

## Curriculum Vitae

**DR. MAHIPAL SINGH**

**Post Held- Professor & Head, Department of Physics**



**Present Address:** Dr. Mahipal Singh  
Deptt. of Physics, R.H. Govt. P.G. College  
Kashipur, Distt.: Udham Singh Nagar (Uttarakhand)  
PIN-244713  
Phone: 05947-262638, 09412518666  
Fax: 05947-262638

**Permanent Address:** Dr. Mahipal Singh s/o Shri Bharat Singh  
Vill.: Udhowala, P.O.: Seervashuchand, Via: Afzalgarh,  
Distt.: Bijnor (U.P.)- 246722, India  
Mobile: 09412518666, 8279389928

**E-Mail:** dmpsc@rediffmail.com; dmahipalsingh1@gmail.com;  
dr.mahipalsingh@rhgpgckashipur.ac.in

**Facebook:** <http://www.facebook.com/mahipal.singh.790>

**Google Scholar:** <https://scholar.google.com/citations?user=XULBhZIAAAAJ&hl=en>

**You tube Channel:** <https://www.youtube.com/c/MahipalSinghPhysics>

\*Lectures on Physics by Mahipal Singh are also available on Uttarakhand Tele Education Network, EDUSAT, Department of Higher Education, Uttarakhand

**ORCHID No.-** 0000000178962574

<b>Citations</b>	<b>3966</b>
<b>h-index</b>	<b>25</b>
<b>i10-index</b>	<b>85</b>

**College website:** [www.rhgpgckashipur.ac.in](http://www.rhgpgckashipur.ac.in), **College E-mail:** rhgpgc@gmail.com

**Date of Birth:** 30-07-1974

**Teaching/Research Experience:** UG: since academic session 2005-06, PG: since academic session 2009-10, Research: since 2006-07

**Academic Qualification:**

Exam. Passed	Board/University	Year	Percentage	Division	Major Subjects/Group
High School	U.P. Board, Allahabad	1989	75 %	Ist.(Hons.)	Hindi, English, Mathematics-Two, Science-Two, Social Science, Biology
Intermediate	U.P. Board, Allahabad	1991	77 %	Ist.(Hons.)	General Hindi, English, Physics, Chemistry, Mathematics
B.Sc.	Kumaun University, Nainital	1996	77 %	Ist	Physics, Chemistry, Mathematics
M.Sc.	G.B. Pant University of Ag. & Tech., Pantnagar	1999	87 %	Ist	Major-Physics Minor-Instrumentation
Ph.D.	G.B. Pant University of Ag. & Tech., Pantnagar	2003	79 %	-	Major- Physics (Solid State Physics) Minor- Computer Science
UGC-CSIR-NET/JRF	CSIR	1999	-	-	Physical Sciences

**Field of Research/Interest:** Theoretical Condensed Matter Physics, High  $T_c$ -Superconductivity, Nanomaterials, Material Science, Science Education, Science Popularization

**M.Sc. Thesis Title:** - “Study of upper critical magnetic field in high  $T_c$  superconductors”

**Ph.D. Thesis Title:** - “Study of supercurrent density in layered high temperature cuprate superconductors”

**Achievements/Scholarships/Fellowships Received:**

- UGC-CSIR-NET(JRF) qualified in 1999.
- Received CSIR-JRF(NET) from July 01, 2000 to June 30, 2002.
- Received CSIR-SRF(NET) from July 01, 2002 to Nov. 14, 2002.
- Received University Merit Fellowship of G.B. Pant University of Ag. & Tech., Pantnagar from July 27, 1999 to June 30, 2000.
- Received Graduate Teaching Assistantship of G.B. Pant University of Ag. & Tech., Pantnagar from Jan 15, 1998 to May 17, 1999.
- Received Akikrit Scholarship, U.P. during 1987-89.

**Workshops/Conferences/Symposia/Seminars/Festivals/Webinars Attended (Without paper presentation):**

- Scouts Camp-Second Sopan organized by UP Bharat Scouts and Guides during February 27-28, 1988 held at HCM Inter College, Kasampur Garhi, Distt. Bijnor (U.P.)

- (ii) Medical Camp of Divisional Scout & Guide Rally of Kumaun Division organized by UP Bharat Scouts and Guides during October 18-21, 1989 at Stadium, Kashipur (Nainital)
- (iii) Nehru Album Competition of District level Junior Red Cross/Saint Jones Ambulance held at Kashipur on December 1, 1990
- (iv) National Conference on “Semiconductor Materials & Recent Technologies” sponsored by Semiconductor Society (India), New Delhi organized by Deptt. of Physics, G.B. Pant University of Ag. & Tech., Pantnagar during Nov. 01-03, 1997.
- (v) 45<sup>th</sup> DAE Solid State Physics Symposium sponsored by Board of Research in Nuclear Sciences, Department of Atomic Energy, Govt. of India organized by Deptt. of Physics, Panjab University, Chandigarh during Dec 26- 30, 2002.
- (vi) National Seminar on “Diversification: An Emerging Demand on Teacher’s Education” organized by Faculty of Education, Banasthali Vidyapith, Banasthali (Raj.) during Feb 08-09, 2003.
- (vii) Workshop on “Implementing a Performance Focused Approach to Budgeting” conducted under the joint auspices of United State Agency for International Development and Government of Uttarakhand, Dehradun in Hotel Pacific, Dehradun during Feb 16, 2005.
- (viii) Third state level youth festival of NSS from Oct 14-20, 2006 organised by NSS cell, Government of Uttarakhand, Dehradun at Rajiv Gandhi Navodaya Vidyalaya, Dehradun.
- (ix) State level seminar on “Opportunities and Scope for Research in Government Colleges” sponsored by National Assessment and Accreditation Council(NAAC), Bangalore, Uttarakhand State Council for Science and Technology(UCOST), Dehradun and State Biotechnology Programme, Govt. of Uttarakhand, Haldi, Pantnagar organized by Govt. P.G. College, Pithoragarh, Uttarakhand during March 16-17, 2007.
- (x) International Conference on Condensed Matter Physics, under the joint auspices of University of Rajasthan, Jaipur; University of Bikaner, Bikaner and Engineering College, Bikaner at Jaipur during Nov 25-28, 2007.
- (xi) 51<sup>st</sup> DAE Solid State Physics Symposium sponsored by Board of Research in Nuclear Sciences, Department of Atomic Energy, Govt. of India at Deptt. of Physics and Electronics, Barkatullah University, Bhopal during Dec. 26-30, 2006
- (xii) 1<sup>st</sup> State Science and Technology Youth Festival-2008 organized by Uttarakhand State Council for Science and Technology(U-COST), Govt. of Uttarakhand, Dehradun at Dehradun during Feb. 28- March 2, 2008.
- (xiii) National Seminar on “Emerging Trends and Present Scenario of Indian Politics” organized by Deptt. of Political Science, Govt. P.G. College, Bageshwar sponsored by ICSSR, New Delhi during March 24-25 March, 2008.
- (xiv) State level seminar/workshop on “Quality Assurance and Sustenance at Institutional level in Higher Education: Opportunities and Challenges” sponsored by National Assessment and Accreditation Council(NAAC), Bangalore at Directorate of Higher Education, Uttarakhand, Haldwani on October 18, 2008.
- (xv) 3<sup>rd</sup> Uttarakhand State Science & Technology Congress-2008 at Indian Institute of Technology(IIT), Roorkee during November 10-11, 2008.
- (xvi) National Seminar on “Environmental Politics in India: Issues, Challenges & Prospects” organized by Deptt. of Political Science, Govt. P.G. College, Bageshwar sponsored by ICSSR, New Delhi during November 28-29, 2008.
- (xvii) Sensitization workshop for prohibition of pre-natal determination of sex of foetus

- organized by NSS, Govt. P.G. College, Bageshwar supported by Deptt. of Medical, Health and Family Welfare, Uttarakhand and National Service Scheme on March 24, 2009.
- (xviii) National Seminar on “Wireless Sensor Network” organized by Deptt. of Electronics & Communication, SRMS College of Engg. & Tech., Bareilly on April 5, 2009.
  - (xix) 2<sup>ND</sup> Rashtriya Yuva Vaigyanik Sammelan-2010 organised by Vijnana Bharti, Doon University and Uttarakhand State Council for Science and Technology(U-COST), Govt. of Uttarakhand, Dehradun at Doon University, Dehradun during Feb. 6-7, 2010.
  - (xx) 5<sup>th</sup> Uttarakhand State Science & Technology Congress-2010 at Doon University, Dehradun during November 10-12, 2010.
  - (xxi) State level advocacy campaign against sex selection and pre-birth elimination of females-Project Shrinkhala-2010(Capacity Building Programme for Awareness on PC-PNDT Act) held on March 15, 2010 at Govt. P.G. College, Bageshwar.
  - (xxii) “Sparsh Ganga Deevash” organized by NSS, Govt. P.G. College, Bageshwar on Dec. 17, 2010.
  - (xxiii) Workshop on HIV and Blood Donation organized by Red Ribbon Club, Govt. P.G. College, Bageshwar during Jan. 4 - Jan.6, 2011.
  - (xxiv) National Seminar on “Protection and Enforcement of Intellectual Property Rights (IPRs) in a Global Knowledge Economy: Opportunities & Challenges” sponsored by University Grants Commission(UGC), New Delhi and Uttarakhand State Council for Science and Technology(UCOST), Dehradun organized by Deptt. of Commerce, Govt. P.G. College, Pithoragarh during March 06-07, 2011
  - (xxv) Workshop on Job opportunities and Self employment in various fields under the aegis of UGC Career and Counselling Cell, Govt. P.G. College, Bageshwar(Uttarakhand) during March 10-11, 2011.
  - (xxvi) National Conference on “Recent Trends in Material Science and Nano Structure(RTMSNS-12)” sponsored by University Grants Commission(UGC), New Delhi and Uttarakhand State Council for Science and Technology(UCOST), Dehradun held at Deptt. of Physics, Govt. P.G. College, Rudrapur(Uttarakhand) during Jan. 3-4, 2012.
  - (xxvii) State level Seminar/workshop on “Promotion of Quality Culture through Internal Quality Assurance Cells (IQACs) in the affiliated colleges of Uttarakhand” sponsored by National Assessment and Accreditation Council(NAAC), Bangalore organized by Internal Quality Assurance Cell (IQAC), Govt. Girls Degree College, Haldwani(Nainital) during July 18-19, 2012.
  - (xxviii) National Conference on “Recent Trends in Interdisciplinary Research and Astrophysics Space Science(NCIRTIRASS-2012)” sponsored by University Grants Commission(UGC), New Delhi; ARIES, Nainital; IUCAA, Bangalore; Uttarakhand State Council for Science & Technology, Dehradun and Uttarakhand Space Application Centre, Dehradun held at Deptt. of Physics, MB Govt. P.G. College, Haldwani, Nainital during 3-4 November 2012.
  - (xxix) District Level Sensitization Workshop for awareness on PCPNDT Act 1994 organized by NSS, Govt. P.G. College, Bageshwar held on 02-03-2013.
  - (xxx) College level workshop on “Rajiv Gandhi Soddhawana Diwas” organized by Govt. P.G. College, Bageshwar (Uttarakhand) on August 20, 2013.
  - (xxxi) College level conference on “Govind Ballabh Pant Jayanti” organized by Govt. P.G. College, Bageshwar (Uttarakhand) on September 10, 2013.
  - (xxxii) Regional Seminar on “Hindi Divas” organized by Govt. P.G. College, Bageshwar on September 14, 2013.

- (xxxiii) National Seminar on “Role of Information and Communication Technology in Socio-Economic and Educational Development” sponsored by Uttarakhand Space Application Centre (USAC), Dehradun organized by Department of B.Ed., Dr. P.D.B.H. Govt. Post Graduate College, Kotdwara, Pauri Garhwal (Uttarakhand) during December 23-24, 2013.
- (xxxiv) Regional Seminar on “Communism in India” organized by History Association, Govt. P.G. College, Bageshwar (Uttarakhand) during December 18-19, 2013.
- (xxxv) Regional Seminar on “Role of Informatics in Academics” organized by Chemistry Association, Govt. P.G. College, Bageshwar (Uttarakhand) during January 8-9, 2014.
- (xxxvi) National seminar on “Crisis of values in contemporary world with special reference to India” sponsored by University Grants Commission, New Delhi held at SBS Govt. P.G. College, Rudrapur (Uttarakhand) on 29 March 2014.
- (xxxvii) National Seminar on “Environmental Economics & Social Sustainability” sponsored by Ministry of Earth Science, Govt. of India; University Grants Commission, New Delhi; Uttarakhand Council for Science and Technology, Dehradun and UGC Academic Staff College, Nainital organized by Department of Botany, Govt. Post Graduate College, Dwarahat, Almora, Uttarakhand during December 4-5, 2014
- (xxxviii) National Seminar on “Recent Development in Physics and Prosperity in Solar Physics-Space Science” sponsored by University Grants Commission, New Delhi; ARIES, Nainital and Uttarakhand State Council for Science and Technology, Dehradun organized by Deptt. of Physics, M.B. Govt. P.G. College, Haldwani, Nainital, Uttarakhand, India during Dec. 27-28, 2014.
- (xxxix) Actively participated in “9<sup>th</sup> Uttarakhand State Science and Technology Congress 2014-15” during 26-28 February 2015 at Uttarakhand State Council for Science & Technology, Vigyan Dham, Dehradun in Brain Storming session- Science Communication.
- (xl) Participated in National Workshop on “Building Awareness on Intellectual Property Rights in Higher Education” organized by M.B. Govt. P.G. College, Haldwani (Nainital) on April 4, 2016.
- (xli) Awareness workshop on “The facilities of UGC-DAE Consortium for Scientific Research” jointly organized by the deptt. Of Physics, D.S.B. Campus, Kumaun University, Nainital and UGC-DAE Consortium for Scientific Research, Indore during April 5-7, 2016 at the deptt. Of Physics, D.S.B. Campus, Kumaun University, Nainital.
- (xlii) National Seminar on “Digital India: Digital Empowerment to Citizens” organized by RLS Govt. Mahila P.G. College, Pilibhit (UP) India sponsored by Deptt. Of Higher Education, Govt. of Uttar Pradesh during January 14-15, 2017.
- (xliii) International Conference on “Recent Advances in Science” organized by Department of Applied Science and Humanities, Invertis University, Bareilly during March 09-10, 2018.
- (xliv) National Seminar on “The Role of E –Learning in Distance Education: Problems and Prospects in India” organized by Uttarakhand Open University Study Centre, SBS Govt. Post Graduate College, Rudrapur (Uttarakhand) India during February 27-28, 2019.
- (xlv) International Conference on “Recent Advances in Science” organized by Faculty of Science, Invertis University, Bareilly (UP) India during March 1-2, 2019.
- (xlvi) The Research Methodology workshop organized by Indian Institute of Management (IIM), Kashipur at Kashipur on 17 March, 2019.

- (xlvi) 2<sup>nd</sup> International Conference on “Global Initiatives for Sustainable Development: Issues and Strategies” organized by Gochar Educational and Welfare Society, Saharanpur (UP) India and Maejo University, Chiang Mai, Thailand at Bangkok, Thailand during June 23-27, 2019.
- (xlviii) NAAC sponsored National Seminar on “ Quality enhancement in NAAC perspective” organized by IQAC, Govt. Post Graduate College (Sridev Suman Uttarakhand University Campus), Gopeshwar (Chamoli) Uttarakhand during Nov. 26-27, 2019.
- (xlix) National Seminar on “Human Values and Professional Ethics in Education: Need and Importance” organized by Govt. Raja P G College, Rampur (UP) sponsored by Deptt. Of Higher Education, UP Government during Feb. 22-23, 2020.
- (l) 4<sup>th</sup> International Conference on “Recent Advances in Science” organized by Faculty of Science, Invertis University, Bareilly (UP) India during Feb. 28-29, 2020.
- (li) National webinar on “Role of online teaching in present era” organized by RLS Memorial Degree College, Jaspur , district Udham Singh Nagar, Uttarakhand India held on 28<sup>th</sup> May 2020 on Zoom App.
- (lii) National Webinar on “Issues and Solutions for saving Biodiversity in Himalayan Region” on the occasion of World Environment Day-2020 jointly organized by Uttarakhand State Councilfor Science and Technology, Dehradun and National Academy of Sciences, India, Prayagraj (Uttar Pradesh) on June 05, 2020.
- (liii) International Webinar on “Nano-materials and Detection Technique of COVID-19” on 07 June, 2020 organized by Deptt. Of Physics, Babu Shivnath Agrawal (PG) College, Mathura (UP), India.
- (liv) International E- Conference on “Recent Applications in Science and Engineering Post COVID-19”organized by Shivalik College of Engineering, Dehradun in association with Society of Scientific Research and Education on June 20, 2020.
- (lv) International E- Conference on “Emerging Advances in Mathematical and Physical Sciences” jointly organized by Deptt of Mathematics and Physics, Hindu College, Moradabad (UP) India during June 28-30, 2020.
- (lvi) International Virtual Conference on “Modern Instrumental and Characterization Techniques in Applied Sciences-2020”organized by MIET Kumaun Haldwani and Deptt of Chemistry, HNB Govt. P.G. College, Khatima, Uttarakhand in collaboration with Uttarakhand Science Education and Research Centre, Dehradun & Deptt. Of Chemistry, R.H. Govt. P.G. College, Kashipur, Uttarakhand, India during July 5-6, 2020.
- (lvii) National e- Workshop on “Use of Scientific Terminology in Higher Technical Education” organized by ABES Engineering College, Ghaziabad (UP) and Commission for Scientific and Technical Terminology, Ministry of Human Resource Development, Deptt. of Higher Education, Govt. of India during July 21-22, 2020.
- (lviii) National webinar on “Novelty of Nanomaterials and their applications” organized by Nano and Molecular Society of India on 9 July 2021.
- (lix) National webinar on “Electrochemical biosensing chips in Bio-Industrial Applications” organized by Nano and Molecular Society of India on 2 August 2021.
- (lx) National webinar on “Climate change and green technological approaches for adaptation” organized by Government P.G. College, Manila, Almora and NEEV on 31 July 2021.
- (lxi) One day Seminar on “North West & Central Himalayan Natural Disasters” jointly organized by Devbhoomi Vigyan Samiti Uttarakhand; Department of Geology &

- Department of Geography, Doon University, Dehradun, Uttarakhand and Uttarakhand Council for Science and Technology, Dehradun on March 26, 2023.
- (lxii) One Day Seminar on North West & Central Himalayan Natural Disasters jointly organized by Devbhoomi Vigyan Samiti, Uttarakhand; Department of Geology & Department of Geography, Dr. Nityanand Himalayan Research & Study Centre, Doon University, Dehradun on 26 March, 2023.
- (lxiii) Lokmanthan, Bhagyanagar-2024 organized by Prajna Pravah, Sanskar Bharti, Prajna Bharti, Akhil Bharti Sahitya Praishad, Vigyan Bharti at Shipa Kala Vedika, Bhagyanagar (Hyderabad), Telangana, India from November 21-24, 2024.

**Training/Faculty Development/Orientation Programmes/ Refresher Courses Attended:**

- (i) A short term programme on ***“Computers in Physics”*** at National Institute of Technical Teachers Training and Research (NITTTR), Ministry of Human Resource Development (HRD), Govt. of India, Chandigarh conducted by Applied Science Department during Jan 10-14, 2005.
- (ii) UGC sponsored ***“Orientation Programme”*** at UGC Academic Staff College, University of Lucknow, Lucknow during March 01-31, 2006.
- (iii) ***“Faculty Development Programme”*** jointly organized by Department of Higher Education, Uttarakhand and ICFAI University, Dehradun at Govt. P.G. College, Rishikesh (Uttarakhand) during April 23- May 07, 2006.
- (iv) Training and Orientation Workshop of NSS functionaries on Cancer Awareness at Dr. Susheela Tiwari Memorial Forest Hospital, Haldwani jointly organized by Kumaun University NSS cell, Nainital and King George’s Medical University, Lucknow during Dec 09-10, 2006.
- (v) State level training workshop for Drinking Water Parameters Under Networking for Wash Campaign catalyzed, organized and supported by Uttarakhand State Council for Science and Technology(U-COST), Govt. of Uttarakhand, Dehradun and National Council for Science and Technology Communication (NCSTC), DST, Govt. of India, New Delhi at Hotel Relax, Dehradun on October 7, 2008.
- (vi) Orientation workshop of District Coordinators organized by Uttarakhand State Council for Science and Technology(U-COST), Govt. of Uttarakhand, Dehradun at Conference Hall, UCOST, Dehradun on Dec. 20, 2007.
- (vii) “Edusat Training Programme for Nodal Officers” organized by Uttarakhand Space Application Centre (USAC), Dehradun and Indian Space Research Organization (ISRO) in joint collaboration with Department of Higher Education, Govt. of Uttarakhand at Doon University, Dehradun during Nov. 30- Dec. 1, 2010.
- (viii) Orientation workshop for IGNOU Centers Coordinators, Nodal Officers and Resource Persons under NDMA-IGNOU project on “Capacity Building in Disaster Management for Government Officials and representatives of Panchayati Raj Institutions and Urban local bodies” on 28-29 March 2011 at Uttarakhand Academy of Administration, Nainital.
- (ix) UGC sponsored Subject Refresher Course in Computer Application (Interdisciplinary) at UGC ASC, Aligarh Muslim University, Aligarh during September 07-27, 2011
- (x) “State level Sensitization Workshop of Master Trainers for Social Communication Campaign on Declining Sex Ratio (PC-PNDT)” organized under the joint aegis of Department of Medical, Health and Family Welfare, Uttarakhand & Vivid India

- Advertising and Marketing, New Delhi during 10-11 Feb. 2012 at Hotel Kamla Palace, Dehradun.
- (xi) Orientation Workshop under NDMA-IGNOU Project “Capacity Building in Disaster Management for Government Officials and Representatives of Panchayati Raj Institutions and Urban Local Bodies at District level” organized on March 19-20, 2012 at Uttarakhand Academy of Administration, Nainital.
  - (xii) UGC sponsored Refresher Course in subject-Physics-Astrophysics at UGC ASC, Kumaun University, Nainital during December 10-30, 2012.
  - (xiii) UGC sponsored Refresher Course in Physics at UGC HRDC, Jawaharlal Nehru University, New Delhi during 05-10-2015 to 30-10-2015.
  - (xiv) Basic Training Course Rover Leader organized by Uttarakhand Bharat Scouts and Guides, Dehradun at Govt. P.G. College, Rudrapur (Uttarakhand) during July 8-14, 2016.
  - (xv) UGC sponsored Short Term Course in Soft Skills & Creative Writings at UGC-HRDC, Guru Nanak Dev University, Amritsar during October 4-10, 2016.
  - (xvi) Advanced Course for Rover Scout Leaders organized by The Bharat Scouts & Guides Uttarakhand, Dehradun at Shantikunj, Haridwar from 29-08-2017 to 04-09-2017.
  - (xvii) Orientation cum Capacity Building Workshop on “Functioning of Study Centres /Learner Support Centres in Open and Distance Learning Mode of Education” organized by Directorate of Regional Services (RSD), Uttarakhand Open University, Haldwani (Nainital), Uttarakhand, India on May 27, 2019.
  - (xviii) Faculty Development Programme (Online Mode) on “Quality enhancement in teaching, learning and assessment during Covid-19 and Post Covid time- Opportunities and Challenges jointly organized by East Calcutta Girl’s College, Kolkata and Acharya Prafulla Chandra College, Kolkata during May 27-31, 2020.
  - (xix) Virtual International Faculty Development Program on “Entrepreneurship Education: Experience from Africa” organized by Navjivan Center for Development, Mehsana, Gujarat, India on 28<sup>th</sup> January 2021.
  - (xx) Faculty Development Programme on “Nurturing Future Leadership Programme (NFLP)” under the aegis of Malaviya Mission Teacher Training Programme (MMTTP), 2024 conducted by Indian Institute of Management Kashipur, Uttarakhand, India from 16<sup>th</sup> December to 20<sup>th</sup> December 2024.

#### **Research Publications in Journals:**

- (i) “*Temperature Dependence of the Supercurrent Density in Bilayer Cuprate Superconductors*” **M.P. Singh**, Ajay and B.R.K. Gupta, Physica C 383, 388-394(2003). [Impact Factor: 0.718]
- (ii) “*Temperature Dependence of Junction Voltage in Bilayer Cuprate Superconductors*” **M.P. Singh**, Indian J. Phys. 77A(4), 365-369(2003). [Impact Factor: 1.785]
- (iii) “*Role of CuO Chains on Supercurrent Density in Bilayer Cuprate Superconductors*” **M.P. Singh**, Ajay, Govind and B.R.K. Gupta, Indian J. Phys. 77A(5), 441-447(2003). [Impact Factor: 1.785]
- (iv) “*Anisotropy in Supercurrent Density in layered cuprate superconductors*” **Mahipal Singh**, Ultra Science Vol. 21(2), 245-252(2009). [Impact Factor: 0.043, ISSN:0970-9150]



- (v) *“Role of Bilayer Chain Coupling on Junction Voltage in Layered High Temperature Cuprate Superconductors”* **Mahipal Singh**, Indian Journal of Pure & Applied Physics Vol. 48, 52-58(2010). [Impact Factor: 0.854, ISSN:0975-1041]
- (vi) *“Influence of Temperature and Carrier Density on Supercurrent Density in SIS Junction”* **Mahipal Singh**, Ultra Science Vol. 22(2), 401-408(2010). [Impact Factor: 0.043, ISSN:0970-9150]
- (vii) *“Influence of temperature on penetration depth in bilayer cuprate superconductors”* **Mahipal Singh**, Ultra Science Vol. 23(1), 27-36(2011). [Impact Factor: 0.043, ISSN:0970-9150]
- (viii) *“Study of penetration depth as a function of temperature, in-plane hopping and single particle tunneling in cuprate superconductors”* **Mahipal Singh** and Vikash Dubey International Multidisciplinary Research Journal 2(1), 51-54 (2012). [Impact Factor: 0.76, ISSN:2231-6302]
- (ix) *“Analysis of temperature dependence of Anderson-Gruneisen parameter for ZnO nanorods”* **Mahipal Singh**, International Journal of Physics and Research(IJPR) 3(4), 55-58 (2013). [Impact Factor: 1.4526, ISSN:2250-0030]
- (x) *“Study of temperature dependence of isothermal bulk modulus of ZnO nanomaterials”* **Mahipal Singh**, International Journal of Advance Research in Science and Engineering 2(10), 109-114 (2013). [E-ISSN: 2319-8354, Impact Factor: 6.1]
- (xi) *“Radiation pattern and performance analysis of rectangular microstrip feedpatch antenna”* Khushbu Ahirwar, Sunil Kumar Singh, Rajeev Chauhan, Madan Singh and **Mahipal Singh**, International Journal of Advance Research in Science and Engineering 2(11), 28-34 (2013). [E-ISSN: 2319-8354, Impact Factor: 6.1]
- (xii) *“Thermal expansion in Zinc Oxide Nanomaterials”* **Mahipal Singh** and Madan Singh, Nanoscience and Nanotechnology Research 1(2), 27-29(2013) [E-ISSN: 2372-4676, DOI:10.12691/nmr-1-2-4].
- (xiii) *“Effect of high temperature pre-annealing on thermal donors in N-doped CZ-silicon”* Vikash Dubey and **Mahipal Singh**, International Journal of Emerging Technologies in Computational and Applied Sciences, 9(1), 106-109(2014)[ISSN:2279-0055, Impact Factor: 1.237]
- (xiv) *“Effect of temperature on volume thermal expansion of minerals”* **Mahipal Singh** and Madan Singh, International Journal of Engineering, Science and Mathematics, 3(4), 86-97 (2014) [ISSN: 2320-0294, Impact Factor: 5.9]
- (xv) *“Equation of state for the study of temperature dependence of volume thermal expansion of nanomaterials”* **Mahipal Singh** and Madan Singh, American Journal of Nanomaterials, 2(2), 26-30 (2014) [ISSN: 2372-3122, Impact Factor: 2.012]
- (xvi) *“Comparative analysis of thermo-elastic properties of zinc oxide nanomaterials at high temperatures”*, Krishna Chandra, Mahipal Singh, Luv Kush and Madan Singh, International Journal of Advance Research in Science and Engineering, 3(12), 100-108(2014) [E-ISSN: 2319-8354, Impact Factor: 1.142]
- (xvii) *“Effect of grain size on volume thermal expansion of nanomaterials”* Madan Singh, Kopang Khotso Hlabana and **Mahipal Singh**, International Journal of Advanced Technology in Engineering and Science, 03(02), 83-89(2015) [ISSN: 2348-7550, Impact Factor:1.012]

- (xviii) *“Impact of Size and temperature on thermal expansion of nanomaterials”* Madan Singh and **Mahipal Singh**, Pramana Journal of Physics, Vol. 84 No. 4, April 2015, pp. 609-619[e ISSN: 0973-7111, Impact Factor: 1.185]
- (xix) *“Effect of size on Debye temperature of Au and Cu nanomaterials”* Madan Singh, Hlabana KC, Krishna Chandra, **Mahipal Singh**, International Journal of Advanced Technology in Engineering and Science 03(01), April 2015, pp. 331-335[ISSN: 2348-7550, Impact Factor: 1.012]
- (xx) *“Thermal Expansion of Fe and Bi nanomaterials depends upon particle size”* Madan Singh, Pelesa Teboho, **Mahipal Singh**, Krishna Chandra, International Journal of Science, Technology & Management 04(01), April 2015, pp. 117-120[ISSN:2394-1537]
- (xxi) *“Power Series Analysis of Equation of State for Nanomaterials”* Kamal Devlal, **Mahipal Singh**, International Journal of Advance Research in Science and Engineering, 4(07), July 2015 pp. 65-74 [ISSN: 2319-8354, Impact Factor:1.142]
- (xxii) *“Behaviour of isothermal bulk modulus of nanomaterials under the effect of temperature”* **Mahipal Singh**, Journal of Nanoscience and Technology, 2(3) July 2016, 138-139 [ISSN: 2455-0191, Impact Factor: 1.354]
- (xxiii) *“Effect of size on Debye temperature of Gold, Silver and Aluminium FCC Nanomaterials”* Mehul Manu, **Mahipal Singh** and Vikash Dubey, American International Journal of Research in Formal, Applied & Natural Sciences, 17(1) February 2017, pp.16-19 [ISSN: 2328-3785, Impact Factor: 4.96]
- (xxiv) *“Low temperature specific heat capacity of Au Nano-particles with their size”* **Mahipal Singh**, International Journal of Current Research in Multidisciplinary, 2(2) April 2017, pp. 27-29 [ISSN: 2456-0979, Impact Factor: 5.218]
- (xxv) *“Size-dependent cohesive energy of FCC nanomaterials”* Mehul Manu, **Mahipal Singh** and Vikash Dubey, Integrated Ferroelectrics, Vol. 184, Dec 2017, pp 108-113 [ISSN: 1607-8489, IF= 0.457]
- (xxvi) *“Analytical model for the size dependent melting entropy and enthalpy of nanomaterials”* Mehul Manu, **Mahipal Singh** and Vikash Dubey, International Journal of Modern Trends in Engineering and Research, Vol. 5032, Feb 2018, pp 17-26 [ISSN: 2349-9745, IF= 4.364, DOI:10.21884/IJMTER.2018.5032.1S1X7]
- (xxvii) *“Equation of state for coefficient of thermal expansion comprising temperature dependent Anderson-Gruneisen parameter for nanomaterials”*, Krishna Chandra, **Mahipal Singh**, Madan Singh, International Journal of Creative Research Thoughts (IJCRT), Vol. 6(1), Feb 2018, pp 1069-1072 [ISSN: 2320-2882, IF = 5.97]
- (xxviii) *“Equation of state for volume thermal expansion for nanomaterials at high temperature”*, Krishna Chandra, **Mahipal Singh**, Madan Singh and Harish Chandra, International Journal of Creative Research Thoughts (IJCRT), Vol. 6(1), Feb 2018, pp 1347-1354 [ISSN: 2320-2882, IF = 5.97]
- (xxix) *“Optical and Electrical Properties of Pristine and Al Doped ZnO Thin Films”* Aadarsh Kumar Chaudhri, B C Joshi, Vanita Devi and **Mahipal Singh**, International Journal of Engineering Sciences Paradigms and Researches, Volume 47, Issue 01, Quarter 01(January to March), March 2018, pp 43-50 [ ISSN: 2319-6564, IF= 2.80]
- (xxx) *“Impact of size on Moduli of Elasticity of Nanosolid, Nanowire and Nanofilm”* Mehul Manu, **Mahipal Singh** and Vikash Dubey, American International Journal of Research in Formal, Applied and Natural Sciences, Vol. 18-111, 2018, pp 32-41 [ ISSN: 2328-3785, IF count value = 4.96]

- (xxxix) “*Wear resistance of electroless Ni-P/Ni-P-SiC nanocomposite depositions*” Munna Ram, Mohd. Abdul Aleem Ansari, Sulaxna Sharma, Vakul Bansal, Awanish Kumar Sharma and **Mahipal Singh**, Interdisciplinary Journal of Contemporary Research, Vol. 5 No. 16, Oct 2018, pp 151-156 [ISSN: 2393-8358, IF=2.314]
- (xxxix) “*Size impact on Debye temperature of In and Ag spherical nanosolids*” by Atul Kumar and **Mahipal Singh**, American International Journal of Research in Formal, Applied and Natural Sciences, Issue: March-May, Vol. 25(1), 2019, pp 28-30 [ISSN: 2328-3785, IF count value = 4.96]
- (xxxix) “*Prediction of size-dependent melting temperature of metallic nanoparticles*” by **Mahipal Singh**, American International Journal of Research in Formal, Applied and Natural Sciences, Issue: March-May 2019, Vol. 25(1), pp 31-34 [ISSN: 2328-3785, IF count value = 4.96]
- (xxxix) “*Study of melting temperature depression in nanoparticles with their size using cluster order concept*” by **Mahipal Singh**, American International Journal of Research in Science, Technology, Engineering and Mathematics, Issue: March-May 2019, Vol. 26(1), pp 126-129 [ISSN: 2328-3580, IF=5.0]
- (xxxix) “*Study of size dependent thermal conductivity of Gold FCC nanomaterial*” by Atul Kumar and **Mahipal Singh**, American International Journal of Research in Science, Technology, Engineering and Mathematics, Issue: March-May, Vol. 26(1), 2019, pp 134-136 [ISSN: 2328-3580, IF=5.0]
- (xxxix) “*Theoretical study of size dependence cohesive energy of nanoparticles*” **Mahipal Singh**, Vikash Dubey and Mohd. Abdul Aleem Ansari, Shodh Drishti Vol. 10 No. 6, June 2019, PP. 151-155 [ISSN: 0976-6650, Impact No. 2.591]
- (xxxix) “*The Debye Temperature of Metallic Nanoparticles*” Atul Kumar and **Mahipal Singh**, IOSR Journal of Applied Physics, Vol. 11, Issue 5 II, October 2019, pp 62-68 [ISSN: 2278-4861, I F= 3.15]
- (xxxix) “*Effects of Grain-Size on Debye Temperature and Thermal Conductivity of Nanomaterials*” Atul Kumar and **Mahipal Singh**, IOSR Journal of Applied Physics, Vol. 12, Issue 1 I, February 2020, pp 61-66 [ISSN: 2278-4861, I F= 3.15]
- (xxxix) “*Droop reduction in ZnO/GaN Hybrid Light Emitting Diodes*” Aadarsh Kumar Chaudhri, BC Joshi, Vanita Devi & **Mahipal Singh**, Indian Journal of Pure & Applied Physics, Vol. 59, April 2021, pp 335-338 [ISSN: 0975-104, IF= 0.653]
- (xl) “*Magnetic Properties of Nanostructured Material with the Effect of Dimension*” Amohelang Sebitiele Monyake, Madan Singh, **Mahipal Singh**, International Journal of Scientific Research in Science, Engineering and Technology, <https://doi.org/10.32628/IJSRSET> Vol. 9, Issue 3, June 2022, pp 463-470 [E-ISSN: 2394-4099, IF : 8.154]
- (xli) “*Boost in the Electromagnetic Shielding Effectiveness of Polystyrene-Polyaniline Composites by Addition of Carbon*” Amit Kumar, Arijit Chowdhuri, Monika Tomar, **Mahipal Singh**, Arabian Journal for Science and Engineering, DOI: 10.1007/s13369-022-07289-0, Volume 48, 29 September 2022, pp 1009-1019 [ISSN: 2191-4281, IF: 2.90, Publisher- Springer Nature]
- (xlii) “*Molecular Dynamics Simulations: To Study Various Properties of Metals at Nanoscale*” **Mahipal Singh** and Riya Gola, Bulletin of The Indian Association of Physics Teachers, Volume 14, Number 10, October 2022, pp 349-354 [ISSN 2277-8950]

- (xliii) *“Electromagnetic shielding effectiveness and dielectric study of polystyrene/aluminium composite by addition of graphite and carbon nanofiber powder”* Amit Kumar, V.K. Sachdev, Arijit Chowdhuri, Monika Tomar, **Mahipal Singh**, Journal of Materials Science: Materials in Electronics, <https://doi.org/10.1007/s10854-023-11232-w>, 34: 1857, 25 September 2023, pages 13, [ISSN: 09574522, IF: 2.779, Publisher- Springer Nature]
- (xliv) *“Development of Polystyrene -Copper dust-based composites by addition of Graphite and Carbon nanofibers for absorption dominated EMI shielding in X-band”* by Mahipal Singh et.al. **Communicated for publication** in Polymer Bulletin 2024 (publisher Springer Nature).
- (xlv) *“Study of the impact of carbon nanofibers inclusion on shielding effectiveness of polystyrene-polyaniline-aluminium dust composite for X-band”* by Mahipal Singh et.al. **communicated for publication** in Journal of Nanoparticle Research 2024 (publisher Springer Nature)

#### Chapter in Edited Book:

- (i) Educational Technology-A powerful tool for Education by **Mahipal Singh**, Luv Kush, Vinod Kumar, E-Learning in Education, Lambert Academic Publishing, Germany, 2015, pp. 344-350 [ISBN: 978-3-659-75715-0], Editor- Dr. Neeraj Kumar Shukla
- (ii) Study of temperature dependence of volume thermal expansion of nanomaterials using new Integral Form of Equation of State (IFEOS) by **Mahipal Singh** and Madan Singh, Recent Trends in Chemical and Material Sciences, Book Publisher International, Colombia, 2021, July 07; Vol. 1 pg 90-98, Chapt. 10 [ E-book ISBN: 978-93-91215-21-7]
- (iii) Marvels of Nano Science and Nano Technology by Sanjay Singh Bisht and **Mahipal Singh**, Innovations in Science and Technology, Book Publisher International, Hoogly, West Bengal, India, Vol. 4, 3 February 2022, Pages 14-22, Chapt. 2 [E-Book ISBN: 978-93-5547-093-5]

#### Book Review:

- (i) Nanotechnology Fundamentals and Applications by Manasi Karkare ( I. K. International Publishing House Pvt. Ltd., New Delhi-110016, India) 2008, pp. 236 [ISBN: 978-81-89866-99-0] **Mahipal Singh** and Madan Singh , International Journal of Engineering & Scientific Research, 3(7), July 2015, pp. 92-95 [ISSN: 2347-6532]

#### Research Papers presented in Conferences/Seminars:

- (i) *“Study of Upper Critical Magnetic Field for High- $T_c$  Superconductors”* Mahipal **Singh** and P. Singh presented in National Conference on “Semiconductor Materials & Recent Technologies” organized by Deptt. of Physics, G.B. Pant University of Ag. & Tech., Pantnagar during Nov. 01-03, 1997.
- (ii) *“Role of Bilayer Chain Coupling on the Supercurrent Density in Layered Cuprate Superconductors”* M.P. **Singh**, Ajay, Govind and B.R.K. Gupta, Proc. of DAESSPS, 45, 397(2002), Panjab University, Chandigarh.
- (iii) *“Interlayer Coupling and Anisotropy in the Supercurrent Density in Layered High Temperature Cuprate Superconductors”* M.P. **Singh**, P.K. Pathak and Ajay, 46<sup>th</sup> DAE Solid State Physics Symposium, Givaji University, Gwalior (M.P.) during Dec. 26-30, 2003.
- (iv) *“Temperature and Carrier Density Dependence of Anisotropy in Supercurrent Density in*

- Layered Cuprate Superconductors*” M.P. **Singh**, B.S. Tewari and Ajay, Proc. of DAESSPS, 51, 633(2006).
- (v) “*Temperature Dependence of the Anisotropy in the Supercurrent Density in Layered Cuprate Superconductors*” **M.P. Singh**, B.S. Tewari and Ajay, presented orally at International Conference on Condensed Matter Physics, under the joint auspices of University of Rajasthan, Jaipur; University of Bikaner, Bikaner and Engineering College, Bikaner at Jaipur during Nov 25-28, 2007.
  - (vi) “*Influence of Temperature and Carrier Density on Supercurrent Density in SIS Junction*” **Mahipal Singh** and Rajkumar Tyagi, Advancement in Science and Technology-Proc. of state level conference on “Role of Science and Technology in the development of Uttarakhand state” organized by Deptt. of Physics, Govt.P.G. College, Bageshwar (Uttarakhand) during October 25-26, 2010, pp.185-192.
  - (vii) “*Porous Silicon Formation for FIPOS Technology*” R.K. Tyagi, B. Joshi and **Mahipal Singh**, Advancement in Science and Technology-Proc. of state level conference on “Role of Science and Technology in the development of Uttarakhand state” organized by Deptt. of Physics, Govt. P.G. College, Bageshwar (Uttarakhand) during October 25-26, 2010, pp.154- 157.
  - (viii) “*Intellectual Property Right and its Importance*” **Mahipal Singh**, Bhagwati Negi and Geeta Srivastava Souvenir- UGC National Seminar on Protection and Enforcement of IPRs in a Global Knowledge Economy: Opportunities & Challenges at Govt. P.G. College, Pithoragarh during March 06-07, 2011, pp.48-49
  - (ix) “*Review and Evaluation of Mechanical Properties of Nanocomposites*” **Mahipal Singh**, Vikash Dubey, Madan Singh and Piyush Shukla at National Conference on “Recent Trends in Material Science and Nano Structure (RTMSNS-12)” sponsored by University Grants Commission (UGC), New Delhi and Uttarakhand State Council for Science and Technology (UCOST), Dehradun held at Deptt. of Physics, Govt. P.G. College, Rudrapur(Uttarakhand) during Jan. 3-4, 2012 (Oral presentation) Souvenir pp 37
  - (x) “*Nanotechnology and Nanomaterials- An Introduction*” **Mahipal Singh**, Sanjay Singhal and OP Yadav at National Conference on “Recent Trends in Material Science and Nano Structure (RTMSNS-12)” sponsored by University Grants Commission (UGC), New Delhi and Uttarakhand State Council for Science and Technology (UCOST), Dehradun held at Deptt. of Physics, Govt. P.G. College, Rudrapur(Uttarakhand) during Jan. 3-4, 2012 (Oral presentation) Souvenir pp 51
  - (xi) “*Internal Quality Assurance Cells in Higher Educational Institutions-Establishments and Monitoring*” at State level Seminar/workshop on “Promotion of Quality Culture through Internal Quality Assurance Cells (IQACs) in the affiliated colleges of Uttarakhand” sponsored by National Assessment and Accreditation Council (NAAC), Bangalore organized by Internal Quality Assurance Cell (IQAC), Govt. Girls Degree College, Haldwani(Nainital) during July 18-19, 2012.
  - (xii) “*Rajiv Gandhi and Information Technology*” at college level one day workshop on “Rajiv Gandhi Suddbhawana Diwas” organized by Govt. P.G. College, Bageshwar (Uttarakhand) on August 20, 2013.
  - (xiii) “*Social life of Govind Ballabh Pant*” at college level conference on “Govind Ballabh Pant Jayanti” organized by Govt. P.G. College, Bageshwar (Uttarakhand) on September 10, 2013.

- (xiv) *"Importance of Hindi in the world"* at Regional Seminar on "Hindi Divas" organized by Govt. P.G. College, Bageshwar on September 14, 2013.
- (xv) *"Communal status in India"* at regional seminar on "Communism in India" organized by History Association, Govt. P.G. College, Bageshwar (Uttarakhand) during December 18-19, 2013.
- (xvi) *"ICT in Education and Research"* at National Seminar on "Role of Information and Communication Technology in Socio-Economic and Educational Development" sponsored by Uttarakhand Space Application Centre (USAC), Dehradun organized by Department of B.Ed., Dr. P.D.B.H. Govt. Post Graduate College, Kotdwara, Pauri Garhwal (Uttarakhand) during December 23-24, 2013.
- (xvii) *"Technology in Education"* at Regional Seminar on "Role of Informatics in Academics" organized by Chemistry Association, Govt. P.G. College, Bageshwar (Uttarakhand) during January 8-9, 2014.
- (xviii) *"Science and Values"* at National Seminar on "Crisis of values in contemporary world with special reference to India" sponsored by University Grants Commission, New Delhi held at SBS Govt. P.G. College, Rudrapur (Uttarakhand) on March 29, 2014.
- (xix) *"Public environmental knowledge"* at National Seminar on "Environmental Economics & Social Sustainability" sponsored by Ministry of Earth Science, Govt. of India; University Grants Commission, New Delhi; Uttarakhand Council for Science and Technology, Dehradun and UGC Academic Staff College, Nainital organized by Department of Botany, Govt. Post Graduate College, Dwarahat, Almora, Uttarakhand during December 4-5, 2014.
- (xx) *"Effect of grain size on volume thermal expansion of nanomaterials"* at International Conference on Science, Technology and Management organized by AR Research Publication at YMCA, Connaught Place, New Delhi on 1<sup>st</sup> February 2015.
- (xxi) *"Educational Technology- A powerful tool for education"* at International Seminar on "Role of E-learning in quality education" sponsored by Department of Higher Education, Govt. of Uttarakhand organized by Deptt. of B.Ed., R.G. Govt. P.G. College, Kashipur (Uttarakhand), India during 22-23 February 2015.
- (xxii) *"Digital India: Challenges & opportunities"* at National Seminar on Digital India: Digital Empowerment to citizens organized by RLS Govt. Mahila P.G. College, Pilibhit (UP) India sponsored by Deptt. Of Higher Education, Govt. of Uttar Pradesh during January 14-15, 2017.
- (xxiii) *"Melting Point Depression in Nanomaterials"* at International Conference on "Recent Advances in Science" organized by Department of Applied Science and Humanities, Invertis University, Bareilly during March 09-10, 2018.
- (xxiv) *"Impact of E-Learning in Education"* at National Seminar on "The Role of E –Learning in Distance Education: Problems and Prospects in India" organized by Uttarakhand Open University Study Centre, SBS Govt. Post Graduate College, Rudrapur (Uttarakhand) India during February 27-28, 2019.
- (xxv) *"Mechanical Properties of Carbon Nanotube"* at International Conference on "Recent Advances in Science" organized by Faculty of Science, Invertis University, Bareilly (UP) India during March 1-2, 2019.
- (xxvi) *"Size dependence of thermal conductivity of Gold FCC nanomaterial"* at 2<sup>nd</sup> International Conference on "Global Initiatives for Sustainable Development: Issues and Strategies" organized by Gochar Educational and Welfare Society, Saharanpur (UP) India and Maejo University, Chiang Mai, Thailand at Bangkok, **Thailand** during June 23-27, 2019.

- (xxvii) *“Quality enhancement in teaching and research in higher education system”* at NAAC sponsored National Seminar on “Quality enhancement in NAAC perspective” organized by IQAC, Govt. Post Graduate College (Sridev Suman Uttarakhand University Campus), Gopeshwar (Chamoli) Uttarakhand during Nov. 26-27, 2019.
- (xxviii) *“Importance of professional Ethics in modern education”* at National Seminar on “Human Values and Professional Ethics in Education: Need and Importance” organized by Govt. Raja P G College, Rampur (UP) sponsored by Deptt. Of Higher Education, UP Government during Feb. 22-23, 2020.
- (ix) *“Technological applications of nanomaterials”* at 4<sup>th</sup> International Conference on “Recent Advances in Science” organized by Faculty of Science, Invertis University, Bareilly (UP) India during Feb. 28-29, 2020.
- (x) *“Interdisciplinary approaches in Basic Sciences for Natural Resource Management”* at 4<sup>th</sup> International Conference on “Natural Resource Management and Sustainability” organized by Gochar Educational and Welfare Society, Saharanpur, UP, India and Udayana University, Bali, Indonesia during November 26-30, 2023.

#### **Other Contributions in Conferences/Seminars:**

- (i) “How to make science more popular among the masses of Uttarakhand” by Mahipal Singh at 5<sup>th</sup> Uttarakhand State Science & Technology Congress-2010 at Doon University, Dehradun during November 10-12, 2010 (poster presentation).
- (ii) “Intellectual Property Right and its Importance” by Mahipal Singh et al at National Seminar on Protection and Enforcement of IPRs in a Global Knowledge Economy: Opportunities & Challenges at Govt. P.G. College, Pithoragarh during March 06-07, 2011.
- (iii) “Career Opportunities in Physics” at National Seminar on Career Counselling in Dynamic World: Issues and Challenges organized by Career Counselling Cell, R.H. Govt. P.G. College, Kashipur, Uttarakhand during April 19-20, 2019.

#### **Foreign Visits**

- (i) Visited Bangkok, Thailand during June 23-27, 2019 to present a research paper at 2<sup>nd</sup> International Conference on “Global Initiatives for Sustainable Development: Issues and Strategies” organized by Gochar Educational and Welfare Society, Saharanpur (UP) India and Maejo University, Chiang Mai, Thailand at Bangkok, **Thailand** and awarded by “Excellent Teacher Award” for outstanding contribution in the field of Physics.
- (ii) Visited Udayana University, Bali, Indonesia during November 26-30, 2023 to present a research paper at 4<sup>th</sup> International Conference on “Natural Resource Management and Sustainability” organized by Gochar Educational and Welfare Society, Saharanpur, UP, India and Udayana University, Bali, Indonesia during November 26-30, 2023.

#### **General Articles published:**

- (i) “What is Raman Effect” published in Daily Newspaper Dainik Jagran, Nainital, 28 February 2008
- (ii) “India is bringing revolutionary changes in the field of technology” published in Daily Newspaper Dainik Jagran, Nainital, 11 May 2009

- (iii) "Global warming is the reason" published in Daily Newspaper Dainik Jagran, Nainital, 20 March 2008
- (iv) "National Science Day-An achievement" published in Gyan Vigyan Bulletin, Almora No. 03, pp. 12, March 2014
- (v) "National Technology Day" published in Gyan Vigyan Bulletin, Almora No. 5, pp. 2, May 2014
- (vi) "Indian Women in Science and Technology" published in Gyan Vigyan Bulletin, Almora No. 01, pp-7, January 2015
- (vii) "National Science Day- A scientific achievement" College Magazine- Rachana, Joint Edition 2013-16, pp 53-54
- (viii) "Rovers-Rangers in College" published in College Magazine- Rachana, Joint Edition 2013-16, pp 160-161
- (ix) "Career Opportunities in Physics" published in Shodhmanthan, Vol. X, May 2019, Special Issue-8, pp 75-76 [ ISSN (P) 0976-5255]

#### **Books Publications / Contribution in Books writing:**

- (i) A text book of **Quantum Mechanics and Relativity** by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2006.
- (ii) A text book of **Modern Physics** by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2006.
- (iii) A text book of **Electronics and Solid State Devices** by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2007.
- (iv) Applied Physics by **Mahipal Singh** and Subhash Tewari, Jagdamba Publishing Company, New Delhi, 2008 [ISBN: 978-81-90-4341-1-9]
- (v) Physics Part-III by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2007
- (vi) Solid State Physics, Solid State Devices & Electronics by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2007
- (vii) Quantum Mechanics & Modern Physics by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2008
- (viii) Relativity, Quantum Mechanics & Mathematical Methods by **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2008
- (ix) Solid State Physics, Laser & Statistical Physics by Hari Prakash & **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.), 2009
- (x) Physics-Semester VI by **Mahipal Singh**, Ram Prasad Publications, Agra (U.P.), 2011
- (xi) Relativity, Quantum Mechanics, Atomic, Molecular and Nuclear Physics by JC Upadhyay & Mahipal Singh, Ram Prasad & Sons, Agra (U.P.)- Hindi, 2009
- (xii) Physics-Semester VI by Hari Prakash & **Mahipal Singh**, Ram Prasad Publications, Agra (U.P.)-Hindi, 2011
- (xiii) Physics-III Year by JC Upadhyay, Hari Prakash & **Mahipal Singh**, Ram Prasad & Sons, Agra (U.P.)-Hindi, 2009
- (xiv) Physics-Semester V by **Mahipal Singh**, Ram Prasad Publications, Agra (U.P.), 2011
- (xv) Advancement in Science and Technology edited by **Mahipal Singh** and A K Paliwal, Jagdamba Publishing Company, New Delhi, 2010(Proceedings of State Level Conference on Role of Science and Technology in the development of Uttarakhand state organized by



Deptt. of Physics, Govt. P.G. College, Bageshwar(Uttarakhand) sponsored by Uttarakhand Science Education & Research Centre(U-SERC), Dehradun; University Grants Commission (UGC), New Delhi and Council of Scientific and Industrial Research(CSIR), New Delhi during October 25-26, 2010), 2010 [ISBN: 978-93-80280-30-1]

- (xvi) Mechanics, B.Sc.-I Year, Uttarakhand Open University, Haldwani, Uttarakhand, India (2017) [ISBN: 978-81-9477-6-6]- 07 Units [ Units- 4, 5, 6, 7, 8, 9, 10]
- (xvii)Electricity and Magnetism, B.Sc.-I Year, Uttarakhand Open University, Haldwani, Uttarakhand, India (2017) [ ISBN: 978-81-947704-2-8]- 08 Units [Units- 1, 2, 3, 7, 8, 9, 10, 11]
- (xviii) Physics Practical, B.Sc.-I, Uttarakhand Open University, Haldwani, Uttarakhand, India (2017) [ ISBN: PH-04-1 (001101)]
- (xix) Thermodynamics and Statistical Mechanics, B.Sc.-II Yr, Uttarakhand Open University, Haldwani, Uttarakhand, India (2018) [ ISBN: 978-81-949373-9-5]- 01 Unit [ Unit-04]
- (xx) Modern Physics, B.Sc. III Year, Uttarakhand Open University, Haldwani, Uttarakhand, India (2019)- 03 Units [ Units- 1, 5 & 15]
- (xxi) Elementary Solid State Physics, B.Sc. II Year, Uttarakhand Open University, Haldwani, Uttarakhand, India (2019) [ ISBN: 978-93-90845-29-3] - 04 Units [ Units-1, 2, 3 & 4]
- (xxii)Electrostatics by Mahipal Singh, Jagdamba Publishing Company, New Delhi, India (2021) [ISBN: 978-93-85437-29-8]
- (xxiii) Atomic and Molecular Physics by Mahipal Singh, Ram Prasad Publication, Agra, India, July 2021 [ ISBN:98-93-85644-23-8]
- (xxiv) Nuclear and Particle Physics by Mahipal Singh, Ram Prasad Publication, Agra, India, July 2021 [ 98-93-85644-24-5]
- (xxv)Classical Mechanics, M.Sc.-1<sup>st</sup> Semester (Physics), Uttarakhand Open University, Haldwani, Uttarakhand, India (2022)- 02 Units [ Units-01 & 02]
- (xxvi) Statistical Mechanics, MSC- 1<sup>st</sup> Semester Physics, Uttarakhand Open University, Haldwani (2022)- 01 Unit [ Unit- 8].
- (xxvii) Electromagnetic Theory (In Hindi) by JC Upadhyay, HP Sinha and **Mahipal Singh**; Ram Prasad Publication, Agra, October 2022 [ISBN: 978-93-85644-11-5]
- (xxviii) General Science (In Hindi) by Dr. Ashok Kumar Goswami, **Dr. Mahipal Singh** and Ram Kumar Chauda, Ram Prasad Publication, Agra (UP), March 2023 [ ISBN: 978-93-85644-47-4]
- (xxix) Electricity and Magnetism by HP Sinha and **Mahipal Singh**, Ram Prasad Publication, Agra (UP), December 2023 [ISBN: 978-93-83385-12-6]
- (xxx)Electricity and Magnetism (In Hindi) by HP Sinha and **Mahipal Singh**, Ram Prasad Publication, Agra (UP), December 2023 [ISBN: 978-93-83385-21-8]
- (xxxi) Analog and Digital Electronics: Principles and Applications by HP Sinha and **Mahipal Singh**, Ram Prasad Publication, Agra (UP), February 2024 [ ISBN: 978-81-970600-0-7]
- (xxxii) Anuroop tatha Digital Eerctronics (Hindi) by HP Sinha and **Mahipal Singh**, Ram Prasad Publication, Agra (UP), February 2024 [ ISBN: 978-81-970600-8-3]

#### **Conferences/Seminars/Workshops etc. organized:**

- (i) One day Workshop on “Remote Sensing” jointly organized by Deptt. of Physics, Govt. P.G. College, Bageshwar(Uttarakhand) and Uttarakhand Space Application Centre, Deptt. of Science & Technology, Govt. of Uttarakhand, Dehradun on December 26, 2008 (Coordinator).
- (ii) One day Seminar on ‘Skills and Technologies for an Emerging India” jointly organized by Deptt. of Physics, Govt. P.G. College, Bageshwar(Uttarakhand), IL & FS Education, New

- Delhi and INTEL, New Delhi on Dec. 14, 2009. (Coordinator).
- (iii) State level conference on “Role of Science and Technology in the Development of Uttarakhand State” organized by Deptt. of Physics, Govt. P.G. College, Bageshwar(Uttarakhand) sponsored by Uttarakhand Science Education & Research Centre(U-SERC), Dehradun; University Grants Commission(UGC), New Delhi and Council of Scientific and Industrial Research(CSIR), New Delhi during October 25-26, 2010(Convener).
  - (iv) Regional Conference on “Rural Development in Hilly Areas of Kumaon Region-Research, Survey and Investigations” under developing and implementing location specific curricula- colleges located in rural/remote/border/hill/tribal areas scheme during 11<sup>th</sup> plan of UGC held during March 04-05, 2011(Convener).
  - (v) Regional Seminar on “Science in the year of 2013” under the flagship of Physics Association, Deptt. of Physics, Govt. P.G. College, Bageshwar(Uttarakhand), India during November 16-17, 2013(Convener).
  - (vi) Two days National Seminar on “Career Counseling in Dynamic World: Issues and Challenges” organized by Career Counseling Cell, R.H. Govt. P.G. College, Kashipur (Uttarakhand) during April 19-20, 2019 (Organizing Secretary).
  - (vii) International E- Conference on “Recent Advances in Physics: A promise to Society” jointly organized by Departments of Physics, Govt. P.G. College, Bazpur; R.H. Govt. P.G. College, Kashipur and PNG Govt. P.G. College, Ramnagar during 24-25 June, 2020 (Co-Convener).
  - (viii) Virtual Workshop on “Right to Information Act-2005: Necessity and Utility” under the flagship of RTI Cell, R.H. Govt. P.G. College, Kashipur on February 10, 2021 as Coordinator.
  - (ix) Virtual Orientation and Seminar under the flagship of Study Centre-Uttarakhand Open University, R.H. Govt. P.G. College, Kashipur on February 21, 2021 as Coordinator.
  - (x) Organized Virtual Science Festival-2021 from February 28, 2021 to March 6, 2021 under the flagship of Physics Association and Botany Association, R.H. Govt. P.G. College, Kashipur as Convener.
  - (xi) Organized One Day National Seminar on “Our Scientific Legacy” on March 25, 2021 under the flagship of Department of Physics and Department of Botany, R.H. Govt. P.G. College, Kashipur as Convener.
  - (xii) Two days National Virtual Workshop on “Disaster Management Techniques” under the flagship of R. H. Govt. P.G. College, Kashipur, Uttarakhand on August 10-11, 2021 as Convener.
  - (xiii) Online National Physics Lecture Series-2021 on Nuclear Physics / Subatomic Physics for UG and PG students from 16-08-2021 to 20-08-2021 under the flagship of Deptt. of Physics, R. H. Govt. P.G. College, Kashipur, Uttarakhand as Coordinator.
  - (xiv) Two days National Seminar on “Concept of Bharatvarsh and Present Challenges” during October 28-29, 2023 organized by Devbhoomi Vichar Manch (Uttarakhand) and Haridev College of Law, Kashipur (Uttarakhand), India as Organizing Secretary

#### **Research Projects:**

- (i) Minor research project entitled “*The Role of Bilayer Chain Coupling on Junction Voltage in Layered High Temperature Cuprate Superconductors*” funded by UGC, New Delhi during April 01, 2006 – March 31, 2008 [F.6-1(26)/2007(MRP/Sc/NRCB) Dated 03 Oct. 2007].

- (ii) Minor research project entitled “*Influence of temperature on penetration depth in bilayer cuprate superconductors*” funded by UGC, New Delhi during April 01, 2009 – June 30, 2010 [F.8-1(36)/2010(MRP/NRCB) Dated 15 March 2010].

#### **Patents:**

- (i) Title of invention: Artificial intelligence and deep learning based technique for understanding the various thermoelectric materials; **Dr. Mahipal Singh**, Kumar Sawrav, Mrs. Putta Durga, Dr. Saravana Kumar, Dr. R. Gayatri Devi; The Patent Office Journal No. 34/2022, Dated 26/08/2022, Page No. 53268 [Application No. 202211045554A]
- (ii) Title of the invention: Systematic approach for monitoring the pollution control in smart cities and addressing the security challenges integrated with IOT; Dr. Mahipal Singh et. al. The Patent Office Journal No. 52/2022, Dated 30/12/2022, Page No. 81628 [Application No. 202211069831 A]
- (iii) “A method of fabricating a composite material for EMI shielding” Dr. Mahipal Singh et.al. patent filed on 22-1-2025 File No. 202511005230 at Controller General of Patents, Design & Trade Marks, Govt. of India

#### **Awards/Honours/Recognition:**

- (i) “Rajiv Gandhi Education Excellence Award” for outstanding achievements in the field of Education by Indian Solidarity Council, New Delhi on 6<sup>th</sup> September 2013.
- (ii) “Rashtriya Vidya Gaurav Gold Medal Award” for outstanding achievements in the field of Education by International Institute of Education and Management, New Delhi on 6<sup>th</sup> September 2013.
- (iii) Honour by Uttarakhand Patrakar and Sahityakar Samiti, Central Unit-Garur, Distt.-Bageshwar for doing excellent work in the field of Education on 5<sup>th</sup> September 2013.
- (iv) “Indira Gandhi Shiksha Shiromani Award” for outstanding achievements and remarkable role in the field of Education by International Institute of Education and Management, New Delhi on 3<sup>rd</sup> October 2013.
- (v) “Vidya Rattan Gold Medal Award” for outstanding achievements and remarkable role in the field of Education by Indian Solidarity Council, New Delhi on 3<sup>rd</sup> October 2013.
- (vi) “Excellent Teacher Award” for outstanding contribution in the field of Physics by Gochar Educational and Welfare Society, Saharanpur (UP) India on June 23-27, 2019 at Hotel Howard Square Boutique, Bangkok, Thailand.
- (vii) “Outstanding Faculty of the Year” 6<sup>th</sup> South Asian Education Awards- 21 by Education & Industry Education Expo TV, Noida, India on January 24, 2021.
- (viii) “Best Researcher Award” by VDGOOD Professional Association, Bangalore on February 26, 2021.
- (ix) “CV Raman Award” by Madhumay Educational and Research Foundation, Ayodhya (UP) India on May 02, 2021.
- (x) “Teacher of the year-2021” by Uttarakhand Technical University, Dehradun; Divya Himgiri, Dehradun; Uttarakhand Council for Science and Technology, Dehradun and Society for Research and Development in Science, Technology and Agriculture, Dehradun presented by Shri Pushkar Singh Dhami, Hon’ble Chief Minister of Uttarakhand on Sunday, 05 September, 2021 at VSMB Uttarakhand Technical University, Dehradun.
- (xi) “Lions Club Special Service Honour” for outstanding achievements in the field of Subject Books Writing by Lions Club Kashipur City, Kashipur, Uttarakhand on 15 February 2023.

- (xii) “Pratibha Ratan” award for outstanding contribution in the field of Literature and Science Education by Shyam Modern Junior High School, Kashipur, Uttarakhand on 22 April 2024.
- (xiii) Chaired technical session on the topic Sustainable Management and Green Marketing on May 3, 2024 during ICSSR sponsored National Seminar on “Sustainable Development: Bridging the Economic and Environmental Sustainability in Hilly Regions” organized by Department of Commerce, Rajkiya Snatakottar Mahavidyalaya, Maldevta (Raipur), Dehradun, India
- (xiv) “Amar Ujala Teacher Honour-2024” for excellent work in the field of education by Amar Ujala, Daily Newspaper, Haldwani, Uttarakhand on 19-10-2024.

**Consultancy and Extension Activities/Mass Awareness Activities:**

- (A) *Activities organized under the flagship of District Science Forum- Uttarakhand State Council for Science & Technology (UCOST), Deptt. of Science and Technology, Govt. of Uttarakhand (As District Coordinator):*
  - (i) District level Science Competitions-Essay Competition on “Bio-diversity; Poster Competition on “Global warming and environment”; Slogan Competition on “The earth and environment” under Planet Earth Programme on Feb. 16, 2008 at Govt. P.G. College, Bageshwar (Uttarakhand).
  - (ii) National Science Day celebration during Feb. 24-26, 2008 at Govt. P.G. College, Bageshwar (Uttarakhand).
  - (iii) Entrepreneurship Development Programmes(EDPs)/Trainings for the poor and weaker sections during March 13-17,2008; March 27-31, 2008; April 02-06,2008; April 24-28, 2008; April 27-May 01, 2008 and April 29- May 03, 2008 in the different parts of Bageshwar district.
  - (iv) Popular lectures on “Water Politics” by Mr. Rajender Singh-Maggsesey awardee on March 24, 2008 and on “Disaster Management” on May 23, 2008.
  - (v) Engineer’s Day celebration on Sept. 15, 2009.
  - (vi) Activities for Science Communication & Popularization-Speech competition, Science quiz, Science article competition and Poster competition on Feb. 02, 2010 in the premises of Govt. Inter College, Garur.
  - (vii) Regional Workshop on “Intellectual Property Rights” on Oct. 12, 2009 in the premises of Govt. P.G. College, Bageshwar.
  - (viii) Science Festival during Feb. 15-16, 2010 at Govt. P.G. College, Bageshwar.
  - (ix) International Bio Diversity Day celebration on May 22, 2010 at Victor Mohan Joshi memorial Govt. Inter College, Bageshwar.
  - (x) National Science Day celebration on February 28, 2011 at Countrywide Public School, Bageshwar.
  - (xi) Global World Environment Day-2011 celebration on June 05, 2011 at VMJS Govt. Inter College, Bageshwar.
- (B) *Activities organized under the joint aegis of Department of Medical, Health and Family Welfare, Govt. of Uttarakhand and Vivid India Advertizing and Marketing, New Delhi(As Coordinator):*
  - (i) Sensitization and Orientation Workshop for Social Communication Campaign on Declining Sex Ratio (PC-PNDT) on 26 Feb. 2012 at Nagar Palika Campus, Bageshwar(Uttarakhand).
  - (ii) Sensitization and Orientation Workshop for Social Communication Campaign on Declining

- Sex Ratio (PC-PNDT) on 27 Feb. 2012 at Vikas Khand Sabhaghar, Kapkot(Uttarakhand).
- (iii) Sensitization and Orientation Workshop for Social Communication Campaign on Declining Sex Ratio (PC-PNDT) on 27 Feb. 2012 at Baijnath, Garur(Uttarakhand).
- (C) ***Organized 8- Face-To-Face Training Programmes(FFTPS) under IGNOU-NDMA Project “Capacity building in Disaster Management for Govt. Officials and Representatives of Panchayati Raj Institutions and Urban Local Bodies at District Level” in Bageshwar, Garur and Kapkot during May-July, 2012 and trained 335 Govt. Officials & Representatives of Panchayati Raj Institutions and Urban Local Bodies.(As Coordinator)***
- (D) ***Attended training of alternate therapy organized by Human awareness and Yoga science centre, Deptt. of Yoga and Health, Dev Sanskrit University, Haridwar during March 25-29, 2014.***
- (E) ***Activities organized under Rover-Ranger programme***
- (i) 12<sup>th</sup> state level Rover/Ranger Convention, Bharat Scouts and Guides, Uttarakhand at R.H. Govt. P.G. College, Kashipur (Uttarakhand) during February 12-16, 2016
  - (ii) Participated in Nipun Rover-Ranger Training and Test Camp organized by Uttarakhand Bharat Scout and Guide, Dehradun during August 20-24, 2016 at Shantikunj, Haridwar
  - (iii) Participated and provided service for Nipun Training & Testing Camp organized by Uttarakhand Bharat Scouts & Guides, Dehradun at State Training Centre, Shitlakhet, Almora from 17-04-2017 to 21-04-2017.
  - (iv) Delivered a talk on Basic Information about Rover and Ranger programme in one day camp of Rovers-Rangers at Govt. P.G. College, Bazpur (Uttarakhand) on 14-11-2017.

**Lectures delivered/Invited Talks :**

- (i) Delivered a lecture in the workshop of Eco-Club Incharges of district Bageshwar and Almora organized by Sparsh Ganga Board, Uttarakhand, India on 21 May 2012 at Govt. Inter College, Bageshwar and educated Eco-Club Incharges to conserve water and save the environment for a better future
- (ii) Delivered a lecture as Guest Faculty on “Effective Communication & Best Use of Natural Resources” during Resource Persons Training Programme on dated 7<sup>th</sup> June, 2013 organized by Jan Shikshan Sansthan(JSS), Bageshwar, Uttarakhand, India.
- (iii) Delivered a talk on “Pre-birth elimination of female fetus and declining sex ratio” during special camp of National Service Scheme (NSS) on December 25, 2013 organized by VMJS Govt. Inter College, Bageshwar(Uttarakhand) India.
- (iv) Delivered lectures under Physics Discipline in seven days workshop during June 25- July 1, 2014 jointly organized by School of Science, Uttarakhand Open University, Haldwani and LSM Govt. P.G. College, Pithoragarh at LSM Govt. P.G. College, Pithoraharh, Uttarakhand, India
- (v) Delivered a lecture on “Women Empowerment” during one day NSS camp on 19<sup>th</sup> November 2014 organized at R.H. Govt. P.G. College, Kashipur (Uttarakhand), India.

- (vi) Delivered a talk on “Technical Terminology and Science Teaching” as resource person during National Seminar/Workshop organized by Commission for Scientific and Technical Terminology, Govt. of India at Deen Dayal Upadhyay College, Delhi (University of Delhi), India during Sept. 18-19, 2015
- (vii) Delivered lectures on “Superconductivity” and “Band theory of solids & Semiconductors” under Physics discipline(Solid State Physics) on January 1, 2016 during seven days[June 25-July 1, 2016] workshop jointly organized by School of Science, Uttarakhand Open University, Haldwani and Govt. P.G. College, Ranikhet (Uttarakhand), India
- (viii) Delivered a lecture on “Carrier in Science” during one day workshop on November 23, 2016 organized by Career and Counselling Cell, R.H. Govt. P.G. College, Kashipur, Uttarakhand, India
- (ix) Delivered a lecture on Primary Education and Guidance of Rovers and Rangers organized by Govt. P.G. College, Bazpur, Distt. Udham Singh Nagar, Uttarakhand on November 14, 2017.
- (x) Delivered a invited talk on “ICT: A change agent for higher education” during National; Seminar on Quality Improvement in Higher Education: In perspective of NAAC on March 11, 2018 organized by IQAC Hindu College, Moradabad, UP, India
- (xi) Delivered a talk on “Carrier in Higher Education” during carrier counseling workshop conducted on 29-08-2018 by Career and Counseling Cell, R.H. Govt. P.G. College, Kashipur, Uttarakhand, India
- (xii) Delivered an invited talk on “Selection of Career after Graduation” and guided the students for getting success in various competitive examinations organized by RLS Memorial Degree College, Jaspur, Distt. Udham Singh Nagar, Uttarakhand on November 10, 2019.
- (xiii) Delivered a motivational invited talk for inspiring the students of the college to contribute in the social development of the Nation and provide the basic training to the Rovers and Rangers of the college during a program organized by Hardev Singh Smarak College, Raipur Mandio, Jaspur, Distt. Udham Singh Nagar, Uttarakhand on February 02, 2020.
- (xiv) Delivered an invited talk on “Suggestions for academic development and its measures” organized by Hardev Singh Smarak College, Raipur Mandio, Jaspur, Distt. Udham Singh Nagar, Uttarakhand on February 02, 2020.
- (xv) Delivered an invited talk on “How to develop intellectual capacity in students?” organized by RLS Memorial Degree College, Jaspur, Uttarakhand on 09-02-2020.
- (xvi) Delivered an invited talk on the topic “Development of intellectual ability of students-Challenges and solution” at Samrat Prathaviraj Chauhan College, Kashipur, Uttarakhand on 09-02-2020.

- (xvii) Delivered a talk and guided the students of Samrat Prathaviraj Chauhan College, Kashipur, Uttarakhand to get success in National Eligibility Test (NET) and State Level Eligibility Test (SLET) on 03-05-2020.
- (xviii) Virtual Physics Practical Demonstrations during online Workshop on “Lectures and Virtual Practical Demonstrations” on 06-07-2020 and 14-07-2020 organized by Deptt. of Physics, