



Dr. Nadeem Azhar

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OVERVIEW of ACHIEVEMENTS

- HEC approved PhD supervisor.
- **20** published research articles in international journals.
- Accumulative impact factor is approximate 60.
- **Citations** since 2016 are more than 140
- Selected as research assistant in NRPU research projects by Dr. Shamaila Rani CUI Lahore 2017 (completed).
- PhD completion in July 2022 in the field of **General Relativity and Cosmology**.

EDUCATION

Degree Name	Year	University Name	Descriptions
<u>PhD</u> <u>Mathematics,</u> (General Relativity and Cosmology)	2017-2022	Department of Mathematics, Comsats University Islamabad, Lahore Campus, Lahore, Pakistan.	Thesis Title: <u>Impact of Alternative Theories of Gravity on Current Cosmic Scenarios</u> Course Work Subjects: <ul style="list-style-type: none">• Theory of Groups• Relativistic Theory of Black Holes• Non-Newtonian Fluid• Fluid and Thermodynamics• Topics in Numerical Mathematics• Topics in Graph Valuations

<u>M. Phil. Mathematics</u> (General Relativity and Cosmology)	2014 – 2016	Department of Mathematics, Comsats University Islamabad, Lahore Campus, Lahore, Pakistan	Thesis Title: <u>Cosmic Acceleration in Dynamical Chern-Simons Modified Gravity</u> CGPA: 3.48 /4.0 Division: First Course Work Subjects: <ul style="list-style-type: none"> • Numerical Solution of ODEs. • Advance Partial Differential Equations. • Fuzzy Logic and Applications. • Advance Modern Algebra with Applications. • Advance Numerical Analysis. • Advance Topic in Graph Theory. • Commutative Algebra. • General Relativity.
<u>M. Sc Mathematics</u> (Applied Mathematics)	2011 – 2013	Department of Mathematics, University of Education, Lahore, Pakistan.	CGPA: 3.29/4.0 Division: First

PERSONAL INFORMATION

Father name: Azhar Saeed
 CNIC NO: 35202-8790640-7
 Date of Birth: 20th August, 1983.
 Place of Birth: Lahore
 Marital Status: Married

Academic Experience

- Assistant Professor (Feb. 2023 – Till date)
 Department of Mathematics,
 National University of Modern Languages (NUML), Lahore Campus, Pakistan.
- Lecturer (Sep. 2017 – Sep. 2021)
 Department of Mathematics,
 National College of Business Administration and Economics (NCBA & E) FLC
 Campus, Lahore Pakistan.

- Lecturer (Nov 2012 - June 2017)
Department of Mathematics,
Imperial College of Engineering, Lahore Pakistan.

CONFERENCES/SEMINARS ATTENDED

No.	Title of Conference	Date	Status	University Name
1	International Conference on Relativistic Astrophysics	Feb: 10-14, 2015	Participant	Department of Mathematics, University of the Punjab, Lahore, Pakistan.
2	International Conference On Recent Advances in Applied Mathematics	Dec: 17-18, 2015	Participant	Department of Mathematics, COMSATS Institute of Information Technology, Lahore.
	Workshop on Relativistic Astrophysics and Cosmology	Nov: 24-25, 2016	Participant	Department of Mathematics, COMSATS Institute of Information Technology, Lahore.
3	1st PU International Conference on Gravitation and Cosmology	Jan: 27-31, 2019	Poster presentation	Department of Mathematics, University of the Punjab, Lahore Pakistan.
4	International Conference of Recent Advances in Applied Mathematics 2019	Feb: 20-22, 2019	Speaker	Department of Mathematics, COMSATS University Islamabad, Lahore-Campus Pakistan
5	5 th UMT international Conference on Pure and Applied Mathematics 2019	March 29-31 2019	Speaker	Department of Mathematics, University of Management and Technology (UMT), Lahore
6	4th PU International Conference on Gravitation and Cosmology	Nov: 22-25, 2021	Speaker	Department of Mathematics, University of the Punjab, Lahore Pakistan
7	RAMMMA 2024	Mach: 2-3, 2024	Participant	Department of Mathematics & Statistical Sciences, Lahore School of Economics, Lahore, Pakistan

8	International Conference on Recent Trends in Mathematics	June: 1-2, 2024	Participant	Abdus Salam School of Mathematical Sciences (ASSMS), GC University, Lahore.
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RESEARCH PUBLICATIONS

1. Nadeem Azhar

“Viability of Reconstructed Bouncing Cosmologies in $f(T, \mathcal{T})$ Gravity.”

