in the college of engineering.
- Member of the annual report and assessment committee, Department of Mathematics and Statistics, College of Science.
- Member of the review committee of the new programme(English mode), Department of Mathematics and Statistics, College of Science.

- **Research Projects and funds**

- **Principal Investigator**

- * Geometric properties of certain special functions; *Funded by Deanship of Scientific research, King Faisal University; Project no: 150244.*
- * On convexity and starlikeness of q-analogue of special functions ; *Funded by Deanship of Scientific research, King Faisal University; Project no: 150282.*
- * On the positive trigonometric sums and its applications; *Funded by Deanship of Scientific research, King Faisal University; Project no: 180105.*

- **Co-investigator**

- * Schwarz type boundary value problems on hyperbolic domains in the complex planes, PI: Dr. Mohammed Saad Akel, *Funded by Deanship of Scientific research, King Faisal University.*

- **National advisor**

- * Fractional Integration of Generalized Bessel-type Functions and Application to Strong Stabilization of Linear Time Invariant Systems, PI: Dr. Nlsar K S; *Deanship of Scientific Research, Salman bin Abdulaziz University, Saudi Arabia, project No 2014/01/2152*

- **Master thesis guided**

- Mr. Mohammed Saad Al Dhuian, Inclusion properties of hypergeometric type functions, Completed.

• **List of Publications : Communicated, Accepted, Published :**

– **Year 2018**

- (1) **S. R. Mondal** and M. Akel, Differential equation and inequalities of the generalized k -Bessel functions, *Journal of Inequalities and Applications* 2018:175
- (2) M. Akel and **S. R. Mondal**, Dirichlet Problems in Lens and Lune, *Bull. Malays. Math. Sci. Soc.* **41** (2018), no. 2, 1029–1043.
- (3) R. M. Ali, S. K. Lee and **Saiful R. Mondal**, Inequalities on an extended Bessel function, *J. Inequal. Appl.* **2018**, 2018:66. MR3797129
- (4) M. Al-Dhuain, **Saiful R. Mondal** On some differential subordination involving the Bessel-Struve kernel function, *Communications of the Korean Mathematical Society* Volume: 33 Issue: 2 (2018) 445-458.
- (5) S. Kanas, S. R. Mondal and A. D. Mohammed, Relations between the generalized Bessel functions and the Janowski class, *Math. Inequal. Appl.* **21** (2018), no. 1, 165–178. MR3716218

– **Year 2017**

- (1) K. S. Nisar, S. R. Mondal and J. Choi, Certain inequalities involving the k -Struve function, *J. Inequal. Appl.* **2017**, No. 71, 8 pp. MR3633105
- (2) S. R. Mondal and K. S. Nisar, Certain unified integral formulas involving the generalized modified k -Bessel function of first kind, *Commun. Korean Math. Soc.* **32** (2017), no. 1, 47–53. MR3608478
- (3) S. R. Mondal, Inequalities of extended beta and extended hypergeometric functions, *J. Inequal. Appl.* **2017**, Paper No. 10, 12 pp. MR3592884
- (4) R. M. Ali, S. R. Mondal and K. S. Nisar, Monotonicity properties of the generalized Struve functions, *J. Korean Math. Soc.* **54** (2017), no. 2, 575–598. MR3622341
- (5) P. Malik and S. R. Mondal, Some composition formulas of Jacobi type orthogonal polynomials, *Commun. Korean Math. Soc.* **32** (2017), no. 3, 677–688. MR3682423

- (6) K. S. Nisar and S. R. Mondal, Some integrals involving generalized k -Struve functions, Commun. Numer. Anal. **2017**, no. 1, Art. ID cna-00313, 19–24. MR3627922
- (7) Saiful R Mondal, P. Malik, J Choi: Certain generalized fractional derivative formulas of hypergeometric functions, Far East Journal of Mathematical Sciences, Volume 101, Number 7, 2017, Pages 1603-1617

– Year 2016

- (1) A. Baricz, S. R. Mondal and A. Swaminathan, Monotonicity properties of the Bessel-Struve kernel, Bull. Korean Math. Soc. **53** (2016), no. 6, 1845–1856. MR3582481
- (2) S. R. Mondal and M. Al Dhuain, Inclusion of the generalized Bessel functions in the Janowski class, Int. J. Anal. **2016**, Art. ID 4740819, 8 pp. MR3568675
- (3) K . S .Nisar, Mondal, **Saiful R. Mondal**, P. Agarwal: *Composition formulas of Bessel-Struve kernel function*, Mathematical Problems in Engineering, Volume 2016 (2016), Article ID 9560346, 8 pages; <http://dx.doi.org/10.1155/2016/9560346>
- (4) K . S .Nisar, S.D. Purohit, **Saiful R. Mondal**: *Generalized fractional kinetic equations involving generalized Struve function of the first kind*; Journal of King Saud University - Science, Volume 28, Issue 2, April 2016, Pages 167-171
- (5) K . S .Nisar, Mondal, **Saiful R. Mondal**, P. Agarwal: *Pathway fractional integral operator associated with Struve function of first kind* , Advanced Studies in Contemporary Mathematics, Volume 26 . No. 1 , (2016), 63-70.(Scopus)
- (6) Nisar K S, Junesang Choi, Saiful R Mondal, Powers of Generalized Bessel and Struve functions, Advanced Studies in Contemporary Mathematics (Kyungshang) 26(4):627-632 October 2016

– Year 2015

- (1) K . S .Nisar, **Saiful R. Mondal**, P. Agarwal, M Al-Dhaifallah: *The umbral operator and the integration involving generalized Bessel-type functions*. Open Math.13 (2015), 426–435.

- (2) **Saiful R. Mondal**, Unified integrals associated with generalized Bessel functions and Struve functions, *Engineering Mathematics Letters*, 2015.
- (3) Rosihan M. Ali, **Saiful R. Mondal** and V. Ravichandran, *On the Janowski convexity and starlikeness of the confluent hypergeometric function*, *Bull. Belg. Math. Soc. Simon Stevin* **22** (2015), no. 2, 227–250.

– **Year 2014**

- (1) **Saiful R. Mondal** and KS Nisar, *Marichev-Saigo-Maeda fractional integration operators of generalized Bessel functions*, *Mathematical Problems in Engineering* Volume 2014 (2014), Article ID 274093, 11 pages .

– **Year 2013**

- (1) Rosihan M. Ali, **Saiful R. Mondal** and V. Ravichandran, *Zero-Free Approximants to Derivatives of Prestarlike Functions*, *Journal of Inequalities and Applications*, 2013.

● **Editor/Reviewer/Referee**

- *Reviewer, Mathematical Reviews (American Mathematical Society)*
- *Acted as reviewer for several Journals including*
 - * African Journal of Mathematics and Computer Science Research
 - * Italian Journal of Pure and Applied Mathematics
 - * Bulletin of the Malaysian Mathematical Sciences Society
 - * Communications of the Korean Mathematical Society
 - * Boletim Sociedade Paranaense de Matemtica
 - * African Journal of Mathematics and Computer Science Research Research
 - * Journal of Pure & Applied Physics
 - * Journal of Mathematics and Statistics
 - * Thai journal of mathematics
 - * Alexandria Engineering Journal
 - * Archivum Mathematicum
 - * Turkish Journal of Inequalities