

<u>Dr. S. K. Srivastava</u>

Associate Professor Srinivasa Ramanuian Department

Srinivasa Ramanujan Department of Mathematics, School of Mathematics, Computer and Information Sciences, Central University of Himachal Pradesh, Campus-Shahpur, PIN-176206, Dharamshala, HP

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Father's Name:	Late Shri A. K. Srivastava
Academic Qualification:	B.Sc., M.Sc., NET-JRF, Ph.D. (Mathematics)
Specialization:	Differential Geometry
Research Interests:	Analysis, Geometry, Topology and Manifolds
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Scopus ID:	<u>57214145306</u>
VIDWAN ID:	<u>48365</u>
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Courses Taught:

(i) Post Graduate students:

Differential Geometry, Complex Analysis, Functional Analysis, Abstract Algebra, Linear Algebra, Real Analysis, Partial Differential equations, Mathematical Methods, Lebesgue Measure & Integration, and Operations Research.

(ii) Ph.D. Students:

Differentiable Structures on Manifolds, Advanced Complex Analysis, Computational Methods, Research Methodology, Advanced Topics in Topology and Analysis.

Total number of publications: 36

List of significant publications:

- (2024) Geometric inequalities of bi-warped product submanifold in generalized complex space form, *Journal of Geometry and Physics*, **199** (2024), 105141. DOI:10.1016/j.geomphys.2024.105141 (with A. Kumar)
- (2023) Characterization of bi-slant submanifolds of paraSasakian manifold, Filomat 37:23 (2023), 7937-7953. DOI:<u>https://doi.org/10.2298/FIL2323937S</u>(with M. Dhiman, K. Sood, and M. A. Khan)
- chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.pmf.ni.ac.rs/filomat-content/2023/37-23/37-23-18-20590.pdf
 (2022) Characterizations of PR-Pseudo-Slant Warped Product Submanifold of Para-Kenmotsu Manifold with Slant Base, *Symmetry*, 14 (2022), 1-21.

DOI:10.3390/sym14051001 (with F. Mofarreh, A. Kumar and A. Ali)

• (2022)PR -Semi Slant Warped Product Submanifold of ParaKenmotsu Manifolds, *Results in Mathematics*, 77:142 (2022), 1-30. DOI:10.1007/s00025-022-01695-4 (with M. Dhiman and A. Kumar)

- (2017) Pointwise Pseudo-slant Warped Product Submanifolds in a Kähler Manifold, *Mediterr. J. Math.*, 14:20(2017), 1-20. DOI:10.1007/s00009-016-0832-3 (with A. Sharma)
- (2017) Geometry of PR-semi-invariant warped product submanifolds in para cosymplectic manifold, *Journal of Geometry*, 108 (1)(2017), 61-74. DOI: 10.1007/s00022-016-0325-3(with A. Sharma)
- **(2016)** On a class of α-para Kenmotsu manifolds, *Mediterr. J. Math.* **13**(**2016**), 391-399. DOI:10.1007/s00009-014-0496-9 (with K. Srivastava)

Research Projects Ongoing/Completed:

- **Completed**: UGC-BSR STARTUP GRANT entitled "**Null Hypersurfaces and Applications**" vide letter No. F. 30-29/2014 dated 18.07.2014, Amount: **Rs. 6,00,000/-**
- Completed (as CI): Major Project entitled "Analytical and Numerical Study of Black Holes in Strong Gravity Regime", DAE, BRNS vide letter No. 58/14/25/2019-BRNS dated: 27.11.2019, Amount: Rs. 27,37,350/-
- **Ongoing** (as member of PIG): **FIST Mathematical Sciences-Project** in the focus area: Basic Science, Sciences vide no. MTH/2-11/Project/CUHP/23/921-926 dated 07.02.2025, Total Budget: **Rs. 46,50,000/-**

Teaching Experience:

November 2012 to January 2025: Assistant Professor, Srinivasa Ramanujan Department of Mathematics, Central University of Himachal Pradesh, Campus- Shahpur, PIN-176206

January 2025 to Present: Associate Professor, Srinivasa Ramanujan Department of Mathematics, Central University of Himachal Pradesh, Campus- Shahpur, PIN-176206

Ph.D. Supervised/Supervising:

Supervised: 05

- **Dr. Kirandeep Bala** (Date of Award of PhD: **18 Jan 2016**), Assistant Professor, Department of Mathematics, Govt Polytechnic HP.
- **Dr. Anil Sharma** (Date of Award of PhD: **9 April 2018**), Assistant Professor, Department of Mathematics, Chandigarh University, Punjab.
- Dr. Kanika Sood (DST INSPIRE JRF & SRF) (Date of Award of PhD: **14 February 2023**) Assistant Professor, Kaushalya-The Skill University, Ahmedabad, Gujarat.
- **Dr. Mayrika Dhiman** (CSIR NET) (Date of Award of PhD: **11 January 2024**), Assistant Professor, Department of Mathematics, Presidency University Bengaluru, Itgalpura, Bengaluru, Karnataka, Pin: 560119.
- **Dr. Anuj Kumar** (CSIR NET-JRF & SRF) (Date of Award of PhD: **18 March 2024**), Assistant Professor, Department of Mathematics and Statistics, Central University of Punjab, Bhatinda.

