



Bhaskaracharya College of Applied Sciences (University of Delhi)

Sector II, Phase I, Dwarka, New Delhi – 110075

FACULTY PROFILE

Title	Dr.	First Name	Ramesh	Last Name	Kumar	Photograph
Designation	Assistant Professor					
Department	Department of Physics					
Address (Campus)	Department of Physics, Bhaskaracharya College of Applied Sciences, University of Delhi.					
Contact Details	9654271875					
Email Id	ramesh.kumar@bcas.du.ac.in					
Educational Qualification	Subject	Institution				
Ph.D.	Quantum Optics	Indian Institute of Technology Delhi (IIT Delhi)				
M. Tech	Applied Optics	Indian Institute of Technology Delhi (IIT Delhi)				
M.Sc.	Physics (Specialization in Opto-Electronics)	University of Lucknow.				
Research Interests/ Specialization						
Quantum Optics, Applied Optics, Spontaneous Parametric Down Conversion, Optical Coherence Tomography, Waveguide,						
Teaching Interest						

Optics, Mathematical Physics, Element of Modern physics, Mechanics, Thermal Physics, Quantum Mechanics, Electromagnetic Theory.

Publications

Year of Publication	Title	Journal	Co-author/s
2018	Parametric down-conversion in ppLN ridge waveguide: a quantum analysis for efficient twin photons generation at 1550 nm	Journal of Optics. 20, 075202	Ramesh Kumar and Joyee Ghosh
2020	SPDC Photon Pairs Using a Spatially Anti-symmetric Pump Beam in a ppLN Ridge Waveguide	Applied Physics B: Lasers and Optics 126, 186	Ramesh Kumar and Joyee Ghosh
2020	Postselection-free, hyperentangled photon pairs in a periodically poled lithium-niobate ridge waveguide	Physical Review A 102, 033722	Ramesh Kumar, Vikash Kumar Yadav, Joyee Ghosh

Conference Publications

2016	Efficiency of guided wave degenerate SPDC compared to that of bulk crystals	proceedings in 13th International Conference on Fiber Optics and Photonics, Dec. 4-8, 2016, Indian Institute of Technology, Kanpur, OSA Technical Digest (online) (Optical Society of America, 2016), paper W3A.23, ISBN: 978-1-943580-22-4	Ramesh Kumar and Joyee Ghosh
2016	Model analysis for efficient twin photon generation in a multimode Lithium Niobate waveguide	proceedings in 13th International Conference on Fiber Optics and Photonics, December 4-8, 2016, Indian Institute of Technology, Kanpur, OSA Technical Digest (online) (Optical Society of America, 2016), paper Tu5C.4, ISBN: 978-1-943580-22-4.	Ramesh Kumar, Vinod Reddy and Joyee Ghosh
2017	Guided-Wave SPDC in LN: A Modal Analysis for Efficient Twin Photon Generation	Workshop on Optics & Photonics: Theory & Computational Techniques (OPTCT), March 4-5, 2017, Indian Institute of Technology, Delhi.	Ramesh Kumar and Joyee Ghosh
2017	Guided Wave SPDC In Lithium Niobate: A Modal Analysis for Efficient Twin Photon Generation And An Estimation Of Signal Power Compared To Bulk Crystals	paper accepted for CLEO-PR, OECC and PGC, Singapore, August 2017	Ramesh Kumar, V. Reddy & Joyee Ghosh
2017	Modal Analysis for Efficient Twin Photon Generation in a Multimode Lithium Niobate Waveguide	Student Conference on Optics and Photonics (SCOP), Sep. 1-2, 2017, Physical Research Laboratory (PRL), Ahmedabad.	Ramesh Kumar and Joyee Ghosh
2017	Guided-Wave SPDC in ppLN: Analysis for Efficient Twin Photon Generation	SERB School on Frontiers in Quantum Optics, Indian Institute of Technology, Guwahati.	Ramesh Kumar and Joyee Ghosh

2018	JSA Analysis of Parametric Down-Conversion in a Lithium Niobate Ridge Waveguide	proceedings in the International Conference on Fiber Optics and Photonics (Photonics 2018), December 12-15, 2018, Indian Institute of Technology, Delhi, paper no. FC1-C1, ISBN 978-93-88653-41-1.	Ramesh Kumar and Joyee Ghosh
2018	A quantum analysis for efficient twin photon generation at 1550 nm in ridge waveguide	2nd Departmental Symposium on Advances in Physics 2018, April 07-08, 2018, Indian Institute of Technology, Delhi.	Ramesh Kumar and Joyee Ghosh
2018	JSA Analysis of Parametric Down-Conversion in a Lithium Niobate Ridge Waveguide	Student Conference on Optics and Photonics (SCOP), October 04-06, 2018, Physical Research Laboratory (PRL), Ahmedabad.	Ramesh Kumar and Joyee Ghosh
2018	Second Harmonic Generation at 775 nm Using Lithium Niobate Ridge Waveguide	proceedings in the International Conference on Fiber Optics and Photonics (Photonics 2018), Dec. 12-15, 2018, Indian Institute of Technology Delhi, paper no. TP082, ISBN 978-93-88653-41-1.	Ramesh Kumar, S. Sanyal, N. Sangwan, K. S. Rai, and Joyee Ghosh
2019	A quantum analysis for efficient generation of non-degenerate twin photon in Lithium Niobate ridge waveguide	3rd Departmental Symposium on Advances in Physics, April 6-7, 2019, Indian Institute of Technology Delhi.	Ramesh Kumar and Joyee Ghosh
2020	Modal-entangled photons pairs in a ppLN ridge waveguide	proceedings in the International Conference on "OSA Quantum 2.0 Conference", September 14-17, 2020, in an all-virtual, web conference format, OSA Technical Digest (Optical Society of America, 2020), paper no. QTh7B.2, ISBN: 978-1-943580-81-1.	Ramesh Kumar and Joyee Ghosh
2021	Temporal Properties and Schmidt Decomposition of the Biphoton State in a ppLN Ridge Waveguide	proceedings in the International Conference on "Frontiers in Optics + Laser Science 2021", November 01-04, 2021, in an all-virtual, web conference format, Technical Digest Series (Optica Publishing Group, 2021), paper no. JW7A.94, ISBN: 978-1-55752-308-2.	Ramesh Kumar, Vikash Kumar Yadav, Vivek Venkataraman, and Joyee Ghosh

Any other information

1. ECA Committee (Convener) 2012-14, 2018-2021
2. Gandhian Study Centre, (Convener) from 2011-2015
3. Sports Committee (member) from 2011-2015
4. Garden Committee (Member) 2011-12
5. Time-Table Committee (Member) 2012-2013
6. Admission Committee (Member) 2013-15
7. Discipline Committee (Member) 2013-14
8. Special Categories Admission Enabling Committee (member) 2013-15
9. Deputy Superintendent of examination 2014-15, 2018-2019
10. Photography club (Member) 2014-15
11. Student Advisory & PR Committee (Member) 2018-21
12. Library Committee (Member) 2018-21
13. Swacchata & Waste Management Committee (Member) 2019-21
14. Teacher-In-Charge, Department of Physics 2020-21
15. Gandhian Study Center (Convener) 2021-22