



Shivaji College Faculty Details Proforma

Title		First Name		Last Name		Photograph
Dr.		RAVINDRA		SINGH		
Designation	Assistant Professor					
Office Address	Department of Physics, Shivaji College(University of Delhi)					
Office Phone No.	011-25116644					
Residence	Delhi					
Mobile						
Email	ravindrasingh@shivaji.du.ac.in					
Web-Page						
Educational Qualifications	M.Sc., M.Phil., Ph.D.					
Degree	University/Institute			Year		
Ph.D.	Sri Venkateshwara University			2020		
M.Phil./M.Tech.	Vinayaka Mission University			2009		
PG	University of Delhi			2006		
UG	University of Delhi			2004		
Any Other Qualification	JRF-NET Conducted by CSIR			2008		
	GATE Conducted by IIT Delhi			2007		
	Certificate Course in MATLAB			2016		
Career Profile						

- To work a challenging and dynamic environment to keep adding value to myself and simultaneously contribute to the growth and success of the organization or institute.

Administrative Assignments

- Took part in various committees of the college such as discipline committee, college development committee and physics society & NAAC committee etc

Areas of Interest/Specialisation

- Physics, Applied Physics/Mathematical Physics and Computational Physics

Subjects Taught

- Mathematical Physics
- Scilab and C++ programming
- Mechanics
- Electricity and Magnetism
- Electromagnetic theory
- Thermal Physics
- Statistical Mechanics
- Waves and Optics
- Superconductivity
- Solid state Physics
- Quantum mechanics
- Classical mechanics
- Atomic and Molecular physics
- Nuclear physics
- Electronics and Digital Electronics etc.

Innovation Project/Research Projects (Major Grants/Research Collaboration)

Publications Profile (Research Papers/Books)

PUBLICATIONS

[12.] **R. Singh**, A. K. Shukla, S. S. Gaur, P. Verma, P. Biswas and O. Rana, “COMPARISON OF THE RESULTS OF DIFFERENTIAL EQUATION BY ORDINARY METHOD AND EULER’S METHOD USING SCILAB”, *Vidyabharati International Interdisciplinary Research Journal (Special Issue)*, 126-128 August, 2021, ISSN 2319-4979

[11.] **Dr. Ravindra Singh**, Dr. Ashok Kumar Shukla, Dr. Shiv Shankar Gaur, Dr. Priyanka Verma, Polly Biswas, Dr. Omwati Rana, “The Matrix Formulations and Algebraic Equations Using Scilab”, *National Journal of Environmental and Scientific Research*, Vol-2, Issue-7, pp. 56-71, July 2021, E-ISSN-2582-5836. DOI - [10.53571/NJESR.2021.2.7.56-71](https://doi.org/10.53571/NJESR.2021.2.7.56-71)

[10.] Polly Biswas, Dr. Ashok Kumar Shukla, **Dr. Ravindra Singh**, “Mathematical Treatment Using Runge-Kutta (Rk-4) Method For Hermite Gaussian (H-G) Laser Pulse In Vacuum For Circularly Polarized Laser Pulse & Linearly Polarized Laser Pulse, and Effects of Decentre Parameter & Electron Energy Gain Versus Laser Intensity Parameter”, *Bull. Cal. Math. Soc.*, 113, (3) 189–194, 2021

[9.] Polly Biswas, Dr. Ashok Kumar Shukla, **Dr. Ravindra Singh**, “The Study of Partition Function, Occupation Number, Internal Energy and Entropy Using Scilab”, *International Journal of Research In Computer Applications And Robotics*, Vol. 9 Issue 6, pp. 1-6, June 2021, ISSN 2320-7345

[8.] Polly Biswas, Dr. Ashok Kumar Shukla, **Dr. Ravindra Singh**, Dr. Shiv Shankar Gaur. “The Study of Fermi-Dirac, Bose-Einstein and Maxwell-Boltzmann Distribution with Energy at Different Temperatures with Scilab Software”, *National Journal of Environmental and Scientific Research*, Vol-2, Issue-6, pp. 53-59, June 2021, E-ISSN-2582-5836.