Supervising: 02

- Ms. Pallavi Thakur
- Mr. Vikram Singh

Patent filed (01): Adaptive algorithm for solving nonlinear differential equations in real time, Patent application No. 202541021164

Publications (Other than Research Papers):

• Chapter in Edited Book, Title: National Education Policy-2020: Soothed with a syrup of words, ISSN/ ISBN No.: 1636400086, Single Author, Publisher's Details: National Education Policy 2020: Reflections from Stakeholders, White Falcon Publishing, Year: 2020.

- Edited Book, Title: <u>Tibet: Current Scenario & Public Future</u> ISBN-13: 978-9391881429, Co-Author, Publisher's Details: Anang Prakashan, New Delhi, Year: 2023.
- Creation of ICT-mediated Teaching Learning pedagogy and content and development of new and innovative courses and curricula: Development of e-content in 4 quadrants for a complete course/ebook, the 4 Credit course Complex Analysis, the Year 2019, Level: Post Graduate, Organization for which it was developed: Commonwealth Educational Media Centre for Asia, New Delhi, Link: <u>http://14.139.240.10/moodle/</u>

Reviewer:

- Annals of Mathematics and Physics
- Contemporary Mathematics of the AMS
- Mathematical Reviews AMS
- Journal of Function Spaces
- Journal of Mathematics
- JP Journal of Geometry and Topology
- Journal of Geometry
- International Journal of Geometric Methods in Modern Physics
- Asian-European Journal of Mathematics
- Thai Journal of Mathematics
- Result in Mathematics
- Symmetry
- AIMS Mathematics
- Mediterranean Journal of Mathematics

Membership of Learned Societies/ Professional Bodies:

- American Mathematical Society
- The Indian Mathematics Consortium (Associate Member)
- Bhartiya Shikshan Mandal (Life Member)
- Vijnana Bharati (VIBHA) (Life Member)
- Himachal Mathematical Society (Life Member)
- Himalayan Mathematical Society (General Secretary)

Other activities/responsibilities: (academic/administrative)

- Member, BOS, SRDM, CUHP (16.06.2020-15.06.2023)
- Member, School Board, SoMC&IS (24 June 2020- 23 June 2023)
- Co-coordinator, Alumni Cell of the Department of Mathematics
- Member, Training & Placement Cell, SRDM, CUHP
- Nodal Officer, Unnat Bharat Abhiyan (UBA) (8 April 2021-7 May 2022)
- Coordinator, Entrepreneurship and Development Cell, SRDM, CUHP
- Coordinator, PG/Ph.D. Admission, SRDM, CUHP
- Coordinator, Course-Registration, SRDM, CUHP
- Coordinator, Self-Reliant India with Math Club, SRDM, CUHP
- Coordinator, Freeship, SRDM, CUHP
- Member, Aryabhatta Math Club, SRDM, CUHP
- Member, Vedic Ganit Mandal, SRDM, CUHP
- Coordinator, IQAC Criterion-II, SRDM, CUHP
- Member, Departmental Research Committee (DRC), SRDM, CUHP

- Member, Research Degree Committee (RDC), SRDM, CUHP
- Member, Master Research Committee (MRC), SRDM, CUHP
- Member of Editorial Board in the Newsletter published by SRDM, CUHP

Awards & Honours Received:

- Late Sri DPS Memorial Award for the best presentation in the conference of Tensor Society on "Application of Tensors and Differential Geometry", July 5-6, 2008, SRMCEM, Lucknow.
- Qualified National Eligibility Test (NET) with Junior Research Fellowship (JRF) in Mathematics (December 2005).

Invited Lectures/Talks:

- Delivered a talk on the topic "**Career Opportunities in Higher Mathematics**", 1 February 2014, M&M Educational Services, Hamirpur (H.P.) -177005.
- Delivered a series of six lectures on the topic "**Expositions of group theory**" in two days workshop, 25 -26 October 2014, organized by M&M Educational Services, Hamirpur (H.P.) -177005.
- **Career Counseling for the students of B.Sc. and M.Sc. Mathematics**, Organized by Placement and Counseling Cell, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, 10 October 2021. <u>https://www.facebook.com/page/100413061938063/search/?q=career%20counselling</u>.
- Delivered a Lecture on the topic "Geometry and Topology of Manifolds: A Quick Introduction", National Conference on Recent Trends in Mathematical Sciences, Organized by Department of Mathematics and Statistics, DDUGU, Nov 24-25, 2018.
- Delivered a Lecture on the topic "**Characterization of Legendre curves in quasi Sasakian pseudo-metric 3-manifold**", CONIAPS XXVII on "Recent Advances in Differential Geometry and Topology", Organized by the Department of Mathematics and Statistics, Central University of Punjab, Bathinda-India, October 26-28, 2021.
- Delivered a talk entitled "**Challenging problems in basic mathematics**" in 8th Refresher Course in Mathematics for teachers of University and Colleges organised by the UGC-MALVIYA MISSION TEACHER TRAINING CENTRE, DDU Gorakhpur University, Gorakhpur during December 08-21, 2023.
- Delivered a talk entitled "**Collatz's Conjecture & Polignac's conjecture**" under Vedic & Mathematical Awareness Programme organized by **Vedic Ganit Mandal**, SRDM, CUHP in Govt. Sr. Secondary School, Gola, Distt. Chamba, 21 February 2023.
- Delivered a talk entitled "Interactive Math Applications" in Govt. Sr. Secondary School, Bhali, Distt. Kangra, 25 November 2024.

