

Curriculum Vitae

Dr. NAEEM AHMAD PUNDEER

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Employment History

- I have Worked as a **U. G. C. Dr. D. S. Postdoctoral Fellow** at the Department of Mathematics, Jadavpur University, Kolkata, West Bengal, India from **September 15, 2021 to September 14, 2024**.
Topic of PDF “Symmetries of Spacetime manifold and Ricci Solitons”.
Mentor: Prof. Dr. Farook Rahaman.
- **Teaching Faculty (Contratual)**, at the Department of Mathematics, **Central University of Karnataka**, Gulbarga from January 11, 2021 to June 21, 2021.
- **Assistant Professor** at the Department of Mathematics, **National Institute of Technology**, Jalandhar from August 24, 2015 to December 18, 2015.
- **Lecturer** at the Department of Applied Sciences, **Baddi University of Emerging Sciences and Technology**, Baddi, Himachal Pradesh from October 07, 2014 to August 20, 2015.
- **Assistant Professor** at the Department Computer Applications, **Shri Ram College**, Muzaffar Nagar, U.P., from July 01, 2010 to November 09, 2013.

Scholastic Record

- **Ph.D. (Mathematics)** from Aligarh Muslim University, Aligarh on August 31, 2020.
Topic of Ph.D. Thesis “A study of geometrical symmetries of spacetime manifold”.
Date of Ph.D. Defence: **31-08-2020**.
Advisor: **Dr. Musavvir Ali.**
- **M.Phil. (Mathematics)** from Himachal Pradesh University, Shimla in the year 2014.
Supervisor: **Prof. Dr. Khem Chand.**
- **M.Sc. (Mathematics)** from Chaudhary Charan Singh University, Meerut in the year 2008.

- **B.Sc. (Physics, Chemistry and Mathematics)** from Chaudhary Charan Singh University, Meerut in the year 2006.
- **Intermediate (Mathematics, Physics, Chemistry & English)** from Uttar Pradesh Board of School Education, Prayagraj, in the year 2003.
- **High School (Mathematics, Science & English)** from Uttar Pradesh Board of School Education, Prayagraj, in the year 2001.

Awards & Honors

- **POSTDOCTORAL FELLOSHIP. No. F.4-2/2006 (BSR)/MA/20-21/0069.** I am selected for the UGC Dr. D.S. Kothari Postdoctoral Fellowship funded by University Grant Commission-Basic Science Research, India on September 08, 2021.
- **Travel Grant** File No. ITS/2799/2016-17 for Attending the Scientific Event Entitled "Geometric Flows and the Geometry of Spacetime" University Hamburg, Germany, September 19-23, 2016.
- **Best Paper Award** by Tensor Society of India, in National Conference on Differential Geometry and General Relativity (NCDGGR - 2017) at Sardar Patel University, Vallabh Vidyanagar, Gujrat, India, (November 28-29, 2017).
- **Travel Grant** by SPP Conference at Infinity from April 1-5, 2019, University of Munster, Germany for a contributed talk.
- **Travel Grant** for participation in the Conference "Probability and Mathematical Physics" from June 27 to July 08, 2022, University of Helsinki, Finland for a poster presentation.
- **Travel Grant** by MPI-MIS for participation in the workshop "Geometry and Machine Learning" from November 13-15, 2023, at Max Planck Institute for Mathematics, Leipzig, Germany.

Field of Specialization/Interest

General Relativity and Geometric flows on Riemannian manifolds.

Membership

1. Life Member (*LP/59*) Cacutta Mathematical Society since November 16, 2022.

Research publications: 14(Research Papers)

- Number of Papers Published/Accepted: **12 (see Annexure-I)**
- Number of Papers Under Review: **2(see Annexure-II)**
- Conferences: **10(see Annexure-III)**

- Workshops: 10(see Annexure-IV)

Teaching Experience: 6 Years, 04 Months, 25 Days

Topics Taught

Geometry and Relativity, Tensor Analysis, Linear Algebra, Matrix theory, Ordinary Differential Equation, Special Functions, Probability and Statistics, Partial Differential Equation. Engineering Mathematics I, II, Numerical Analysis, Operational Research.

Software Known

Latex, Tex Studio, Maple, Python, Matlab.