[7.] Polly Biswas, Dr. Ashok Kumar Shukla, **Dr. Ravindra Singh**, “Weighted Least Square Fitting Through Matrix Form Using Scilab Programming”, *International Research Journal of Humanities and Interdisciplinary Studies*, Vol. 2, Issue 6, pp. 259-264, June 2021, ISSN 2582-8568. DOI Link- <https://doi-ds.org/doi/10.2021-79778634/IRJHIS2106033>

[6.] **Ravindra Singh**, Sandeep & Jaspreet Kaur, “Electron Injection for Direct Acceleration by A Gaussian Laser Field Under the Influence of Azimuth Magnetic Field”, *Journal of Atomic, Molecular, Condensate & Nano Physics*, Vol. 6, No. 3, pp. 153–164, Dec. 2019, ISSN-2349-2716 DOI:10.26713.v6i3.1320

- [5.] **Ravindra Singh**, Sandeep & Jaspreet Kaur, “Electron Acceleration by a Chirped Short Intense Laser Pulse in Presence of an External Axial Magnetic Field in Vacuum With Different Phase Values”, *Journal of Atomic, Molecular, Condensate & Nano Physics*, Vol. 6, No. 2, pp. 81–91, August 2019, ISSN 2349-2716, DOI: [10.26713/jamcnp.v6i2.1279](https://doi.org/10.26713/jamcnp.v6i2.1279)
- [4.] **Ravindra Singh** & Shiv Shankar Gaur, “Electron Acceleration by a Radially Polarized Laser Pulse in an Azimuthal Magnetic Field”, *Journal of Atomic, Molecular, Condensate & Nano Physics*, Vol. 5, No. 2, pp. 149–157, March 2018, ISSN 2349-2716 DOI: [10.26713/jamcnp.v5i2.810](https://doi.org/10.26713/jamcnp.v5i2.810)
- [3.] **Ravindra Singh**, “Electron Energy Enhancement by Comparison of Linearly and Circularly Polarized Laser Pulse in Vacuum Using Different Values of Magnetic Fields”, *Journal of Atomic, Molecular, Condensate & Nano Physics*, Vol. 5, No. 2, pp. 123-131, July 2018, ISSN 2349-2716, DOI: [10.26713/jamcnp.v5i2.914](https://doi.org/10.26713/jamcnp.v5i2.914).
- [2.] **Ravindra Singh**, Dharmendra Kumar, Shiv Shankar Gaur & Sandeep, “Effect of Laser Pulse Parameters and Initial Phase on the Acceleration of Electrons by a Circularly Polarized Gaussian Laser Beam under the Influence of Azimuth Magnetic Field”, *International Journal of Advanced Scientific Research and Management, Special Issue II, Oct 2018*, ISSN 2455-6378 www.ijasrm.com
- [1.] **Ravindra Singh**, Dharmendra Kumar, Shiv Shankar Gaur & Sandeep, “The Study of a Chirped Short Intense Laser Pulse In Vacuum in External Magnetic Field and The Variation of Field & Phase”, KIET IJCE KIET *International Journal of Communications & Electronics*, Vol. 6, Issue No. 1, Jan-June 2018, ISSN 2320-8996.

BOOK CHAPTER/PAPER

- [3.] Polly Biswas & **Dr. Ravindra Singh**, “The Important Techniques of Plotting Graphs Using Scilab”, *International Book Chapter on Multidisciplinary Subjects For Research-VIII, Volume-2*, RED'SHINE PUBLICATION PVT. LTD 232, Bilton road, Perivale, Greenford, Passcode: UB6 7HL London, UK. Website: www.redshine.uk, Chapter 20, pp.109-116, 2021, ISBN: 978-1-300-70823-0 (Paperback) ISBN-A: 10.1300708239 DIP: 18.10.1300708239 DOI: 10.25215/1300708239 Available at- DIP: 18.10.1300708239.020 OR go to link <https://redshine.co.in/978-1-300-71032-5>
- [2.] Polly Biswas & **Dr. Ravindra Singh**, “Solution of Four Linear Ordinary Differential Equations of Ist Order Using for Loop in a Single Program with the Initial Conditions in Scilab Software 5.5.2”, *International Book Chapter on Multidisciplinary Subjects For Research-VIII, Volume-1*, RED'SHINE PUBLICATION PVT. LTD 232, Bilton road, Perivale, Greenford, Passcode: UB6 7HL London, UK. Website: www.redshine.uk, Chapter 17, pp. 82-85, 2021, ISBN: 978-1-300-71032-5 (Paperback) ISBN-A: 10.1300710322 DIP: 18.10.1300710322, DOI: 10.25215/1300710322 Available at- DIP: 18.10.1300710322.017 OR go to link <https://redshine.co.in/978-1-300-71032-5>

