




DESHBANDHU COLLEGE
(UNIVERSITY OF DELHI)
KALKAJI, NEW DELHI - 110019
Faculty Details Proforma for College Website

Title	DR.	First Name	VIKRAM	Last Name	VERMA	Photograph
Designation		ASSISTANT PROFESSOR				
Address		Department of Physics, Deshbandhu College, Kalkaji, New delhi-11009				
Phone No. Office						
Residence Mobile		+91- 9807418327				
Email		vikramverma18@gmail.com				
Web-Page						
Educational Qualifications						
Degree		Institution			Year	
Ph.D.		UNIVERSITY OF ALLAHABAD			2015	
M.Phil.						
PG		UNIVERSITY OF ALLAHABAD			2007	
UG		EWING CHRISTIAN COLLEGE (UNIVERSITY OF ALLAHABAD)			2005	
Any other qualification		CSIR-NET			2009	
Career Profile						
<ul style="list-style-type: none"> • Teaching since 2010 • Theoretical research in <i>Quantum Information Theory</i> 						
Administrative Assignments						
Areas of Interest/Specialization						
QUANTUM PHYSICS, CONDENSED MATTER PHYSICS						
Subjects Taught						
At UG Level-Theory		At UG Level- Lab		At PG Level-Theory		At PG Level- Lab
Quantum Mechanics		Mechanics		Data Acquisition System		Condensed Matter Physics
Electromagnetic Theory		Optics				Non Linear Optics
Thermal Physics		Electricity and Magnetism				
Statistical Mechanics		Electronics				
Mechanics		Modern Physics				
Research Guidance						
List against each head (If applicable):						
<ol style="list-style-type: none"> 1. Supervision of awarded Doctoral Thesis 2. Supervision of Doctoral Thesis, under progress 3. Supervision of awarded M.Phil. dissertations 4. Supervision of M.Phil. dissertations, under progress 						

Publications Profile

(a) **Research papers published in Refereed/Peer Reviewed Journals:**

1. Hari Prakash and **Vikram Verma**, "Minimum assured fidelity and minimum average fidelity in quantum teleportation of single qubit using non-maximally entangled states", published in **Quantum Inf Process**, **11** (2012) 1951-1959.
2. Hari Prakash and **Vikram Verma**, "Non-Existence of Magic Basis and Existence of Magic Partial Bases for $2N$ Entangled Qubit States with $N>1$ ", **J. Phys. A: Math. Theor.** **45** (2012) 395306.
3. **Vikram Verma** and Hari Prakash, "Standard Quantum Teleportation and Controlled Quantum Teleportation of Arbitrary N Qubit Information State", **Int. J. Theo. Phy.** **55** (2016) 2061-2070.
4. M. Sisodiya, **V. Verma**, K. Thapiyal and A. Pathak, "Teleportation of qubit using entangled non-orthogonal states: a comparative study". *Quantum Inf Process* (2017) 16:76 DOI 10.1007/s11128-017-1526-x

(b) **Research papers published in Refereed/Peer Reviewed Conferences Proceedings:**

5. **V. Verma** and H. Prakash, "Quantum Teleportation of Single Qubit Mixed Information using WernerLike State as Resource," in *12th International Conference on Fiber Optics and Photonics*, OSA Technical Digest (online) (Optical Society of America, 2014), paper S5A.82. <http://www.opticsinfobase.org/abstract.cfm?URI=Photonics2014S5A.82>

Conference Organization/Presentations

➤ Organization of a Conference

➤ **Participation as Paper (Oral/Poster) Presenter:**

1. Hari Prakash and **Vikram Verma**, "Minimum Assured Fidelity in Quantum Teleportation of Single Qubit using Non-Maximally Entangled States and its Relationship with Concurrence", *National Laser Symposium (NLS-09)*, BARC, Mumbai on January 13-16, 2010. **(Poster presentation)**
2. Hari Prakash and **Vikram Verma**, "A precise and Simple Protocol for Standard Quantum teleportation of an Arbitrary N -Qubit State", *International Conference on Advances in Modeling, Optimization and Computing (AMOC2011)* Department of Mathematics, Indian Institute of Technology Roorkee, Roorkee-247 667 (U.K.), India, on December 5 - 7, 2011. **(Oral presentation)**
3. Hari Prakash and **Vikram Verma**, "Existence of Partial-Magic Bases for Four Entangled Qubits", *3rd International Conference on Current Developments in Atomic, Molecular, Optical & Nano Physics (CDAMOP 2011)*, Department of Physics and Astrophysics, University of Delhi, Delhi – 110007 (INDIA) on December 14-16, 2011. **(Poster presentation)**
4. **Vikram Verma** and Hari Prakash, "Entanglement Swapping giving Entanglement greater of those of the Two Initial Entangled Pairs and Generation of χ -type Entangled State of 4-Parties", *Rajarshi Udai Pratap Singh Memorial 2nd International Workshop on Spectroscopic Signature of Molecular Complexes /Ions in Our Atmosphere and Beyond*, February 7-10, 2012, organized by Udai Pratap Autonomous College, Varanasi-221002, India in collaboration with Department of Applied Physics, IT BHU, Varanasi, India. **(Oral presentation)**
5. Hari Prakash and **Vikram Verma**, "Maximal Average Fidelity in Quantum Teleportation of Single Qubit Mixed Information State by Using Two Qubits X-State as Resource", *13th Asian Quantum Information*

<p><i>Science Conference (August 25-30, 2013), IMS Chennai, India. (Poster presentation)</i></p> <p>6. Vikram Verma and Hari Prakash, "Perfect Controlled Quantum Teleportation of an arbitrary N-qubit Information State", International Conference on Light Quanta: Modern Perspectives & Applications organized by Physics Department, University of Allahabad, Allahabad-211002. December 14-16, 2015 (Poster presentation)</p>
<p>Research Projects (Major Grants/Research Collaboration)</p>
<p>Awards and Distinctions</p> <p><i>"Best Poster Presentation" award in International Conference on Light Quanta: Modern Perspectives & Applications, held on December 14-16, 2015 at Department of Physics, University of Allahabad, Allahabad.</i></p>
<p>Association With Professional Bodies</p> <ul style="list-style-type: none"> • <i>Editing</i> • <i>Reviewing</i> • <i>Advisory</i> • <i>Committees and Boards</i> • <i>Memberships</i> • <i>Office Bearer</i>
<p>Other Activities</p>

(Dr. Vikram Verma)

Signature of Faculty Member