Languages known

- *English, Hindi and Urdu* : Read, write & speak fluently.
- *Arabic* : Read only.
- *Bangla* : Speak Only.
- *Bangla* : A1 Level.

Annexure-I

Research Publications

1. Naeem A. Pundeer, P. Ghosh, H.M. Shah and A. Bhattacharya, Some solitons on homogeneous almost α -cosymplectic 3-manifolds and harmonic manifolds, *Mathematical Notes*, **116** (4), 717-724, (2024). **SCIE**, (Q3), **I.F. 0.6**.
2. Naeem Ahmad Pundeer, Hemangi Madhusudan Shah and Arindam Bhattacharyya, Quasi-Bach flow and quasi-Bach soliton on Riemannian manifolds, *Journal of Geometry and Physic*, **204**, 105278, (2024). **SCIE**, (Q2), **I.F. 1.6**.
3. Sameh Shenawy, Uday Chand De, Nasser Bin Turki and Naeem Ahmad Pundeer, Projective collineations in warped product manifolds and $(PRS)_n$ manifolds, *Symmetry*, **15**(9) 1644, (2023.) **SCIE** (Q2), **I.F. 2.2**.
4. F. Rahaman, A. Aziz, T. Manna, A. Islam, N.A. Pundeer, and S. Islam, Deflection of massive body around wormholes in Einstein-Kalb-Ramond spacetime, *Physics of Dark Universe*, **42**, 101287, (2023). **SCIE** (Q1) **I.F. 5.0**.
5. Naeem A. Pundeer, F. Rahaman, M. Ali and S. Shenawy, Spacetime admitting semiconformal curvature tensor in $f(R)$ modify gravity, *Int. J. Geom. Methods Mod. Phys.*, 2023. (ISSN 0219-8878, **SCIE** (Q2), **I.F. 2.1**). <https://doi.org/10.1142/S0219887823501761>.
6. Naeem A. Pundeer and M. Ali, The semiconformal curvature tensor on Relativistic spacetimes, *Palestine Journal of Mathematics*, **12** (3), 301-308, (2023). **SCOPUS**
7. Naeem A. Pundeer, M. Ali and M. Bilal, A Spcetime manifold admitting semiconformal curvature tensor, *Balk. J. Geom. Appl.*, **27**(1), 130-137, (2022). (ISSN 1843-2875, **SCOPUS**)

8. Y. J. Suh, N.A. Pundeer and V. Chawan, Pseudo-Quasi-Conformal Curvature Tensor and Spacetimes of General Relativity, *Filomat*, **35(2)**, 657-666, (2021). (**ISSN: 2406-0933, SCIE (Q3) IF 0.8**).
9. M. Ali, N.A. Pundeer and A. Ali, Semiconformal curvature tensor and fluid spacetime in general relativity, *J. Taibah Univ. Sci.*, **14(1)**, 205-210, (2020). (**ISSN: 1658-3655, SCIE (Q2) IF 2.8**)
10. Naeem A. Pundeer, M. Ali, N. Ahmad and Z. Ahsan, Semiconformal symmetry - A new symmetry of the spacetime manifold of the general relativity, *J. Math. and Comp. Sci.*, **20(3)**, 241-254, (2020). (**ISSN 2008-949X, SCOPUS**)
11. M. Ali, N.A. Pundeer and Y. J. Suh, Proper Semiconformal Symmetries of Spacetimes with Divergence-Free Semiconformal Curvature Tensor, *Filomat*, **33(16)**, 5191-5198, (2019). (**ISSN: 2406-0933, SCIE (Q3) IF 0.8**).
12. M. Ali and N.A. Pundeer, Semiconformal Curvature Tensor and Spacetime of General Relativity, *Diff. Geom.-Dyn. Sys.*, **21**, 14-22, (2019). (**ISSN 1454-511X, UGC Listed**)

Annexure-II

Communicated Papers/In Preparation

1. Naeem A. Pundeer (with F. Rahaman, Ruhul Amin, Mahmud Hasan, Anikul Islam, Saibal Ray and Abdul Aziz), Gravitational deflection of massive body around global monopole, *Communicated*.
2. Naeem A. Pundeer (with F. Rahaman, A. Aziz, T. Manna, A. Islam, and S. Islam), Deflection of charged massive body around charged wormholes, *Communicated*.
3. Naeem A. Pundeer (with F. Rahaman), Conformal Ricci soliton with wormhole spacetime, *In Preparation*.

