

# Resume

**Rohtash Singh, Ph.D.**

Assistant Professor

Department of Physics

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## ACADEMIC QUALIFICATIONS

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- **Doctor of Philosophy (2011)**  
Indian Institute of Technology Delhi, India.
- **Master of Science (2003)**  
Kurukshetra University, Kurukshetra, Haryana, India.
- **Bachelor of Science (2001)**  
Maharshi Dayanand University Rohtak, Haryana, India.

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## RESEARCH PUBLICATIONS

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1. Soumitra Das, Pramod Sharma, **Rohtash Singh**, Rajesh K. Vatsa and Vipin K. Tripathi “Multiple Ionization and Coulomb Explosion in Terawatt Photoexcitation of Xenon Clusters: An Experimental and theoretical study”, Journal of Photochemistry & Photobiology, A: Chemistry 404, 112884 (2021).
2. **Rohtash Singh**, V. K. Tripathi, R. K. Vatsa, and D. Das “Nanosecond Laser-Cluster Interactions at  $10^9 - 10^{12}$  W/cm<sup>2</sup>”, Phys. Plasmas 24, 082111 (2017).
3. **Rohtash Singh** and V. K. Tripathi, “Laser Excitation of Terahertz Surface Plasma Wave over a Hollow Capillary Plasma”, Laser Part. Beams 34, 109-114 (2016).
4. K K Magesh Kumar, **Rohtash Singh** and Vinod Krishan, "Plasma wave aided two photon decay of an electromagnetic wave in a plasma", Phys. Plasmas 21, 112112 (2014).
5. Manoj Kumar, **Rohtash Singh** and Updesh Verma, “Bremsstrahlung soft X- ray emission from clusters heated by a Gaussian laser beam” Laser Part. Beams 32, 9 (2014).

6. **Rohtash Singh** and V. K. Tripathi, "Parametric coupling of lower hybrid wave with gyrating ion beam driven ion cyclotron instability in a plasma", Phys. Plasmas 20, 072112 (2013).
7. **Rohtash Singh**, A. K. Sharma and V. K. Tripathi, "Grating formation by a high-power radio wave in near-equator ionosphere", Phys. Plasmas 18, 112101(2011).
8. **Rohtash Singh** and A. K. Sharma, "Ponderomotive acceleration of electrons by a self-focused laser pulse", Phys. Plasmas 17, 123109(2010). (This publication has been selected in Virtual Journal of Ultrafast Science)
9. **Rohtash Singh** and A. K. Sharma, "Ponderomotive acceleration of electrons by a whistler pulse", Appl Phys B 100, 535 (2010).
10. **Rohtash Singh** and A. K. Sharma, "Anomalous absorption of whistler in rippled density plasma" Phys. Scr. 82, 015503 (2010).
11. **Rohtash Singh**, A. K. Sharma and V.K. Tripathi, "Relativistic self distortion of a laser pulse and ponderomotive acceleration of electrons in an axially inhomogeneous plasma", Laser Part. Beams 28, 299 (2010).
12. **Rohtash Singh** and A. K. Sharma, "Self-focusing of a whistler propagating at an angle to magnetic field in a plasma" Phys. Scr.79, 065502 (2009).
13. Rajendra Prasad, **Rohtash Singh** and V. K. Tripathi, "Effect of an axial magnetic field and ion space charge on laser beat wave acceleration and surfatron acceleration of electrons", Laser Part. Beams 27, 459 (2009).

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## CONFERENCES / SYMPOSIUM ATTENDED

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1. Participated in the 5<sup>th</sup> International Conference on the Frontiers of Plasma Physics and Technology, April 18-22, 2011, **Singapore**, Republic of Singapore.
2. Participated and acted as Scientific Secretary for a session, in the 1<sup>st</sup> International Particle Acceleration Conference 2010 (IPAC'10), May 23- 28, 2010, Kyoto International Conference Centre, Kyoto, **Japan**.
3. Delivered a presentation in ISRO-Respond Programme at Physical Research Laboratory **Ahmedabad**, March 19-20, 2010.
4. Participated in the 24<sup>th</sup> National Symposium on Plasma Science and Technology, **NIT Hamirpur**, Himachal Pradesh, Dec 8 -11, 2009.
5. Participated in Summer College on Plasma Physics at The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, **Italy**, August 10-28, 2009.

6. Participated in International Workshop on the High Energy Density Science Endstation and Associated Instrumentation at the European XFEL, March 30-April 01, 2009, St. Catherine's college, University of Oxford, **United Kingdom**.
7. Participated in the 23<sup>rd</sup> National Symposium on Plasma Science and Technology, **BARC Mumbai**, Dec 10-13, 2008.
8. Participated in the 22<sup>nd</sup> National Symposium on Plasma Science and Technology, **Ahmedabad**, Dec 06-10, 2007.
9. Participated in the National Workshop on Self-focusing of Electromagnetic Waves in Plasma, University of Lucknow, **Lucknow**, Nov 19-25, 2007.

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## **TEACHING POSITIONS**

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- Working as an Assistant Professor, Maitreyi College, University of Delhi w.e.f. 10-01-2024 till date.
- Worked as an Assistant Professor from 23-07-2012 to 09-01-2024 in Acharya Narendra Dev College, University of Delhi.
- Worked as an Assistant Professor from 02-01-2012 to 12-06-2012 in Miranda House College, University of Delhi.

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## **COUNTRY VISITED**

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- UK, JAPAN, ITALY, SINGAPORE

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## **RESEARCH COLLABORATIONS**

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- Indian Institute of Astrophysics, Bangalore, India.
- Bhabha Atomic Research Centre (BARC), Mumbai, India.

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## **MEMBERSHIP OF LEARNED BODIES/SOCIETIES**

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- Life Member of Plasma Science Society of India (PSSI).

