

Curriculum Vitae

Prof. (Dr.) Vinod Kumar Singh

Member, U.P. Education Services Selection Commission, Prayagraj.
Ex. Member, U.P. Higher Education Services Commission, Prayagraj.
Professor, Deptt. of Physics,
K.S. Saket P.G. College, Ayodhya
(Affiliated to Dr. R.M.L. Avadh University, Ayodhya)
Ex-Principal, Ratan Sen Post Graduate College,
Bansi, Siddharthnagar-272153, U.P.
(Affiliated to Siddharth University, Kapilvastu, Siddharthnagar)
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Personal Details :

Father's Name : Shri Shubh Narayan Singh
Date of Birth : June 24, 1968
Sex : Male
Marital Status : Married
Languages Known : English, Hindi, Sanskrit
Nationality : Indian

Address for Correspondence:

609, Civil Line No.-1,
Near-P.W.D. Office
Sultanpur – 228001, U.P.
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Educational Qualifications :

- M.Sc., Ph.D. (**Physics**) From Dr. R.M.L. Avadh University, Ayodhya, U.P.

Teaching & Administrative Experience :

Teaching Experience in U.G. & P.G. Classes: **33 Years**

- Member, U.P. Higher Education Services Commission, Prayagraj since 28.12.2021.
- Professor in the Department of Physics at K.S. Saket P.G. College, Ayodhya (01.11.2021 to till date)
- Principal Ratan Sen P.G. College, Bansi, Siddharthnagar since 01.11.2021 to 30.06.2022.
- Associate Professor in the Department of Physics at K.S. Saket P.G. College, Ayodhya (20.09.2007 to 30.10.2021)
- Assistant/Associate Professor in the Department of Physics G.S.P.G. College, Sultanpur (07.02.1991 – 19.09.2007)

Research paper Published in Journals :

1. **"Model of Black Hole Entropy in Induced Gravity."** A.K. Srivastava, **V.K. Singh** & M.P. Singh, PAS, 2008 (14), 86-88.
2. **"On Quantum Theory in External E.M. Fields."**, **V.K. Singh**, V.P. Dubey & A.K. Srivastava, PAS, 2008 (14), 89-94.
3. **"The Problem of Black Hole Entropy."**, A.K. Srivastava, **V.K. Singh** & G.S. Dubey, PAS , 2008 (14), 95-98.
4. **"Possible Observation of Energy Level Quantisation in an Intrinsic Josephson's Junction."**, **V.K. Singh**, Rajesh K Verma, Ashish & Om Prakash, PAS , 2008 (14), 118-122.
5. **"Solar Longitudinal Distribution of Solar Flares in Association with Forbush Decreases."**, **V.K. Singh**, Om Prakash & R.K. Verma, PAS , 2008 (14), 123-129.
6. **"High Temperature Superconductivity From Complexity to Simplicity."**, **V.K. Singh**, Rajesh Kumar, Research Link, 2008 VII(2), 5-6.
7. **"Forecasting of rain Fall using statistical Technique over Faizabad Region"**. Ashish Caudhary, A. Pandey, Rajesh K, S.N.D & **V.K. Singh** et.al; International Transactions in Applied Sciences (ITAS), 2012, (4), 195.
8. **"Wind Speed Prediction Using Statistical Regression Over Faizabad Region."**, Rajesh Kumar, A Chaudhary, S.N. Tiwari, S.N.D., A. Pandey, **V.K. Singh**, O.P. Yadav, Acta Ciencia India, 2012, XXXVIII(4), 227-234.
9. **"Analysis of Bright Sunshine Using Regression Over Ayodhya Region."**, S.N. Diwedi, Rajesh Kumar, A. Chaudhary, **V.K. Singh** et.al; ISST J. Applied Physics, 2012, 3(1), 29-32.
10. **"Prediction of Rainfall Using ARIMA Model."**, A Chaudhary, Rajesh Kumar, A Pandey, S.N.D, **V.K. Singh**, O.P. Yadav; ISST J. Applied Physics, 2012, 3(1), 33-36.
11. **"Analysis of Wing Speed Using ARIMA Model."**, Rajesh Kumar, A Chaudhary, A.Pandey, N Diwedi, **V.K. Singh** et.al; Acta Ciencia Indica, 2013, XXXZXP (3), 135-140.
12. **"Electrical and XRD Behaviour of Ba ($W_{0.70}Zr_{0.3}$)O₄."**, C.K. Dixit, R.P. Sharma, **Vinod Singh**, IJERT, 2014 (3), 6, 1552-1555).
13. "Biological Nanofactories: Using Living Forms for Metal Nanoparticle Synthesis.", Shilpi Srivastava, Zeba Usmani, Atanas G. Atanasov, **Vinod Kumar Singh**, Nagendra Pratap Singh, Ahmed M. Abdel-Azeem, Ram Prasad, Govind Gupta, Minaxi Sharma and Atul Bhargava, Mini-Review in Medicinal Chemistry, 2021, 21, 245-265.
14. **"Comparative Study of Molecular Docking, Structural, Electronic, Vibrational Spectra and Fukui Function Studies of Thiadiazole Containing Schiff Base– A Complete Density Functional Study."** Anoop Kumar Pandey, Vikas Baboo, Vijay

