



Department of Physics
School of Sciences
Maulana Azad National Urdu University
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DR. RIZWAN UL HAQ ANSARI

CURRENT DESIGNATION/INVOLVEMENT

 Working as an Assistant Professor of Physics in School of Sciences, Maulana Azad National Urdu University (Central University), Hyderabad, Telangana, India.

RESEARCH PROFILES

Google Scholar

ID:https://scholar.google.com/citations?user=s6h8CZQAAAAJ&h

• Scopus ID: <u>22978463600</u>

• Web of Science Researcher ID:

• ORCID ID: https://orcid.org/0000-0003-3744-867X

AREA(S) OF SPECIALIZATION

Cosmology, Early Universe and Inflation, Cosmological, Perturbation theory, Study of perturbations in dark energy, Bouncing Cosmology, late time acceleration of the universe. Atmospheric Science.

ONGOING ACADEMIC RESEARCH/PROJECTS

 Currently working on looking at quantum gravity effects in warm inflationary model with various potentials, also exploring warm inflationary scenario in Conformal Cyclic Cosmology. A Study of Atmospheric Indices Over Hyderabad.

INNOVATION WITH FIELD OF STUDY AND COLLABORATIVE EFFORTS

Working on research problems in collaboration with faculty of University of Hyderabad and Ahmedabad university. Also, I have previously worked with faculty other universities/ institutes and have resulted in publications.

ACADEMIC AND ADMINISTRATIVE EXPERIENCES

- Assistant Professor, School of Sciences- Physics, Maulana Azad National Urdu University (MANUU), Gachibowli, Hyderabad.
 September 2014- Till Date
- Assistant Professor, Department Of Physics, GITAM University, Hyderabad December 2013-May 2014
- Guest Faculty Department Of Astronomy,
 Osmania University, Hyderabad
 August 2013-December 2013
- Visiting Post-Doctoral Fellow.
 Inter University Centre For Astronomy And Astrophysics (IUCAA), Pune
 2nd March 2012 To 31st August 2012
- Project Scientist Inter University Centre For Astronomy And Astrophysics(IUCAA), Pune 2nd March 2010 To 1st March 2012

Administrative responsibilities

- Assistant to Head Procurement, MANUU 23-12-2017 to 22-12-2018
- Assistant Dean students' welfare, MANUU 26-04-2016 to 23-12-2017
- Academic Coordinator, Department of Physics, MANUU December 2016 to 2019, November 2021- till date
- Nodal teacher for Gender Champions programe of Ministry of women and Child Development and MHRD, 31-10-2016 31-10-2017

EDUCATIONAL QUALIFICATIONS

Ph.D. (Physics), School of Physics,
 University of Hyderabad, Hyderabad. 2009

TEACHING PROFICIENCY

• Effectively taking both theory and laboratory courses assigned for UG and PG classes.

RESEARCH PUBLICATION DETAILS

20. Higher-order quantum gravity correction on inflationary dynamics, Somnath Das, Rizwan Ul Haq Ansari, and P. K. Suresh, International Journal of Modern Physics DVol. 34, No. 04, 2550010 (2025)

