

CURRICULUM VITAE

Dr. Amrita

Assistant Professor, Department of Physics,

Patna Women's College, Patna University

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Looking forward to become a star performer in all given assignments to me. I possess a dynamic positive attitude which offers advancement in the challenging field of research, teaching and leadership.

Professional Synopsis

- ⇒ A dynamic professional with **1 year** of rich experience in assisting HOD – Physics Post Graduate department as Teaching Asst.
- ⇒ Expertise in Matlab, Mathematica, C++, C, MS DOS, MS Office.
- ⇒ An effective communicator with good relationship management.

Professional Experience

- **Present Institution:** Department of Physics
Patna Women's College,
Patna University, Patna.
 - ❖ **Designation:** Assistant Professor.
 - ❖ **Period:** 21st Aug'2017- till date.
 - ❖ **Job Responsibilities:**
 - ⇒ To take Lectures in B. Sc courses.
 - ⇒ To participate in event management of the activities conducted in the department/ by the department.
- **Previous Institution:** Centre for Applied Physics,
Central University of Jharkhand, Ranchi.
 - ❖ **Designation:** Guest Faculty.
 - ❖ **Period:** Feb'15- Dec'15.
 - ❖ **Job Responsibilities:**
 - ⇒ Take lectures in B.Sc/M.Sc courses.
- **Prior Institution:** Ranchi University. (P.G Deptt. Of Physics)

- ❖ **Designation:** Teaching Asst.
- ❖ **Period:** Jan'09 – Dec'09.
- ❖ **Job Responsibilities:**
 - ⇒ To take practical as well theory classes of M.Sc. 1st year.
 - ⇒ To help department to organize & Present seminars for Ph.D.

Fellowship

- **Institution:** Ranchi University. (P.G Deptt. Of Physics)
 - ❖ **Designation:** Project Fellow, UGC Major Research Project.
 - ❖ **Period:** July'10 – Jan'13.
 - ❖ **Job Responsibilities:**
 - ⇒ Carry on the research work under the UGC Major Research Project.
 - ⇒ Ph.D work.

Computer Skills

- **Operating Systems** : MSDOS, Windows XP, 2007.
- **Computer Languages** : C and C++ .
- **Scientific Applications** : MATLAB, Mathemaica.
- **Office Applications** : Microsoft PowerPoint, Excel, Word.

Educational Qualifications

- 2010-2013** *Ph.D in Physics from Ranchi University*
Thesis title: “Study of non-classical properties in two/multi photon processes with special reference to quantum entanglement.”
Percentage: 86.2 (in course work)
- 2006-2008** *M.Sc in Physics from Ranchi University*
Percentage: 78.06(First Class First)
- 2003-2006** *B.Sc in Physics Hons. from St. Xavier’s College, Ranchi University*
Percentage:80.75 (First Class First)
- 2001-2003** *I.Sc from St. Xavier’s College, J.I.E.C*
Percentage: 73
- 2001** *A.I.S.S.E (Matriculation) from C.B.S.E*
Percentage: 85.6

- **Academic Achievements:**
 - ❖ **Topper** -B.Sc. - Physics, Ranchi University.
 - ❖ **Gold Medalist**- M.Sc. - Physics, Ranchi University.

- ❖ **Gold Medalist** - Overall best Master Degree holder in General Courses (M.A/M. Sc/M.Com) in the Ranchi University.
- **Specialization:**
- ❖ M. Sc. - Electronics.
- ❖ Ph. D. - Theoretical Physics (**Quantum Optics**).

Research Publications (during Ph.D)

1. Dr. Sudha Singh and Amrita, “Exact solutions for Jaynes-Cummings models with non-degenerate two-photon transitions in the ladder configuration” *Int J Theor Phys* 51:838-851 (2012).
2. Dr. Sudha Singh, C. H. Raymond Ooi and Amrita, “Dynamics for two atoms interacting with intensity-dependent two-mode quantized cavity fields in the ladder configuration” *Physical Review A* 86, 023810(2012).
3. Dr. Sudha Singh and Amrita, “Dynamics of two atoms interacting with quantized two mode cavity fields in the ladder configuration” *Int J Theor Phys* 52:137-155 (2012).
4. Dr. Sudha Singh and Amrita, “Effects of cavity field statistics on Atomic Entanglement in two-mode Jaynes Cummings model” *Int J Theor Phys* 52: 3874-3885.
5. Dr. Sudha Singh and Amrita, “Effects of cavity field statistics on Atomic Entanglement in a two-mode Jaynes Cummings model with intensity dependent coupling” *Journal of Modern Optics*, 2013.

Research Presentations/Conferences attended

1. Attended as a participant in the National Conference on “***Contributions of Indian Scientists in different areas of Physics***” organized by the University deptt. of Physics ,Patna University on 15th April’2018.
2. Presented the paper “***A comparative analysis of Atomic Entanglement in JCM with Multiphoton Interaction***” and got awarded the “***First Prize in Oral Presentation***”.
3. Attended the “***International Conference on Quantum and Atom Optics-ICQAO-2018***” organized by IIT Patna on 16th -18th Dec’2018.
4. Presented the paper “***Analysis of Atomic Entanglement in Three mode Jaynes Cummings Model for different field statistics***” in the Poster session.

Projects Supervised/ Conducted

1. Supervised the Project entitled “***Study of Non-Classical Properties in Generalized Jaynes Cummings Model***” under the CPE status accorded by UGC.
2. Supervised the Project entitled “***Design and analysis of Mobile Phone detector***” under the Star Scheme by the DBT.

Personal Details

Date of Birth : 3rd November, 1986
Gender : Female
Father’s Name : Mr. Ram Prasad Singh.
Marital Status : Married.
Husband’s Name : Mr. Atul Kumar Singh.
Permanent Address : B-1009/2, Sector-2,
P.O.Dhurwa,
Ranchi-834004.
Interest and Hobbies : Surfing & Programming
Languages Known : Hindi and English.
Strength : Strong Willpower, Confidence & Leadership.

Date: 6th April’2019

Place: Patna

Amrita