- Narayan Mishra, **V.K. Singh** & Apoorva Dwivedi POLYCYCLIC AROMATIC COMPOUNDS Vol. 42(1) 2022 Taylor Fancies IF=3.374)DOI: <https://doi.org/10.1080/10406638.2020.1712440>
15. **"Time dependent density functional theory, AIM Analysis, NLO and Thermodynamic properties of Propofol and adsorption effects of Propofol drug over Carbon nanotube (C56H16) as the factor of drug delivery system."**, A.K. Pandey, **V.K. Singh** et.al. *Macromol. Symp.* **2023**, 407, 2100451 DOI:10.1002/masy.202100451 (Wiley IF=1.02)
 16. **"A combined theoretical and experimental study of nickel derivative [Daiquiris (nicotinamide-jN1) nickel (II)]-lfumarato-K2O1:O."**, A.K. Pandey, S. Chand, **V.K. Singh**, V.N. Mishra October 2023 International Journal of Computational materials sciences and engineering sciences ID 2530017(26 pages) DOI: 10.1142/S2047684123500471 (World Scientific IF=1.30)
 17. **"Quantum chemical study of 2-(Imidazol-1-yl)-4-Methylphenol"**, V.K. Singh et.al. *TMU Journal of Basic & Applied Chemistry Vol.3 Jan-December, 2023: P.16-23*
 18. **"Chemical and Biological activity of anticancerous drug Isoalantolactone by using Ab-initio technique"**, H.N. Mishra, **V.K. Singh**, et.al. Sri JNPG College Revelation 6(1),17-22, 2022 ISBN:2556-7698
 19. **"Geometry, Vibrational, electronic reactivity and UV-Vis Spectra of Imidazole derivative molecule 2-(Imidazol-1-yl)-4-methylphenol by using Ab-initio technique"**, **V.K. Singh** et.al. Sri JNPG College, REVELATION A Peer Reviewed & Refereed Annual Journal of Popular Science Vol. 7, No. 1 (2022), ISSN : 2456-7698 RNI: UPBIL 04909.
 20. **"Geometry Optimization Vibrational Analysis QAIM Analysis of Isoalantolactone by using Ab-initio Technique"**, R.K. Yadav, **V.K. Singh** et.al. *Journal of Chemistry and Chemical Sciences, Vol.11(10),103-109, October, 2021* (An International Research Journal), ISSN 2319-7625 www.chemistry-journal.org
 21. **"COMPREHENSIVE THEORETICAL STUDY OF PYRIDO (2, 3-b) PYRAZINE-2,3-DIOL BY USING DENSITY FUNCTIONAL THEORY"**, V.N. MISHRA, **V.K. Singh** et.al. ROMANIAN J. BIOPHYS., Vol. 31, No. 4, P. 000-000, BUCHAREST, 2021 (UGC Care list journal)
 22. **"SPECTROSCOPIC, NLO, NBO, BIOCHEMICAL INVESTIGATION OF 3-(HYDROXYMETHYL)-3-METHYL-2, 6 DIPHENYLPYPERIDIN-4-ONE A.K. PANDEY"**,

V.K. SINGH, et.al. ROMANIAN J. BIOPHYS., Vol. 33(2),67-83, BUCHAREST, 2023
(UGC care List journal)