- **19.** An analytic study of hybrid inflationary model with quantum gravity corrections, M A Moiz and Rizwan Ul Haq Ansari, J. Phys. Commun. 9 025001 (2025).
- **18.** Fluorescent/ Photoluminescent Carbon Dots as a Sensor for the Selective and Sensitive Detection of Fe3+/Fe2+ Metal Ions. A Review of the Last Decade. M Shahbaz, U Salma, MZ Alam et al. J Fluoresc (2025)
- **17.** Trend Analysis of Atmospheric Lifted Index, Precipitable Water, and Rainfall Over Hyderabad, India, M.Taiyab, MS Begum, Rizwan Ul Haq Ansari, M. K. Rahiman, H. Aleem Basha, Curr World Environment, 19, 3 (2024).
- **16.** Significance of the Lifted Index in Atmosphere, M.Taiyab, Rizwan Ul Haq Ansari, M. K. Rahiman, H. Aleem Basha, Int Journal of Ecology and Environmental Sciences, 50, 2, 167, (2024).
- **15.** Impact of Surface Dew Point Temperature, Precipitable Water and the Lifted Index on the Precipitation Over Hyderabad(India). M.Taiyab, Rizwan Ul Haq Ansari, M. K. Rahiman, H. Aleem Basha, Curr World Environment, 19,1 (2024).
- **14.** Afrat-e-Kaiynat-Humaari Kaiynat ka hairat angez Mazhar (Inflation an amazing phenomenon in our universe), M.A. Moiz and Rizwan Ul Haq Ansari, Quami Zaban,8,1, 72(2023). published in urdu language by Telengana urdu academy.
- **13.** Taareek Maada- Humaari kaaynat ka Purisraar Hissa (Dark matter-impactful component of the universe), M.A. Moiz and Rizwan Ul Haq Ansari, Science ki duniya, 48, 4, 32 (2022), published in urdu language by (CSIR-NIScPR).
- **12.** Modified Theory of Gravity and Clustering of Multi-Component System of Galaxies, Mir Hameeda, Behnam Pourhassan, Mir Faizal, C. P. Masroor, Rizwan Ul Haq Ansari, P. K. Suresh, The European Physical Journal C, 79,769, (2019).
- 11. Effect of dark energy sound speed and equation of state on CDM power spectrum, Rizwan ul Haq Ansari and Sanil unnikrishnan, Journal of Physics: Conference Series (2014) 484 012048.
- **10.** Evolution of the density parameter in the anisotropic DGP braneworld cosmology, Rizwan ul Haq Ansari and P K Suresh, Int Journal of Mod Phys D 20, No. 13 2599, (2011).
- **9.** Phase transitions in higher dimensional cosmology, Rizwan ul Haq Ansari and P K Suresh, Int Journal of Mod Phys A 25 No.1 113, (2010).

- **8.** Cosmology from anisotropic DGP Braneworld, Rizwan ul Haq Ansari and P K Suresh, Int Journal of Mod Phys D 19 No. 3 233 (2010).
- **7.** DGP Cosmology in Bianchi-I brane ,Rizwan ul Haq Ansari and P K Suresh, Phys Rev D 78, 043533 (2008).
- **6.** Bulk scalar Field in DGP Braneworld cosmology, Rizwan ul Haq Ansari and P K Suresh, JCAP 09 (2007) 021.(2008)
- **5.** On the one loop correction of Phi⁴ theory in Higher Dimensions, Rizwan ul Haq Ansari and P K Suresh, Int Journal of Mod Phys A 22 No.29 5369, (2007).
- **4.** Transplanckian Physics from Cosmology, S Joras, G Marozzi and Rizwan ul Haq Ansari, Published in proceedings of Les Houches Summer school, France, Session 86, pg no:525, Elsevier publications.
- **3.** Braneworld graviton interactions in early universe phase transitions, Rizwan ul Haq Ansari, Cedric Delaunay, Rhiannon Gwyn, Anke Knauf, Alexander Sellerholm, Nausheen R. Shah, Federico R. Urban, Published in proceedings of Les Houches Summer school, France, Session 86, pg no:537, Elsevier publications. arXiv: hep-ph/0612321.
- **2.** Perturbations in dark energy models with an evolving speed of sound, Rizwan ul Haq Ansari and S. unnikrishnan (arXiv: 1104.4609)
- 1. Finite temperature effects in brane cosmology Rizwan ul Haq Ansari, PK Suresh. arXiv preprint gr-qc/0408075

DETAILS OF CONFERENCE/ SEMINAR /WORKSHOP/ FDP (ATTENDED/ PRESENTED)

Presentations:

- 13. Revisiting Coleman-Weinberg potential in a inflationary Universe, talk given at International Science Conference, MANUU, 27-28, February 2023.
- 12. Cosmology-Unravelling the Mysteries of Universe, invited talk at Certificate course in Astronomy & Astrophysics, Dept of Astronomy, Osmania University, 19 July 2019.
- 11. Dark Energy-the unknown component of our universe, Talk given at National Urdu Science Congress-2019, Maulana Azad National Urdu University, Hyderabad 1-2, March 2019.
- Cosmology From theoretical to Precision Science, Talk given at National Urdu Science Congress-2018, Maulana Azad National Urdu University, Hyderabad 8-9, February 2018.

