

DEEPAK SINGH

ASSISTANT PROFESSOR

Department of Mathematics
B.L.J. Govt. (P.G.) College Purola, Uttarkashi
Higher Education Uttarakhand



Research Specialization: Quantum Computing, Quantum Communication,
Quantum Secret Sharing, Quantum Noise

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 : Google Scholar Profile	 : Research Gate Profile	 : ORCID ID- 0000-0001-5598-5407

PERSONAL INFORMATION

Father's Name	Mr. Balam Singh
Date of Birth	25-07-1994
Nationality	Indian
Gender	Male
Languages Known	Hindi & English
Marital Status	Unmarried

EDUCATION

COURSE	YEAR	COLLEGE/INSTITUTE	BOARD/UNIVERSITY	%
High-School	2009	Army Public School Lansdowne	CBSE	70.5%
Intermediate	2011	Army Public School Lansdowne	CBSE	80.6%
B.Sc. (PCM)	2014	D.B.S. (P.G.) College Dehradun	H.N.B. Garhwal University	73.7%
M.Sc. Mathematics	2016	D.B.S. (P.G.) College Dehradun	H.N.B. Garhwal University	87.5%
Ph.D.	Ongoing	Indian Institute of Technology Roorkee	Indian Institute of Technology Roorkee	-

Title of Thesis: "Quantum Communication Algorithms in Noisy Environment with Weak Measurements"

AWARDS & ACHIEVEMENTS

- Gold Medallist - M.Sc. Mathematics (2014–2016 Batch) from H.N.B. Garhwal University (A Central University)
- Qualified CSIR-NET JRF Mathematical Science –
 - December 2015 (AIR-69)
 - June 2016 (AIR-120)
 - December 2016 (AIR-105)
 - June 2017 (AIR-140)
 - June 2018 (AIR-135)
- Qualified Graduate Aptitude Test in Engineering (GATE) Mathematics
 - 2016 (AIR-825)
 - 2017 (AIR-379)
 - 2018 (AIR-539)
 - 2019 (AIR-809)

RESEARCH EXPERIENCE

- **Research Scholar | Indian Institute of Technology Roorkee** Jan 2017 – Present
 - **Research Interest:** Quantum Computation, Quantum Teleportation, Quantum Communication, Quantum Noise

TEACHING EXPERIENCE

- **Tutorial Assistant for B.Tech. Course-MAN-001 at IIT Roorkee** 2017 – 2018
- **Assistant Professor | B.L.J. Govt. (P.G.) College Purola, Uttarkashi** July 2019 - Present
 - Teaching UG students all the courses in the curriculum.

RESEARCH PUBLICATIONS

<ul style="list-style-type: none"> • Deepak Singh, Sanjeev Kumar, and Bikash K. Behera. “Complexity analysis of quantum teleportation via different entangled channels in the presence of noise.” IET Quantum Communication (2022). https://doi.org/10.1049/qtc2.12048 	2022
<ul style="list-style-type: none"> • Deepak Singh, Sanjeev Kumar, and Bikash K. Behera. “A secure deterministic remote state preparation via a seven-qubit entangled channel of a two-qubit entangled state under the impact of quantum noise.” Optics Communications (2023): 129352. https://doi.org/10.1016/j.optcom.2023.129352 	2023
<ul style="list-style-type: none"> • Deepa Rathi, Sanjeev Kumar, Farhan Musanna, and Deepak Singh. “Quantum secret sharing protocol through noisy channel with application in visual cryptography.” Concurrency and Computation: Practice and Experience: e7899(2023). https://doi.org/10.1002/cpe.7899 	2023
<ul style="list-style-type: none"> • Deepak Singh and Sanjeev Kumar. “Enhancing the fidelity of controlled cyclic teleportation via quantum weak measurement techniques to combat the decoherence due to amplitude damping.” International Journal of Quantum Information (2023). (Accepted :- Manuscript ID: IJQI-D-23-00087) 	2023

WORKSHOPS & CONFERENCES

<ul style="list-style-type: none"> • Attended Workshop titled “Numerical Modelling of Transport Phenomena in Fluid Flows for Engineering Applications” organized by Department of Mathematics, Indian Institute of Technology Roorkee. 	18-Feb-2017
<ul style="list-style-type: none"> • Attended Instructional School for Teachers titled “PDE: Theory and Computation” organized by National Centre for Mathematics (A joint centre of TIFR and IIT Bombay) held at Indian Institute of Science Bangalore. 	23-July-2018 to 4-August-2018
<ul style="list-style-type: none"> • Attended UGC-HRDC One month “Faculty Induction Program/Orientation Course” organized by Ramanujan College, University of Delhi. 	21-March-2022 to 19-April-2022

<ul style="list-style-type: none"> Attended UGC Approved Short Term Professional Development Programme Under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching on “Implementation of NEP-2020 for University and College Teachers”. 	09-Sept-2022 to 17-Sept-2022
<ul style="list-style-type: none"> Attended UGC-HRDC One month “Faculty Development Programme” on “Digital Security in Online Classroom” organized by Ramanujan College, University of Delhi. 	10-Oct-2022 to 16-Oct-2022
<ul style="list-style-type: none"> Participated in training programme on “e-Granthalay: Handson training” at Doon University, Dehradun organized by Department of Higher Education Uttarakhand. 	16-Feb-2022 to 18-Feb-2022
<ul style="list-style-type: none"> Participated in training programme on “e-Governance: Emerging Technologies” at Dr. R.S. Tolia Uttarakhand Academy of Administration Nainital. 	24-Aug-2023 to 26-Oct-2023

UNIVERSITY DUTIES

<ul style="list-style-type: none"> Syllabus Preparation Committee Member for Sridev Suman Uttarakhand University <u>National Education Policy-2020 (NEP-2020)</u>. <ul style="list-style-type: none"> Bachelor’s Degree with Honours - Mathematics Syllabus Degree with Research and PG Syllabus Quantitative Aptitude and Logical Reasoning Syllabus Scientific Writing and Computing Syllabus Vedic Mathematics Syllabus 	2023
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OTHER GOVERNMENT DUTIES

<ul style="list-style-type: none"> Worked as “Sector Magistrate” during the Uttarakhand Legislative Assembly Elections of 2022. 	Dec 2021 to Feb 2022
<ul style="list-style-type: none"> Worked as “Additional Returning Officer” during the vote counting process for the Yamnотri Constituency in the Uttarakhand Legislative Assembly Elections of 2022. 	09-March-2022

SKILLS

<ul style="list-style-type: none"> Programming Languages <ul style="list-style-type: none"> MATLAB C++ Python 	<ul style="list-style-type: none"> Software Packages <ul style="list-style-type: none"> MS Office LaTeX HTML, CSS Adobe Photoshop
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HOBBIES AND INTERESTS

<ul style="list-style-type: none"> Playing & Following Chess Snooker Swimming Photography

I hereby declare that the information given above is true and to the best of my knowledge.

(DEEPAK SINGH)