Participation in Seminars/Conferences:

- Presented a paper entitled "A study on hypersurfaces of para Sasakian manifold" in 7th Conference of the International Academy of Physical Sciences (CONIAPS-VII, 2004) jointly organized by University of Allahabad, U.P. Rajarshi Tandon Open University and International Academy of Physical Sciences, Allahabad, December 21-23, 2004.
- Presented a paper entitled "D-symmetric metric connection in a Sasakian manifold" in 10th Conference of the International Academy of Physical Sciences (CONIAPS-X, 2008) organized by Guru Ghasidas University, Bilaspur (C.G.), January 12-14, 2008.
- Presented a paper in the National Symposium on Modern Trends in Differential Geometry and Mathematical Modelling in Bio-Sciences organized by Department of Mathematics, Lucknow University, Lucknow, December 24-25, 2008.

- Presented a paper entitled "On the hypersurfaces of almost r-contact manifold" in the Conference of the Tensor Society on Application of Tensors and Differential Geometry organized by SRMCEM, Lucknow, July 5-6, 2008.
- Presented a paper entitled "A note on lightlike hypersurfaces" in the National Conference on Recent Trends in Pure & Applied Mathematics organized by Department of Mathematics and Statistics, DDU Gorakhpur University, Gorakhpur, July 11-12, 2009.
- Presented a paper entitled "On Legendre curves in 3-dimensional trans- Sasakian manifolds" in the National Conference on Recent Trends in Mathematics and Statistics (CORTMAS-2013) organized by Department of Mathematics and Statistics, DDU Gorakhpur University, Gorakhpur, July 27-28, 2013.
- Presented a paper entitled "On warped product submanifolds of Kenmotsu Manifolds" in the National Conference on Differential geometry and its applications (DGACON 2014) organized by Department of Mathematics, University of Allahabad, December 27-28, 2014.

Workshop/Training Attended:

- Attended Two Weeks of FDP on "Comprehensive e-Learning to eTraining guide for Administrative Work" organized by Ramanujan College, New Delhi, from May 25- June 05, 2020.
- Attended Two Weeks of FDP on "Managing Online Classes and Co-Creating MOOCS" organized by Ramanujan College, New Delhi, from April 20- May 06, 2020.
- Attended One Week of FDP on "Universal Human Values for DEEKSHARAMBH (Student Induction Program)" organized by NIT Patna, during Nov 23- 27, 2020.
- Attended Two Weeks Refresher Course in "Environmental Studies (Interdisciplinary)" organized by UGC-HRDC JNU, from Sep 20- Oct 04, 2021.
- Attended Interdisciplinary Refresher Course in "Advanced Research Methodology" organized by TLC, Ramanujan College, New Delhi, from Jan 23-Feb 06, 2023.
- Attended Two-Week Instructional School for Lecturers on "Differential Geometry" organized by the Department of Mathematics, Banasthali Vidyapith, Banasthali (Rajasthan), during Dec. 8-20, 2014.
- Attended Four-Week Orientation Programme Organized by UGC-HRDC DDU Gorakhpur University, Gorakhpur, from May 23- June 19, 2015.
- Attended a Three-Week Refresher Course Organized by UGC-HRDC University of Lucknow, Lucknow, during Dec 09-31, 2016.

Workshop/Seminar/Conference Organized:

- Three days workshop on "Two faces of Analysis", 21-23 April 2014.
- One Week workshop on "Analytical Aspects of Dynamics", 11-17 November 2014.
- Two days workshop on "**Sobolev spaces**", 27-28 February 2015.
- One day workshop on "Recent Trends in Continuum Mechanics", 18 May, 2015.
- One Day Workshop on "**Introduction to Distribution Theory**", 11 February 2017.
- Two days workshop on "**Indian Mathematics**", 13-14 September 2019.
- National Seminar on Analytical Aspects of Dynamics, 22-23 November 2019.
- Workshop on "Geometry of continued fractions: Ramanujan and his successors", 14-15 September 2020.
- Workshop on "Srinivasa Ramanujan: The man beyond infinity", 22 December 2020.
- National Webinar on "**Relevance of Vedic Mathematics in today's context**", 03 September 2021.
- Workshop on "**Principles of Vedic Mathematics**", 8-12 November 2021.