- 9. Cosmology- From Big Bang to Present, talk given at FOUNDATIONS OF ASTRONOMY AND ASTROPHYSICS, Certificate course in Astronomy & Astrophysics, Dept of Astronomy, Osmania University, 22 July 2017.
- 8. Effect of dark Energy Sound Speed on the CDM Power Spectrum, Talk given at International Workshop on dark energy, CTP, Jamia Millia Islamia, New Delhi, 21-23, December, 2011.
- 7. Perturbations in dark energy models with evolving sound speed, Poster presented at International conference on cosmology and gravitation ICGC 2011, Goa, 14-19, December, 2011.
- 6. Effect of dark Energy Sound Speed on the CDM Power Spectrum, Talk given Indian Conference on Cosmology and Galaxy Formation, IISER, Mohali, 5-7, November, 2011.
- 5. Cosmology and Extra Dimensions, Talk given for Vacation students' progrmme/Summer school, IUCAA, PUNE, May-June, 2010.
- 4. Anisotropic DGP braneworld cosmology, Talk given at 2nd Indo-Japan workshop on Gravitation and Cosmology, Jamia Millia Islamia, Delhi, 29-30 December 2009.
- 3. 3. Dynamics of DGP cosmology with a Bulk field, Talk given at ICSW07, 4th June 2007 Tehran, Iran.
- 2. Introduction to DGP model, Talk given at IUCAA Reference Centre, University of North Bengal, 20th August 2009.
- 1. Effects of Shear in DGP braneworld cosmology, Talk given at Physics Department, Cochin university of Science and technology, Kochi, 9th October 2009.

Attended:

- 17. International Workshop on Emerging Trends in Gravitation and Cosmology (IWETGC 2021), Department of Mathematics, Presidency University, Kolkata, India, from 16th December to 19th December, 2021.
- **16.** National Seminar on Recent Advances in Astrophysics and Cosmology by ICARD, NBU (March 24-25, 2021).
- **15.** 30th meeting of Indian Association for General relativity and Gravitation(IAGRG)-2019, BITs Hyderabad (03-05 January, 2019)

- **14.** Invisible matters: Neutrino and Dark matter, Physics Department, IIT Hyderabad (29-31 October, 2014)
- **13.** Frontiers in Physics, School of Physics, University of Hyderabad (17-18, October, 2014)
- **12.** Frontiers in Physics, School of Physics, University of Hyderabad (20-22, September, 2013)
- **11.** International conference on gravitation and Cosmology, Goa, (14-19 December, 2011).
- **10.** Primordial Features and Non-Gaussianities (PFNG), HRI Allahabad (December 14-18, 2010).
- 9. 2nd Indo-Japan workshop on Gravitation and Cosmology, Jamia Millia Islamia, Delhi (29-30 December, 2009)
- **8.** Summer School on Cosmology, International centre for theoretical physics, Trieste, Italy, (21July-1August, 2008).
- 7. IPM Cosmology School and workshop, Tehran, Iran (June 2-9,2007).
- **6.** Summer School on "Particle Physics and cosmology: Fabric of space time", Les houches, France, (August 2006).
- **5.** Workshop on Some Aspects of Quantum Mechanics at Center for learning, Bangalore, India(January 2005).
- **4.** Main SERC School on High Energy Physics at University of Rajasthan, Jaipur , India (February 2004).
- **3.** Workshop on Galaxies: Structure and Dynamics at Osmania University, Hyderabad, India (January 2004).
- **2.** Preparatory SERC School on High Energy Physics at University of Hyderabad. Hyderabad, India (November 2003).
- 1. DAE Symposium on High Energy Physics at University of Hyderabad, Hyderabad, India (December 2000).

ETAILS OF SUPERVISION (M.PHIL/M.TECH/PH.D.) • Three students are pursuing Ph.D under my supervision.

PROFESSIONAL MEMBERSHIPS

- Member, Board of studies, Department of Astronomy, Osmania University
- Visiting Associate of Inter-university Centre for Astronomy and Astrophysics, Pune from August1, 2015 to 2024

PROFESSIONAL ACTIVITIES

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ACHIEVEMENTS

- JRF-UGC Research Fellowship for meritorious students (2007-2009)
- IUCAA Post Doctoral fellowship- Project Scientist (2010-2012)

PERSONAL DETAILS Father's Name : Hamid Ali Ansari

Date of Birth :

Gender : Male
Marital Status : Married
Nationality : Indian

Language Known: Urdu, English, Hindi, Telugu

Date: 14-06-2025

Place: Hyderabad Name: Rizwan ul Haq Ansari

[Last update on 14/06/2025]