Int. J. Geom. Meth. Mod. Phys. **15(2022) 1850034 (Category X, IF=2.1).**

<https://www.worldscientific.com/doi/abs/10.1142/S0219887824503043>

2. Abdul jawad, Shama Sadiq, Nadeem Azhar and Shamaila Rani

“Chaplygin Gas Inspired Warm Inflation and Swampland Conjecture through Various Scalar Potentials.”

Chinese Physics C (2024) (Category W, IF=3.6).

<https://iopscience.iop.org/article/10.1088/1674-1137/ad4c58/meta>

3. Abdul Jawad, Nadeem Azhar, Shamaila Rani, Muhammad Rizwan Azhar and Aitazaz Ahsan

“Cosmic visualizations of equation of state parameterizations in mimetic cosmology.”

Chinese Journal of Physics **89 (2024), 429 (Category W, IF=4.6).**

<https://www.sciencedirect.com/science/article/abs/pii/S0577907324000546>

4. Nageen Pervaiz, Nadeem Azhar, Abdul Jawad and Shamaila Rani

“Cosmic and thermodynamic analysis of parameterized torsion gravity.”

Chinese Journal of Physics **88 (2024), 110-128 (Category W, IF=4.6).**

<https://www.sciencedirect.com/science/article/abs/pii/S0577907323002836>

5. Shamaila Rani, Iftikhar Ahmed, Umair Anwar, Nadeem Azhar and Abdul Jawad

“Energy conditions in $f(R, A)$ gravity”.

International Journal of Geometric Methods in Modern Physics **21 (2024), 2450070. (Category X, IF=2.1).**

<https://ui.adsabs.harvard.edu/abs/2024IJGMM..2150070R/abstract>

6. Sania, Nadeem Azhar, Shamaila Rani and Abdul Jawad

“Cosmic and Thermodynamic Consequences of Kaniadakis Holographic Dark Energy in Brans-Dicke Gravity”.

Entropy, **25(2023) 576. (Category W, IF=2.1).**

<https://www.mdpi.com/1099-4300/25/4/576>

7. Abdul Jawad, Abdul Malik Sultan and Nadeem Azhar

“Dynamics of Constant Sound Speed Inspires Warm Inflation”.

Mod. Phys. Lett. A, **37(2022) 2250166. (Category X, IF=1.594).**

<https://inspirehep.net/literature/2181388>

8. Abdul jawad and Nadeem Azhar

“ $f(T, \tau)$ Gravity and Generalized Gravitational Baryogenesis”.

