Curriculum Vitae

Dr. Sarfraz Ali

Assistant Professor
Department of Mathematics,
University of Education Lahore
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PERSONAL INFORMATION

Father's Name	:	Muhammad Irshad
Date of Birth	:	20th October 1980
CNIC No.	:	33100-0806671-7
Passport No.	:	R8156811
Marital Status	:	Married
Religion	:	Islam
Nationality	:	Pakistani

ACADMIC INFORMATION

- PhD (Mathematics) Thesis Title: Some Important Aspects Of General Relativity In Chern-Simons Modified Gravity.
  University of Sargodha, Sargodha 2012-2018
- M.Phil. (Mathematics)
  GC University Lahore. 2006-2008
- M. Sc. (Mathematics)
  University of Sargodha, Sargodha. 2003-2005
- B. Ed. (General)
  Allama Iqbal Open University, Islamabad. 2004-2005
- B. Sc. (Mathematics A, Mathematics B, Physics)
  University of the Punjab, Lahore. 1999-2001
- F. Sc. (Chemistry, Mathematics, Physics)
  BISE Faisalabad. 1997-1999
- Matric (Biology, Chemistry, Mathematics, Physics)
  BISE Faisalabad 1995-1997

PROFESSIONAL EXPERIENCES

- Assistant Professor of Mathematics (Dec.2021 To date)
  University of Education Lahore (Faisalabad Campus)
- Lecturer in Mathematics (Nov.2016 to Dec. 2021)
  University of Education Lahore (Faisalabad Campus)
- Lecturer in Mathematics (Oct. 2007 to Nov. 2016)
  University of Education Lahore (Okara Campus)
- Coordinator Department of Mathematics (Oct. 2016 Nov. 2018)
  University of Education Lahore (Faisalabad Campus)
- Coordinator Department of Mathematics (Oct. 2010 to Nov. 2012)
  University of Education Lahore (Okara Campus)
- In-charge Internal Examinations (Nov. 2016 to Feb 2018)
  (Faisalabad Campus)
- In-charge Internal Examinations (Nov. 2011 to Nov. 2012)
  University of Education Lahore (Okara Campus)
- Estate officer (Feb. 2023 to Aug. 2023)
  University of Education Lahore (Faisalabad Campus)

RESEARCH ACTAVITIES

Published Papers:

1. Sarfraz Ali, Muhammad Awais and Muhammad Hussain, *Cosmic Dynamics Unveiled in Chern-Simons Modified Gravity with Holographic Dark Energy Model* **Indian Journal of Physics**, DOI10.1007/s12648-024-03243-y (2024).
2. Wasib Ali, Umber Sheikh, Sarfraz Ali, and Muhammad Jamil Amir *Exploring the physical properties of strange star SAXJ1808.4–3658 in rainbow gravity*, **International Journal of Geometric Methods in Modern Physics,** https://doi.org/10.1142/S0219887824501998 (2024).
3. Sarfraz Ali, Muhammad Kamran and Umber Sheikh; Cosmic *Implications of Kaniadakis HDE Model in Chern-Simons Modified Gravity*, **New Astronomy** 110(11):102226 (2024), DOI:10.1016/j.newast.2024.102226
4. Ukasha Tasleem, Umber Sheikh and Sarfraz Ali, *Compact Object Formation from Collapsing Magnetized Strange Quark Matter in Rainbow Gravity*, **International Journal of Geometric Methods in Modern Physics,(2023)** https://doi.org/10.1142/S0219887824500300.
5. Sarfraz Ali, Zulaikha Mukhtar, *Cosmic Implications of Generalized HDE Model in FRW Universe*, **New Astronomy 104 (2023) 102084. DOI.** 10.1016/j.newast.2023.102084.