[1.] Polly Biswas, Dr. Ashok Kumar Shukla & **Dr. Ravindra Singh**, “The Equations of Motion of The Electron Under Certain Conditions With An Electric Field & Path Comparison”, *Exploring The Scientific Research (Volume-2) International Book of Multidisciplinary Studies*, AkiNik Publications, Chapter 5, pp. 41-50, 2021 ISBN: 78-93-91216-06-1, E-Book ISBN: 978-93-91216-18-4, Book DOI: <https://doi.org/10.22271/ed.book.1215>

Conference/Seminar/Faculty Development Programme/Workshop

FACULTY DEVELOPMENT PROGRAMS

- **02 week Faculty Development Program** on “**ICT Based New Paradigm of E-Teaching and E-Learning : Digital Pedagogy**” under the aegis of MHRD, Department of Computer Science, Mata Sundri College for Women (University of Delhi) in collaboration with Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) with Grade “A” from Sept 15-Sept 30, 2020.
- **02 week Faculty Development Program** on “**RESEARCH METHODOLOGY**” from Teaching Learning Centre Ramanujan College, University of Delhi sponsored by Ministry of Human Resources Development, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) with Grade “A+” from Oct. 01- Oct. 15, 2020.
- **01 week Faculty Development Program** on “**Python 3.4.3**”, organized by Department of Physics & IQAC, Barnagar College, Sorbhog, Barpeta, Assam in association with Spoken Tutorial, IIT Bombay under PMMMNTT Scheme from August 27th to 2nd September, 2020.
- **02 week Faculty Development Program** on “**ICT Tools for Teaching, Learning Process and Institute**” from 10th - 21th August, 2020. Under the “Scheme of Financial assistance for setting of Electronics and ICT Academics” of the **Ministry of Electronics and Information Technology (MeitY), Government of India**.
- **04 week Faculty Induction/Orientation Program** from Teaching Learning Centre Ramanujan College, University of Delhi sponsored by Ministry of Human Resources Development, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) with Grade “A+” from June 04-July 01, 2020.
- **01 week Faculty Development Program** on “**LaTeX**”, organized by CMR Engineering College in association with Spoken Tutorial, IIT Bombay, funded by Nation Mission of Education through ICT, MHRD, Govt. of India from June 01 – June 06, 2020.
- **02 week Faculty Development Program** on “**Managing online classes and co-creating MOOCs: 2.0**” from Teaching Learning Centre Ramanujan College, University of Delhi sponsored by Ministry of Human Resources Development, Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) from May 18-June 03, 2020.
- Participated as an Organizer of many events such as National conference, Workshops, Inspir camps from 2013-2018, and annual departmental fests. etc. from 2013 to 2019.

- Took part in different committees of the college such as discipline committee, college development committee and physics society NAAC committee etc

RESOURCE PERSON & ORGANIZER

- **Resource Person** (three times) in inspire science camp (of 5 days in each year) by Department of Science and Technology **DST** from 2015-2018, held at **Shivaji College (University of Delhi)**.
- **Organizer** of “National Conference on Current and Future Perspectives” in Nanotechnology “Nanoworld-2018” held on 12-13 April, 2018 at Shivaji College.
- **Organizer** of workshop “SPECTRUM-2018”, held on 12 Feb, 2018 at Shivaji College.
- **Organizer** of “INVENIO” annual Departmental fest held on 30-31 March, 2017 at Shivaji College.
- **Organizer** of “PRATIBIMB” Departmental fest held on 31 January, 2017 at Shivaji College.
- **Organizer** of workshop on “Astrophysics, Cosmology and Computation” organized by Physics Department of Shivaji College on 12 February, 2016.

TECHNICAL WORKSHOPS

- **Two Weeks** Hands-on Online Workshop Series on **MATLAB** for Engineering & Science. 12 - 25, July 2021 organized jointly by the ELIXIR Educational Services, Chhattisgarh and The PRIME ACADEMY, Tamil Nadu, India.
- Workshop in “**Web Development Using CMS**” conducted on 18.10.2020.
- A certificate in “**Data Mining in Cyber Crime** (Detecting Trends and Scams in Virtual World)” from IFO Forensic Standards & Research P. Ltd. on 02.10.2020.
- 10 Days online certificate course on “**Cyber Security & Cyber Ethical Hacking**”, IQAC cell **Hansraj College (University of Delhi)** from 10th - 21st August, 2020.
- **24 days ILL** workshop from **Delhi University** in 2010 at **DDUC**.
- One day workshop on “**Cyber Security & Cyber Ethical Hacking**” at CETPA Infotech Pvt. Ltd. held on 15 September, 2018.
- Two days **SCILAB** Workshop of **DBT** at Hansraj College (**University of Delhi**) on 22 & 23 Sept, 2017.