Mod. Phys. Lett. A, **35(2022) 2050268. (Category X, IF=1.594).**

9. Abdul Jawad, Abdul Malik Sultan and **Nadeem Azhar**:
“Canonical Scalar Field Inflation in $f(T)$ Gravity with Well-Known Potentials”,
Astrophys. Space Sci. **367**(2022) **48** (Category X, IF=1.8).
<https://link.springer.com/article/10.1007/s10509-022-04073-2>
10. Abdul Jawad, Shamaila Rani, Sameen Ashraf and **Nadeem Azhar**:
“Barrow Holographic Dark Energy in Deformed Horava-Lifshitz Gravity”,
Int. J. Geom. Meth. Mod. Phys. **15**(2022) **1850034** (Category X, IF=2.1).
<https://www.worldscientific.com/doi/10.1142/S0219887822501122>
11. **Nadeem Azhar**, Abdul Jawad and Shamaila Rani:
“Impact of $f(G, T)$ and $f(R, G)$ on Gravitational Baryogenesis and Observational Bounds”,
Physics of the Dark Universe **32**(2021) **100815** (Category W, IF=5).
<https://www.sciencedirect.com/science/article/abs/pii/S2212686421000467>
12. Shamaila Rani and **Nadeem Azhar**:
“Braneworld Inspires Cosmological Implications of Barrow Holographic Dark Energy”,
Universe **7**(2021),**268** (Category W, IF=2.5).
<https://www.mdpi.com/2218-1997/7/8/268>
13. **Nadeem Azhar**, Shamaila Rani and Abdul Jawad:
Generalized gravitational baryogenesis of well-known $f(T, T_G)$ and $f(T, B)$ models
Physics of the Dark Universe **30**(2020)**100724** (Category W, IF=5).
<https://www.sciencedirect.com/science/article/abs/pii/S2212686420304374>
14. Abdul Jawad, Shamaila Rani, Kazuharu Bamba and **Nadeem Azhar**:
“Reconstruction of Warm Chaplygin Gas Inflationary Models”,
Mod. Phys. Lett. A, **35** (2020) **2050268** (Category X, IF=1.4).
<https://www.worldscientific.com/doi/abs/10.1142/S0217732320502685>
15. M. Umair Shahzad, **Nadeem Azhar**, Abdul Jawad and Shamaila Rani:
“Viability of Specific Reconstructed $f(T, \mathfrak{S})$ Models”,
Int. J. Mod. Phys. A, **34** (2019) **1950184** (Category X, IF=1.475).
<https://www.worldscientific.com/doi/abs/10.1142/S0217751X19501847>
16. Abdul Jawad Shamaila Rani and **Nadeem Azhar**:
“Non-flat FRW Universe Version of Tsallis holographic Dark Energy in Specific Modified Gravity”
Mod. Phys. Lett. A **34**(2019) **1950055** (Category X, IF= 1.4).
<https://www.worldscientific.com/doi/abs/10.1142/S021773231950055X>

17. Abdul Jawad and **Nadeem Azhar**:
 “Cosmic Aspects of Specific Dark Energy Model in Loop Quantum Cosmology”,
Int. J. Geom. Meth. Mod. Phys. 15 (2018) 1850170 (Category X, IF=2.1).
<https://www.worldscientific.com/doi/abs/10.1142/S0219887818501700>
18. **Nadeem Azhar**, Abdul Jawad, Sarfraz Ahmed and Iftikhar Ahmed:
 “Cosmological Implications of Dark Energy Models in Modified Gravity”,
Int. J. Geom. Meth. Mod. Phys. 15 (2018) 1850034 (Category X, IF=2.1).
<https://www.worldscientific.com/doi/abs/10.1142/S0219887818500342>
19. Abdul Jawad, Shamaila Rani and **Nadeem Azhar**:
 “Entropy Corrected Holographic Dark Energy Models in Modified Gravity”,
Int. J. Mod. Phys. D 26 (2017) 1750040 (Category X, IF=1.8)
<https://www.worldscientific.com/doi/abs/10.1142/S0218271817500407>
20. Abdul Jawad, Shamaila Rani, Ines G. Salako and **Nadeem Azhar**:
 “Non-flat Pilgrim Dark Energy FRW Models in Modified Gravity”,
Astrophys. Space Sci. 361 (2016) 286 (Category X, IF=1.8).
<https://link.springer.com/article/10.1007/s10509-016-2868-z>

Projects

Completed:

- As research assistant under the project entitled as,

"Cosmological Analysis of Extended Teleparallel Gravity with Higher-Derivative Torsional Terms"

under SRGP by HEC with grant No: 21-1112/SRGP/R&D/HEC/2016

SELF ASSESSMENT

I have a good appreciable research skill including presentation skills, reading and writing skills in English and capable of teaching mathematics at any level with a great art of transfer of knowledge to the students. I can work under stress conditions, independently and with spirit. I have good working experience with scientific tools like Mathematica, Maple, WinEdit, Latex and MS Office.

REFERENCES

- Prof. Dr. Kashif Ali**
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- Dr. Abdul Jawad**

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- **Dr. Shamaila Rani**

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