

Personal Details

Name : (Dr.) AJAY WADHWA

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Official Address : Associate Professor

Department of Physics

SGTB Khalsa college, Delhi University

Delhi-110007, India.

Teaching Experience:23 years (as upto 2015)

Educational Qualifications:

- **Ph.D.** in Particle Astrophysics from Delhi University (1991-95)
under Prof. Jai Dev Anand & Dr. S.K. Soni
Title of thesis: Study of energy loss rates by direct URCA
processes in neutron and quark stars.
- **M.Sc.** in Physics from I.I.T., Kanpur (1987-89)
- **Research fellow** for 3 months (1989-90) on superconductivity
project at NPL, New Delhi.
- **Research fellow** for 1-year (1990-91) on superconductivity
project at I.I.T. , Thin film Lab., New Delhi.

Extra-curricular: ex- National squash player.

Manager of the Delhi University Squash team for Inter-University Squash
Tournaments.

Extension Services: Invited to act as Adjudicator for Science Inter-college
Competition held at Acharya Narendra Dev College, Kalkaji, New Delhi on
March 22, 2013 and 21 September, 2015

UGC sponsored Research Projects under-taken : 2

- 1. Major research project: (2012):** “Study of pressure and temperature effects
on the property of resilience of rubber balls” F.39-513/2010(SR), 2011-14, (2,39000)
- 2. Minor research project: (2007):** “Development of PC tools for the study of
basic physical phenomena” F.9-307/2006(SR), 2007-2009

Research Publications (13) and Conference Presentations (5): 18

18. Study of dynamic properties and effect of temperature using a spring model for the bouncing ball.
Ajay Wadhwa
European J. of Physics 34 March (2013) 703-713.
17. Measuring the rebound resilience of a bouncing ball.
Ajay Wadhwa
Physics education, IOP Publ. Ltd, UK, 47 (5) (2012), 620
16. Determination of contact time of rubber balls using digital oscilloscope
Ajay Wadhwa
Physics education, IOP Publishing Ltd, UK, 45 (6) (2010) 635
15. Measurement of coefficient of restitution using digital oscilloscope.
Ajay Wadhwa
Physics education, IOP Publishing Ltd, UK, 49 (4) (2009), 517-521.
14. Study of damped harmonic oscillations using an electronic counter.
Ajay Wadhwa
Physics Education (IOP, UK), 44 (1) (2008) 70-77.
13. Study of damped harmonic oscillations through PC
Ajay Wadhwa
Physics Education, India, 25 (2008) 151.
12. An Innovative method to study Stokes Law in Laboratory.
Ajay Wadhwa
Physics Education, IOP (UK) (Vol. 43(3), 311,2008)
11. Simulation of radioactive decay series.
Ajay Wadhwa
Physics Education 24 March (2007) 11-15
10. Bulk viscosity of neutron stars.
Ajay Wadhwa, J.D.Anand, V.K.Gupta
Pramana 49 (1997) 443.
9. On the cooling of neutron stars.
Ajay Wadhwa, J.D. Anand, V.K.Gupta
Jour. of Physics G : Nucl. Particle Physics vol. 21 (1995) 1137.
8. Neutrino emissivity from quark matter at finite temperatures.
Ajay Wadhwa and J.D. Anand
Pramana vol. 45 (1995) 195.
7. Neutrino emissivity from strange quark matter having density-dependent quark masses.
Ajay Wadhwa and J.D. Anand
Zeit. fur Physik vol. 345 (1993) 37.

6. Structural study of annealed Ag-YbaCuO interface.
Ajay Wadhwa, S.T.Laxmikumar and Y.S. Reddy
Jour. Materials Science Letters vol. 8 (1989) 977.
5. Research paper at ICPE conference 2013 held at Prague,
Czech Rep. Published in the Proceedings of the conference
“Using Class-room Communication System in Physics Laboratory”
4. Presented Research paper entitled, "Analysis of the bouncing ball motion
using a spring-mass model " at the “International Conference on Science
Education-epiSTEME-5, 2013”.
Venue: Homi Bhabha Center for Science Education, Mumbai, India
Date: 7-11 January, 2013.
3. Using multi-media and classroom computer networking for evaluation
and analysis
Ajay Wadhwa, Akash Gupta & Yash Mohan Sharma
Proceedings of the “International Conference on Science
Education-epiSTEME-6, 2015”, IIT,Mumbai-TIFR.
2. 2nd International workshop on Physics Education-
“**PHYSWARE-2012**” sponsored by ICTP, Italy
Venue: Miranda House, University of Delhi.
Date: 26 Nov.-7 Dec., 2012.
1. International conference on Quark-Gluon Plasma
J.D.Anand, V K Gupta and Ajay Wadhwa, Kolkata (1994), India.

Text-Books Published: 8

1. Microprocessor 8085: Architecture, Programming
& Interfacing. January, (2010) Prentice-Hall
Learning, New Delhi. ISBN 8120340132/10
Reprint-2012, 2014
Author: Ajay Wadhwa
2. Numerical Analysis (2012) Prentice-Hall
Learning, New Delhi. ISBN 812034545452/12
Reprint- 2014
Author: Ajay Wadhwa
- 3*. Mathematical Physics (Pt. I), 2002 ,Har-Anand
Publications, New Delhi. ISBN 8124108137/10
Co-Author: Ajay Wadhwa
- 4*. Mathematical Physics (Pt. II), 2002 ,Har-Anand
Publications, New Delhi. ISBN 8124108145/10
Co-Author: Ajay Wadhwa

- 5*. Mathematical Physics (Pt. III), 2008 ,Har-Anand Publications, New Delhi. ISBN 9788124117095
Co-Author: Ajay Wadhwa
- 6*. Mechanics 2001, Har-Anand Publications, New Delhi. ISBN 9788124117453
Co-Author: Ajay Wadhwa
7. Mathematical Physics (Pt. IV), 2010 ,Har-Anand Publications, New Delhi. ISBN 9788124117095
Co-Author: Ajay Wadhwa
8. Mathematical Physics (Pt. V), 2010, Har-Anand Publications, New Delhi. ISBN 9788124117514
Co-Author: Ajay Wadhwa

*Revised editions in year 2008, 2010