WORKSHOPS

- **National workshop** on “**Research Methodology & Skill Development**” organized by Shri Venkateshwara University held from Feb. 3rd to 9th, 2020 in association with Indian Association For Management Development (IAMD).
- **International Seminar** on Science, Environment and Spirituality (ISSES 2019) held on September 13, 2019 at **Shivaji College (University of Delhi)**.
- Two days **International E-Summit** organized by The Entrepreneurship Development Cell held on 14-15 February, 2019 at **Shivaji College (University of Delhi)**.
- Two days **National Seminar** on “**New Trends in Nanotechnology and Applications**” NTNA-2018 held

on 27-28 September, 2018 at ARSD college (University of Delhi).

- Two days **National Conference** on “Material and Devices” held on 31-01 August, 2018 in Sharda University, Greater Noida.
- Two days **International Conference** on “Frontiers of Science & Technology-2018” IGFT-18 held on 21-22 July, 2018 at Department of Applied Sciences KIET Group of Institutions, Ghaziabad, U.P.

WEBINARS/E-CONFERENCES

- **National Level Webinar** entitled “Art of Academic Writing: A systematic approach” organized by by Research Cell, Shivaji College (University of Delhi) on September 4, 2021.
- **Three days National workshop** on “Challenging of Teaching Physics Laboratory Course in Online Mode” organized by Department of Physics under the aegis of IQAC Kalindi College in association with Department of Physics and Astrophysics, University of Delhi and the National Academy of Sciences India (NASI), Delhi Chapter on 23-25 January, 2021.
- **International webinar (e-conference)** on the theme “Prospective of Interdisciplinary Research in Science and Technology in the Present Scenario” held on May 15-16, 2020. Chaudhary Charan Singh University Meerut, Uttar Pradesh, India
- **National Webinar** on “Emerging out a Winner in Lockdown” organised by Department of Physics, Kalindi College on May 14, 2020.
- **National Webinar** on “Science, Society and Exponential Change: Reimagining the Future” organised by Department of Physics, Kalindi College, on May 13, 2020.
- **National Webinar** on “AN INTRODUCTION TO MEASUREMENT OF LIGHT” Department of Physics, Department of Physics, Kalindi College, University of Delhi has University of Delhi held on 13th May, 2020.
- **National webinar** on “What is Light : Evolution of Quantum Theory”, organised by Department of Physics, Kalindi College, on May 12, 2020.
- Webinar on “Material Science, Technology & Society (MSTS 2020)”, on 8-9 May 2020 at JNU.
- Five Days online **National Research STTP** on How to Write a Research Paper organized by Matter here on on 21 - 25 October, 2020.

Research Guidance (Supervision of Doctoral Thesis/Dissertations)

Awards and Distinctions

- **National Level E-quiz** competition on “**Mathematics & Mathematicians**” organized by Department of Mathematics, Government Shyama Prasad Mukharjee College Sitapur, Chhatisgarh with 96% on 25.08.2020.

EDITOR

Worked as an editor for a book titled “**Modern Research and Trends in Engineering vol-2**”, which was published in August 2021. Amazon Publishers www.kdp.amazon.com ISBN : 979-8464793903

Memberships

EDITORIAL BOARD MEMBERSHIP

- At present member of editorial Board of National Journal of Environment and Scientific Research, E-ISSN 2582-5836.

Other Academic Activities

TECHNICAL QUALIFICATIONS

- A certificate course in **MATLAB with Numerical Techniques in PHYSICS & MATHEMATICS** from an **ISO 9001:2008** certified company, NOIDA (U.P).
- Certificate in **SCILAB** programming with Numerical Techniques.
- Certificate in **PYTHON** programming with Numerical Techniques.
- Certificate in **LATEX**.
- Certificate in **Web Development Using CMS**
- Certificate in **Data Mining in Cyber Crime** (Detecting Trends and Scams in Virtual World)
- Certificate in **Cyber Security & Cyber Ethical Hacking**
- A certificate course in **MS-Word, MS-Excel, MS-DOS, Power Point, Internet Explorer and Email** etc. from **University of Delhi**.
- **PASCAL** Programming through Physics.
- **C, C+ and C++** programming through Physics.
- Special tips on **ANDROID** platform and **Ethical Hacking**.

Cultural/Extracurricular Activities

- Took part in different committees of the college such as discipline committee ,college development committee and physics society NAAC committee etc.



Signature of Faculty Member