6. Sarfraz Ali, Maryam Saif, Khuram Ali Khan, Nehad Ali Shah and Wajaree Weera, A Note on Varying G and L in Chern–Simons Modified Gravity, **Symmetry (2022),** 14, 1430. https://doi.org/10.3390/sym14071430.
7. Sarfraz Ali and Muhammad Siddique, *Time Dependent Gravitational Constant in Chern Simons Modified Gravity,* **Iranian Journal of Physics Research** Vol.21**(2022)**3.
8. Sarfraz Ali, Sarfaraz Khan, Sadia Sattar and Amare Abebe, *The Renyi holographic dark energy model in Chern-Simons gravity: some cosmological implications,* **International Journal of Geometric Methods in Modern Physics,** Vol. 19, No. 01, 2250001 **(2022)**. https://doi.org/10.1142/S0219887822500013
9. Sarfraz Ali, Muhammad Hummad Waheed, Muhammad Imran Asjad, Khuram Ali Khan, Thanin Sitthiwirattham and Chanon Promsakon, *The Sharma–Mittal Model's Implications on FRW Universe in Chern–Simons Gravity*. **Universe (2021),**7,428.https://doi.org/10.3390/universe7110428.
10. Sarfraz Ali, Sabir Iqbal, Khuram Ali Khan and Hamid Reza Moradi *Amended FRW Metric and Rényi Dark Energy Model*, **Advances in High Energy Physics** Volume 2021, Article ID 9704909, **(2021).** *IF 1.777*
11. Sarfraz Ali and M. Jamil Amir, *A Study of Important Solutions in Chern-Simon Modified Gravity.* **Indian Journal of Physics** 94, 1837–1845 **(2020).** IF 1.407
12. Sarfraz Ali and M. Jamil Amir, *Cosmological Analysis of Modified Holographic Ricci Dark Energy in Chern-Simon Modified Gravity.* **Advances in High Energy Physics** Volume 2019, Article ID 3709472 https://doi.org/10.1155/2019/3709472 (2019). *IF 1.777*
13. Sarfraz Ali and M. Jamil Amir, *Energy-Momentum Distribution of Six Dimensional Geometric Model of Gravitational Field,* **Universal Journal of Mathematics and Applications**, 2(2019) 141-147.
14. Sarfraz Ali and M. Jamil Amir, A Study of Holographic Dark Energy Models in Chern-Simon Modified Gravity, **International Journal of Theoretical Physics**. (2016) **55,** 5095 *IF 1.708*
15. M. Jamil Amir, Sarfraz Ali, *Spherical Symmetric Gravitational Collapse in Chern-Simon Modified Gravity,* **International Journal of Theoretical Physics**. (2016) 55:2040–2052. *IF 1.708*
16. M. Jamil Amir, Sarfraz Ali, *Ricci Dark Energy of Amended FRW Universe in Chern-Simon Modified Gravity,* **International Journal of Theoretical Physics**. *(2015) 54:1362. IF 1.708*
17. M. Jamil Amir, Sarfraz Ali, Tariq Ismaeel, Energy-Momentum Distribution of Non-Static Plane Symmetric Spacetimes in General Relativity and Teleparallel Theory, **Chinese Journal of Physics**, Vol. 50, 1(2012)14- 27. IF 3.237.

RESEARCH SUPERVISION

MS Mathematics Thesis Supervision

Sr.#	Registration #	Student Name	Thesis Title
1	21-UE-05181 (2021-23)	Muhammad Awais	Variational Impact of Cosmological and Gravitational "Constants" in Chern Simons Modified Gravity.
2	21-UE-05300 (2021-23)	Muhammad Hasnain	The Cosmological Dynamics of New Tsallis Agegraphics Dark Energy in Chern Simons Modified Gravity.
3	21-UE-04526 (2021-23)	Mohammad Kamran	Cosmic Implications of Kaniadakis Holographic Dark Energy Model in Chern-Simons Modified Gravity.
4	21-UE-04493 (2021-23)	Mobin Akhtar	Analysis on the Reducibility of Quasi-periodic Linear Hamiltonian System Under Brjuno-Russmann Condition.
5	21-UE-04974 (2021-23)	Kashif Ali	Reducibility of Non-linear Quasi-periodic Systems with Small Perturbation Parameter Near Brjuno Russmann Condition.
6	21-UE-05103 (2021-23)	Muhammad Waqas	With Small Parameters of the Class of Quasi-periodic Non-linear Hamiltonian Systems Using Brjuno Russmann Condition.
7	Reg. No.22-UE-05201	Saima Sattar	Scalar Field Models as a Bridge to Understanding HDE Model in Chern-Simons Modified Gravity.
8	Reg. No. 18-UE-02803	Hijab Zahra	Temporal Evolution of Gravitational and Cosmological Constants in Chern-Simons Modified Gravity
Co-Supervised MS Mathematics Thesis			
9	Riphah International University Faisalabad Campus (2018).	Muhammad Siddique	The study of Dark Energy Model with Time Dependent Gravitational Constant in Chern-Simons Modified Gravity.
10	Riphah International University Faisalabad Campus (2018)	Ayesha Bibi	Some Important Solutions in Modified Brans-Dicke Theory.
11	Riphah	Iqra Jamil	Cosmological Analysis of Some Important Metrics in Brans-Dicke Theory.