Annexure-III

Workshops

1. Attended International workshop on "Geometry and Machine Learnig" at Max Plank Institute of Mathematics, Leipzig, Germany, (November 13-15, 2023).
2. Attended International Virtual Heidelberg Laureate Forum in Heidelberg, Germany, (September 21-25, 2020).
3. Attended International Webinar on "Relativity & Cosmology" organized by, Department of Mathematical Science, Bodoland, University, Kokrajhar, India, (August 9, 2020).
4. Attended International Workshop on "Convex Analysis and Optimization" in Aligarh Muslim University, Aligarh, India, (November 14 - 19, 2017).
5. Attended CIMPA-INDIA Research School on Geometric Flows at Jadavpur University, Jadavpur, Kolkata from Dec. 1-12, 2016.
6. Attended International Workshop on "Geometric flows and the Geometry of spacetime" at University of Hamburg, Germany from Sep 19-23, 2016.

7. Attended Short term course on "Recent Trends in Applied Mathematics at NIT Jalandhar from Nov-30 to Dec-04, 2015.
8. Attended Advanced workshop on "Finite difference Methods for Differential equations" at South Asian University, New Delhi from 13-17 March, 2015.
9. Attended ATM workshop (NCM) on "Conservation laws of continuum mechanics" at Panjab University, Chandigarh from Dec. 2, 2014 to Dec. 7, 2014.
10. Attended Advanced Instructional School (AIS) on "Diophantine Equations", June 16, 2014 to July 4, 2014 at HPU Shimla.

Annexure-IV

Conferences

1. Contributed talk "The semiconformal curvature tensor on Relativistic spacetime" "2nd International Conference on Mathematical Analysis and Applications in Modeling", at the Department of Mathematics, Jadavpur University, Kolkata, West Bengal, India, (October 9-11, 2023).
2. Contributed talk "On some properties of M -projective curvature tensor in spacetime of general relativity" "International Conference on Algebra, Mathematical Analysis and General Simulations (ICAMAS - 2022)", at Calcutta Mathematical Society, Kolkata, West Bengal, India, (December 8-10, 2022).
3. Contributed talk on "Spacetime admitting semiconformal curvature tensor in $f(R)$ modify gravity" in "An Inaugural Conference on Current Status of Cosmology, 17th – 19th October 2022, organized by The Thanu Padmananbhan Centre for Cosmology and Science Popularization (CCSP), SGT University, Gurugram, Delhi-NCR.
4. Poster presentation on "A spacetime admitting semiconformal curvature tensor" in "International Conference on Probability and Mathematical Physics", at Department of Mathematics, University of Helsinki, Finland, (June 27 to July 08, 2022).
5. Contributed talk on "A spacetime manifold admitting semiconformal curvature tensor" in "International Conference on Differential Geometry and General Relativity (ICDGGR - 2019)", at Deen Dayal Upadhyaya University, Gorakhpur, UP, India, (November 8-10, 2019).
6. Contributed talk on "Semiconformal Curvature tensor and fluid spacetime in General Relativity" in "SPP International Conference on Geometry at Infinity-2019", at University of Munster, Munster, Germany, (April 1-5, 2019).
7. Contributed talk "On the Divergence of Semiconformal Curvature Tensor and Fluid Spacetime in GR" in "International Conference on Gravitation, Cosmology and Mathematical Physics (ICGCAMP-19)", at GLA University, Mathura, UP, India, (April 04-07, 2019).
8. Contributed talk on "Semiconformal symmetry-A new symmetry of the spacetime manifold of the General Relativity" in "12 Chandigarh Science Congress-2018 at Punjab University, Chandigarh, India, (February 12-14, 2018).
9. Contributed talk on "Semiconformal Curvature Collineatio in Spacetime of General Relativity" in "National Conference on Differential Geometry and General Relativity (NCDGGR - 2017)", at Sardar Patel University, Vallabh Vidyanagar, Gujrat, India,

Personal Details

Father's Name	Mr. Nzaket Ali
Date and place of birth	April 16, 1986, Muzaffarnagar (UP)
Nationality	Indian
Religion	Islam
Marital Status/Sex	Married/Male

References

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(Dr. Naeem Ahmad Pundeer)