




KIRORI MAL COLLEGE, UNIVERSITY OF DELHI



Title	Dr.	First Name	AGAM	Last Name	JHA	Photograph
Designation	ASSOCIATE PROFESSOR					
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Educational Qualifications						
Degree	Institution				Year	
Ph. D.	Department of Physics and Astrophysics, University of Delhi, Delhi				2007 (Thesis Title: Some Aspects of Quark Hadron Phase Transition)	
M. Sc. (Physics)	Ramjas College, University of Delhi, Delhi				2000	
Career Profile						
<ul style="list-style-type: none"> ➤ Taught Undergraduate Courses in Kirori Mal College, Delhi (Delhi University, Delhi, India) as a lecturer on an ad-hoc basis from 05-11-2003 to 04-12-2003. ➤ Taught Undergraduate Courses (Thermal Physics, Electricity and Magnetism, Properties of Matter and various experiments. Apart of these helping 3rd Year students during their project work) in Sri Venkateswara College, Delhi (Delhi University, Delhi, India) as a lecturer on an ad-hoc basis from 09-08-2004 to 17-11-2005 as well as from 01-05-2006 to 07-01-2007 and on temporary basis from 18-11-2005 to 30-04-2006 & also from 8th January 2007 to 6th June 2010. ➤ Taught a paper "Radiation Technology and its Applications" to M. Tech. in Nuclear Science and Technology at Department of Physics and Astrophysics, University of Delhi from 17-08-2009 to 27-11-2009 (1st Semester) and Augt. 2013 to Nov. 2013 (1st Semester) as a 						

Guest Lecturer.

- **Working as an Associate Professor, permanent basis, in the Department of Physics, Kirori Mal College, University of Delhi since 7th June 2010 to till date.**

Administrative Assignments

- Worked as a member of Placement Cell (constituted by the Staff Council of the College) from 2010-2015 & 2016-2021. At Present, also contributing as the member of the cell.
- Working as a member of Internal Assessment Committee (constituted by the Staff Council of the College) since 2010.
- **Worked as a Convener of the Library Committee (Constituted by the Staff Council of the College) from May, 2015 to April, 2017.**
- **Worked as a Convener of SPIC-MACAY KMC CHAPTER during May, 2017-19.**
- Pursing as a member of the Research Cell in the college.
- Worked as a Convener of a **Maintenance and Development Committee** (constituted by the college) during May, 2018 to April, 2019. **And still contributing in the committee as a member.**
- Pursuing as a member of **Central Purchased Committee (CPC)** since 2015 (During 2016-17 worked there as a **convener**).
- Worked as a **Teacher-in-Charge (TIC), Department of Physics**, Kirori Mal College during May, 2018 to May, 19.
- Worked as a convener of **Centralized Computer Committee (CCC)** since 2019. **At Present (2021), continuing as a convener of Coordination Committee of IT (CCIT) of the college.**
- University assigned work as a member to participate in the syllabus (B. Sc. (Hons.) Physics making process during early **2013**.
- University assigned work to participate in the modification of the B. Sc. (Hons.) Physics CBCS syllabus during early **2015**.
- University assigned work to participate in the modification of the B. Sc. (Hons.) Physics

CBCS LOCF syllabus during early 2018-19 .
Areas of Interest / Specialization
Pursuing research in Quark-Gluon Plasma (QGP) (Theoretical High Energy Physics). Also working in Neutrino Physics.
Subjects Taught
<ul style="list-style-type: none"> ➤ Taught Undergraduate Courses Mathematical Physics (Complex Analysis, Differential Equations, Special Functions, Linear Algebra, Fourier and Laplace Transforms, Tensor Analysis, Calculus of Variation, Group Theory and Advanced Theory of Probability), Electricity and Magnetism, Thermal Physics, Waves and Optics. Also supervised their Physics Laboratory courses. ➤ Taught a paper “Radiation Technology and its Applications” to M. Tech. in Nuclear Science and Technology at Department of Physics and Astrophysics, University of Delhi from 17-08-2009 to 27-11-2009 (1st Semester) and Augt. 2013 to Nov. 2013 (1st Semester).
Research Guidance
<ul style="list-style-type: none"> ➤ Guided students at Undergraduate and Postgraduate levels in their Physics Projects and dissertations. ➤ Mr. Abdul Hamid Nanda defended his thesis “Dynamics of Heavy-ion Collisions in Thermal Model Approach” in April, 2021 at Department of Physics, Jamia Millia Islamia under my supervision (Co-supervisor) and got Ph. D. degree awarded.
Publications Profile
<ul style="list-style-type: none"> ➤ A paper "Simple statistical model for analysis of quark-gluon plasma droplet (fireball) formation" published in Physical Review C 70, 027903 (2004). Preprint of this paper in arXiv (http://xxx.lanl.gov) hep-ph/0406092. ➤ A paper “The Interfacial Surface Tension of a Quark-Gluon-Plasma Fireball in a Hadronic Medium” published in Pramana 68, No. 5, 757 (2007) (Also Published by Springer). ➤ A paper “Effect of the curvature on a statistical model of Quark-Gluon-Plasma fireball in the hadronic medium” published in Pramana – Journal of Physics Vol. 74, 27 (2010) (Also Published by Springer). Also in arXiv (http://xxx.lanl.gov) 0807.4827 (hep-ph).

- A paper “Effect of finite chemical potential on QGP-Hadron phase transition in a statistical model of fireball formation” published in **Indian Journal of Physics Vol. 85, No. 6, pp 885-889, June, 2011 (Also Published by Springer)**. Preprint of this paper in arXiv (<http://xxx.lanl.gov>) **0802.2433**.
- A paper “CPT violating neutrino oscillation under planck scale effects” published in **International Journal of Theoretical Phys. 50 2609-2613 (2011)**.
- A paper “Nucleation rate of Quark-gluon plasma droplet at finite quark chemical potential” published in **Pramana-Journal of Physics Vol. 78, No. 5, pp 719-728, May 2012 (Also published by Springer)**.
- A paper “Restudy of Surface tension of QGP with one-loop correction in the mean-field potential” published in **International Journal of Modern Physics A Vol. 29, No. 20 (2014) 1450097 (World Scientific)**.
- A paper “Phenomenological Study of QGP-fireball Thermodynamics” published in **Proceedings of the DAE Symposium on Nucl. Phys. 58 (2013)**.
- A paper “Velocity of sound in a Quark-Gluon Plasma with one loop correction in mean field potential” published in **Proceedings of the DAE Symp. On Nucl. Phys. 59 (2014)**.
- A paper “ Modified Surface Tension of a QGP-Droplet Under One Loop correction in Peshier Potential” published in **Proceedings of the Indian National Science Academy Volume 81(1) 2015**.
- A paper “QGP-Hadron Phase structure in a statistical model using Cornell, Richardson & Peshier potentials” published in Proceedings of the DAE-BRANS symp. on Nucl. Phys. 60 (2015).
- “A Density of States for QGP Fireball Formation in Heavy Ion Collisions Incorporating Hydrodynamical Features in the model” published as a chapter in **XXII DAE High Energy Physics Symposium, Springer Proceedings in 2018**.
- “Quark Gluon Plasma (QGP) Evolution under Loop Corrections” published in **International Journal of Scientific Research in Physics and Applied Sciences in Dec., 2020**.
 - “Quantum gravity Effects on Oscillatin Parameters in a Four Flavor

**Framework” published in International Journal of Theoretical Physics
(2021) 60:1920–1932, May (2021).**

Conference Organization/ Presentations (in the last three years)

- Attended an International Conference on **Light Cone Relativistic Hadronic & Particle Physics** during 10-15 December 2012 at University of Delhi, Delhi.
- Attended and presented a paper “Phenomenological Study of QGP-fireball Thermodynamics” in an **International DAE symposium on Nuclear Physics at BARC, Mumbai** during 2-6 December 2013.
- Attended and presented a paper in an **International Conference on Matter at Extreme Conditions: Then and Now** during **15-17 January 2014** at S. N. Bose Institute, Kolkata.
- Attended and presented a paper in an **International Conference on Physics and Astrophysics of Quark-Gluon Plasma (ICPAQGP) 2015** at SINP-VECC in Kolkata from 1st February 2015 to 6th February 2015.
- Attended and presented a paper “A density of states for QGP fireball formation in heavy ion collisions incorporating hydrodynamical features in the model” in XXII DAE-BRNS High Energy Physics Symposium from 12 December 2016 to 16 December 2016 at the Department of Physics and Astrophysics, University of Delhi, Delhi (India).
- Attended a Refresher Course in PHYSICS at CPDHE, University of Delhi, Delhi from October, 2016 to November 2016.
- Presented a paper in XXXII Annual IAPT Convention 2017 and National Symposium on Recent Trends In Physics at Different Scales during October 29-31, 2017 at Department of Physics, Gurukula Kangri Vishwavidyalaya, Haridwar..
- Presented a paper in Symposium on Advances in Physics from Small to Large Scales during March 27-28, 2018 at Department of Physics (UGC-Centre of Advanced Study), Kumaun University, Nainital.
- Attended one week Faculty Development Programme on “Biomathematics” (August 1st to August 7th, 2019) at Shivaji College, University of Delhi, Delhi in collaboration with Mahatma Hansraj Faculty Development Centre Hansraj College, University of Delhi.

- **Attended one week FDP entitled “Emerging Areas of Engagement in Pedagogy and Research” at Shyamal College, Univ. of Delhi, Delhi under Guru Angad Dev Teaching Learning Centre of MHRD, SGTB and NIEPA during 24-30 November 2018.**

Research Projects (Major Grants/Research Collaboration)

- (1) Successfully completed a project “Innovation Project (2012-13) (KMC-101)”, sponsored by University of Delhi, Delhi, as Principal Investigator (PI). The title of the project is “Study on Quark Gluon Plasma (QGP) and Neutrino Physics”. The amount granted under the Project was Rs. 1000000 only.**
- (2) Successfully completed a project “Innovation Project (2013-15)”, sponsored by University of Delhi, Delhi, as Principal Investigator, having title “Study on Quark Gluon Plasma (QGP) and Neutrino Physics (Extension)”. The amount granted under the project was Rs. 6, 00000 only.**

Awards and Distinctions

- **Qualified CSIR-UGC National Eligibility Test (NET) – June 2000, for Lectureship and awarded Junior Research Fellowship (JRF) – July 2001, by Council of Scientific and Industrial Research (CSIR), India. Also got upgraded as Senior Research Fellow (SRF) of CSIR in 2003.**
- **Cleared Graduate Aptitude Test in Engineering (GATE) – 2000 Exam in Physics.**

Association With Professional Bodies

N.A.

Other Activities

Passionate to Social and Community **Services**, Composing **Poems**, Playing & watching cricket, listening to light music and writing **articles** in daily news papers.

Agam Kumar Jha

(Dr. Agam Kumar Jha)

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