	International University Faisalabad Campus (2018)		
12	Riphah International University Faisalabad Campus (2018)	Iqra Shehzadi	Study of FRW Model Using Higher Derivatives of the Hubble Parameter H in Chern-Simons Modified Gravity

BS Mathematics Thesis

1	19-UE-03125 (2019-23)	Ahsan Ameer	Cosmic Aspects of HDE Model
2	19-UE-03085 (2019-23)	Suban Khalid	A Study on Cosmological Parameters and Their Implications.
3	19-UE-02981 (2019-23)	Muhammad Ali	Analysis of Cosmological and Gravitational Constant
4	19-UE-02464 (2019-23)	Munawar Abbas	Cosmological Constraints of Special form of HDE Model
5	19-UE-02420 (2019-23)	Ali Sufyan Afzal	Study of Holographic Dark Energy Model and Cosmological Parameters
6	19-UE-02964 (2019-23)	Abdul Hafeez	Cosmological Study of Ricci Holographic Dark Energy Model
7	19-UE-02720 (2019-23)	Muhammad Nasir	A Note on AFRW Model in CS Gravity
8	Reg. No: 20-UE-04753 (2020-24)	Shahram Arshad	Time-Dependent Gravitational and Cosmological Constants in Bianchi Type-V Cosmological Model"
9	Reg. No.20-UE-04861 (2020-24)	Muhammad Khaleel Iqbal	Exact Solutions and Adjustable Parameters for Anisotropic Cosmological Models"
10	Reg. No.20-UE-04529 (2020-24)	Muhammad Danish Asif	Hypergeometric Solutions and Emden-Fowler Equation in Homogeneous Anisotropic Cosmology
11	Reg. No.20-UE-04533 (2020-24)	Mujeeb Ul Hassan	Dynamics of Cosmological and Gravitational Constants: An Analytical Study in Bianchi Type-V Model

12	Reg. No.20-UE-04027 (2020-24)	Qamar Zulfiqar	Hypergeometric Function and Emden-Fowler Equation: Solutions for Anisotropic Cosmology
13	Reg. No. 20-UE-04703 (2020-24)	Irfan Ali	Behavior of Cosmological and Gravitational Constants in Homogeneous but Anisotropic Cosmology
14	Reg. No. 20-UE-04648 (2020-24)	Muhammad Waleed Iqbal	Isotropization and Anisotropy Growth in Bianchi Type-V Cosmological Models

International Journal Reviewer

- Indian Journal of Physics Springer
- General Relativity and Gravitation.
- IOP Publishing
- Advances in High Energy Physics
- International Astronomy and Astrophysics Research Journal.
- Universe
- International Journal of Astronomy and Astrophysics
- International Journal of Geometric Methods in Modern Physics.
- Qeios.
- Journal of Modern Physics

CONFERENCES ATTENDED/ PRESENTED

- 2nd International Conference on Recent Advances in Mathematics - CORAM 2023.
- The 6th International Conference on "Pure and Applied Mathematics" (ICPAM) December 6, 2023.
- .Two days International Conference on Pure and Applied Mathematics Nov 21-22 2018 University of Sargodha, Sargodha Pakistan
- Two days International Conference on Pure and Applied Mathematics Nov 09-10 2017 University of Sargodha, Sargodha Pakistan.
- 16th Canadian Conference on General Relativity and Relativistic Astrophysics (24859) Simon Fraser University 8888 University Drive, Burnaby, BC V5A 1S6 Canada. July 06-08, 2016.
- 4th Italian-Pak workshop on Relativistic Astrophysics Feb 15-17 2013, CAMP, NUST. Islamabad, Pakistan.
- 8th Symposium on “Computational Complexities, Innovations and Solutions (CCIS)” 27-28 May, 2013 held at CIIT, Abbottabad, Pakistan.

- 5th International Conference on Recent Developments in Fluid Mechanics June 24-26, 2013 held at Department of Mathematics, Quaid-i-Azam University Islamabad Pakistan.
- One-day Symposium on Pure and Applied Mathematics Jan 01, 2014 University of Sargodha, Sargodha Pakistan.
- 9th Symposium on CCIS, May 12-13, 2014, Math Dept. CIIT Abbottabad.
- International Conference on Relativistic Astrophysics Feb 10-14, 2015 held at Punjab University, Lahore, Pakistan.

SEMINORS / WORKSHOPS ORGINISED

- Important Aspects of Mathematics and Higher Studies, 10th May 2018 University of Education Lahore, Faisalabad Campus.
- One-day Workshop on Mathematical Tools and their Applications 2nd June 2022, University of Education Lahore, Faisalabad Campus.

COURSES TAUGHT

- Calculus
- Classical Mechanics
- Multivariable Calculus
- Linear Algebra
- Vector and Tensor Analysis
- Methods of Mathematical Physics
- PDE and ODE
- Differential Geometry
- Riemannian Geometry
- Special Relativity
- General Relativity

AWARDS/ CERTIFICATES

- **5000 Indigenous Scholarship Program for Ph. D., Phase-I**, HEC, Govt. of Pakistan for MPhil (2006-08) and PhD (2012-16).
- **International Research Support Initiative Program**, HEC Scholarship for Six Months for University of British Colombia Canada.

OTHER INFORMATION

Computer Literacy:

- Microsoft Word, PowerPoint and Excel
- Typesetting with TeX & LaTeX
- Mathematica, Maple. Matlab

Languages

- Fluent in Urdu & Punjabi
- Conversational English

INTERNATIONAL COLLABORATORS

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REFERENCES

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