23. **"Geometry Optimization, Electronic Properties, UV Spectra and NLO Analysis of 5-nitro-picolinamide by using First Principle"**, A.K. Pandey, **V.K. Singh** et.al. *TMU Journal of Basic & Applied Chemistry Vol-1 2022 pages 13-21.*
24. **"Variation in Structural Chemical Reactivity and Nonlinear Optical (NLO) Properties of C₅₆H₁₆ Nanotube After Endohedral Doping of Superalkali (Na₂F) and Superhalogen (BF₄): A DFT Study"**, V. Singh **V.K. Singh**, A. Dwivedi, A.K. Pandey, September 2023 Chemistry Africa DOI: 10.1007/s 42250-023-007398 (Springer IF=2.98)
25. **Theoretical Investigation of Geometry Optimization, Vibration Analysis, Thermodynamical Properties and electronic properties of Hexachlorophosphazene: A DFT Study**, G. Mishra, D.V. Shukla, D.N. Mishra, D.D. Dubey, A.K. Singh, Ashutosh Tiwari, Anoop Kumar Pandey, **Vinod Kumar Singh**, Sri JNPG College, REVELATION, A peer reviewed & Refereed Annual Journal of Popular Science, Vol. No. 8, No. 1(2023), ISSN: 2456-7698 RNI, UPBIL 04909.
26. **Stability, Spectroscopic Investigation (Experimental and Theoretical), Electronic and Molecular Docking of Anesthetic Agent: Propofol**, Anoop Kumar Pandey, S.P. Pandey, **V.K. Singh**, Vijay Narayan, Dharmesh Vikram Shukla, Vijay Singh and Apoorva Dwivedi, *Macromolecular Symposia*, 2024, 413, 2300076 pp 1 to 8.

Paper published in Conference Proceeding

1. Geometry Vibrational and NBO analysis of thiozole derivatives (Z)-4-[[4-(3-methyl-3-phenylcyclobutyl)thiazol-2-yl]amino]-4-oxobut-2-enoic acid
Anoop Kumar Pandey, Ankit Kumar Sharma, **VK Singh**, Benard S. Mwankemwa, Vijay Singh in proceeding of International conference one merging trends in IoT & Computing technologies-2022 paper presented entitled organized by G.I.T.M. along with G.I.P.S. Lucknow (U.P.) India associated with **CRC press (Taylor & Francis Group)** dated 13-14 May 2022. ISBN:9781003350057 DOI:10.1201/978100335005

Projects Online

1. Co-PI as One On going Research project founded by UP Government entitled "Molecular Docking DFT calculation of some important biologically active

molecule and their interaction with metal” of amount three lakhs rupees of three years

Submitted project as Co-PI

1. A journey for exploring new drug delivery system for drug by using quantum chemical techniques incorporate with molecular dynamics (Project Id 2530) of nearly 17 lakh in Council of Science & Technology

Books Published:

1. **An Introduction to Atomic & Molecular, Physics-** ISBN 978-81-949264-6-7, Published by P.K. Publishers & Distributors, Delhi.
2. **An Handbook of Solid State Electronics-** ISBN 978-81-949264-5-0, Published by P.K. Publishers & Distributors, Delhi.
3. **यूनीफाइड प्रायोगिक भौतिक विज्ञान-** ISBN 978-81-948262-6-2, Published by Ram Prasad Publication, Agra.
4. Concept of Physics and its application ISBN 978-93-92239-16-8, Published by P.K. Publishers and Distributors, New Delhi.
5. A Text Book of Thermal Physics and Semiconductor Devices, ISBN 978-93-93509-02-4, Discount Group of Publication, Gorakhpur.
6. A Text Book of Electromagnetic Theory & Optics, ISBN 978-93-93509-20-8, Discount Group of Publication, Gorakhpur.
7. Wave and Optics, ISBN 978-81-961734-6-3, Published by Mahavir Publication, Dibrugarh, Assam.

Research (Ph.D.) Supervised :

- No. of Ph.D. Supervised - 04 (Awarded)
1. **Rajesh Kumar**, “Study of forecasting technique and application of relation between Wind Velocity & Temperature in eastern U.P.”.
 2. **Ashish Chaudhury**, “Study of forecasting technique of rainfall and temperature in eastern U.P.”
 3. **S.N.D. Dwivedi**, “Study of forecasting technique and application of bright sunshine, cloud cover and temperature in eastern U.P.”
 4. **Anupam Kumar Pandey**, “Study of forecasting technique and application of the relation of relative humidity, cloud cover & temperature in eastern U.P.”

Improvements of Professional Competence:

1. **Orientation Course of 4 weeks at Academic Staff Collage, D.D.U. Gorakhpur University, Gorakhpur 2007.**
2. **Refresher Course at Academic Staff Collage, Aligarh Muslim University, Aligarh 2008.**
3. **Refresher Course at Academic Staff Collage, CPDHE University of Delhi 2008.**

4. Refresher Course at Academic Staff Collage, CPDHE University of Delhi University, Delhi 2009.

Seminar/Symposium/Conferences/Workshop Attended :

1. 17th Annual Conference of Purvanchal Academic of Science, held at K.S. Saket P.G. College, Ayodhya, Feb 19 & 20, 2008.
2. "Professional Development of Teachers in Global Perspective" Paper entitled "BLACK HOLE ENTOPY IN STRING THEORY" organized by College of Education Bilaspur Greater Noida, 25 & 24 Nov. 20, 2010.
3. National Seminar on "ROLE OF MEDIA IN WAR AND TERRORISM" Paper entitled "NEW TECHNOLOGY AND NEW TYPE TERRORISM" organized by Department of Defence & Strategic Studies Ishwar Sharan Degree College, Prayagraj, Nov. 13, 14, 2010.
4. National Symposium on Recent Researches in Physics and Biological Sciences., National Academy of Sciences, held at KNIPSS Sultanpur, Feb, 14-15, 2011.
5. National Seminar on "New Dimensions of Security Challenges in South Asia : Diagnosis & Prognosis" Paper entitled "ELECTRONIC GADGETS : NEW THREAT TO SECURITY" 15 & 16 Oct., 2011.
6. IQAC: Total Internal Quality Management, U.P. Govt., UPSHEC, held at Dr. R.M.L. Law University, Lucknow on March 24, 2012.
7. National Seminar on "RESERVATION POLICY AND DALITS" Paper entitled "ROLE OF TECHNOLOGY TO PREVENT DALIT DISCRIMINATION" organized by K.S. Saket P.G. College, Ayodhya, Oct. 26-27, 2013.
8. Workshop on Development of Low Cost Scientific Experiments to Inspire Inquiring Spirit Among Students on Oct. 28-20, 2013 held at Department of Physics, Govt. P.G. College, New Tehri, Garhwal, Uttarakhand.
9. Participated as mentor in the INSPIRE INTERNSHIP - 2014 Program on 17.12.2014 held at G.S.P.G. College, Sultanpur (Sponsored by- An Initiative of DST, Govt. of India).
10. National Seminar on "RECENT ADVANCES IN PHYSICAL SCIENCES" Paper entitled "NEW METHODOLOGY OF ANALYSING WIND SPEED" organized by U.P. College Varanasi Feb. 28, 2015.
11. International Conference on light Quanta, "Modern Perspectives & Application" organized by Deptt. of Physics, University of Allahabad, U.P. on Dec. 14-16, 2015.
12. Certificate of Participation in CYBER CRIME AND SECURITY WORKSHOP organised by Image Building at K.S. Saket P.G. College Ayodhya, on Aug.10-11, 2016.
13. Science Academies Lecture- Workshop on "RECENT PERSPECTIVES IN COMPUTATIONAL AND EXPERIMENTAL CHEMISTRY" organized by U.P. College Varanasi Jan 17-19, 2017.

14. राष्ट्रीय संगोष्ठी "भारतीय परम्परा का आधुनिक भारत: स्वरूप एवं दिशा", आयोजक महात्मा गांधी काशी विद्यापीठ विश्वविद्यालय, वाराणसी एवं अखिल भारतीय शैक्षिक महासंघ दिनांक 27-28 जुलाई 2019.
15. XXX Statutory Conference & National Seminal on "Draft on NEP & Higher Education in India" organized by All India Federation of University & College Teacher Organization (AIFUCTO) & AONGCTA held on 7th to 9th December 2019 in Bhubaneswar Odisha.
16. National Conference on "Material & Divices (NCMD-2020)" organized by Deptt. of Physics Teerthankar Mahaveer University Moradabad on 18-19 December 2020.
17. International Webinar on Food System & Immunity Facing Challenge during Covid-19 organized by K.S. Saket P.G. College, Ayodhya on July 21, 2020.
18. National Webinar on Computation Simulation: A Powerful tool for Advance Scientific Research (CSPTASR-2020) organized by M.M.M. P.G. College Bhatpa Rani Deoria, U.P. on 18-19 October 2020.
19. 2nd National Conference on Materials and Devices (NCMD- 2021) Invited Talk "NLO and opto-electronic response of applied electric field L-lysine p-nitrophenolate monohydrate (LLNPNP) by using First Principal" organized Deptt. of Physics Teerthanker Mahaveer University Moradabad on 16-17 September 2021.

Life Membership :

- Life Member of "Indian Association of Physics Teachers", (Membership No. 9675L6008)

Administrative Assignments :

- **Member**, Executive Council of Mahatma Gandhi Kashi Vidyapeeth University, Varanasi.
- **Director**, Computer Science Department, K.S. Saket P.G. College, Ayodhya.
- **Proctor**, K.S. Saket P.G. College, Ayodhya. (July, 2008 – till now)
- **Member**, Academic Committee of the College.
- **Member**, I.Q.A.C. of the College.
- **Member**, Board of Studies Physics of Dr. R.M.L. Avadh Univ. Ayodhya.
- **Co-ordinator and Dy. Co-ordinator** of evaluation of University exams of Dr. R.M.L. Avadh Univ. Ayodhya.
- **Member** in Seniority Determination Committee of the Dr. R.M.L. Avadh Univ. Ayodhya.
- **Member** of C.D.C. of Dr. R.M.L. Avadh Univ. Ayodhya.
- **Expert** in the Selection of Lecturers in Degree College of Dr. R.M.L. Avadh Univ. Ayodhya.
- **Panel member** of the Affiliation committee of Dr. R.M.L. Avadh Univ. Ayodhya.
- **Nodal Officer** of the College for AISHE.
- **College Liasoning Officer**.
- **Convener** of Admission committee of the College.

- **Incharge** of Grievance Redressal Cell of the College.
- **Observer** in Student Union Election in College.
- **Assistant Election Officer** in the Student Union Election in the College.
- **Member** Seat Matrix Committee of the College.
- **Expert** in Selection of the Principal, PGT & TGT Exam in U.P. Madhyamik Shiksha Sewa Chayan Board, Prayagraj.
- **Observer** in Examination of various universities and Commission.
- **Observer** in B.Ed. Entrance Examination.
- **Observer** in Examination of Assistant Professor conducted by UP Higher Education Service Commission Prayagraj.
- **Observer** in L.T. & Lecturer grade examinations conducted by U.P. Madhyamik Shiksha Sewa Chayan Board, Prayagraj.
- **सदस्य**, विश्वविद्यालय परिनियमावली संशोधन समिति।

Honours:

- उच्च शिक्षा के क्षेत्र में विशेष रूप से राष्ट्रीय शिक्षा नीति-2020 के क्रियान्वयन में उल्लेखनीय योगदान हेतु डॉ० राममनोहर लोहिया अवध विश्वविद्यालय, अयोध्या द्वारा शिक्षक दिवस समारोह दिनांक 05 सितम्बर 2021 को सम्मानित।
- डॉ० राममनोहर लोहिया अवध विश्वविद्यालय, अयोध्या द्वारा आयोजित दीपोत्सव-2020 (गिनीज बुक ऑफ वर्ल्ड रिकार्ड) में उच्च कोटि के समन्वय एवं सतत पर्यवेक्षण हेतु प्रशस्ति-पत्र।
- **Nation Builder Award** by Rotary Club Sultanpur on the occasion of Teachers Day 2021.
- महात्मा गांधी काशी विद्यापीठ विश्वविद्यालय वाराणसी में आजादी का अमृत महोत्सव कार्यक्रम के अवसर पर राष्ट्रीय शैक्षिक महासंघ काशी प्रांत द्वारा आयोजित कार्यक्रम में दिनांक 21.11.2021 उच्च शिक्षा के क्षेत्र में विशिष्ट योगदान हेतु सम्मानित।

Date :

Place :

(Prof. (Dr.) Vinod Kumar Singh)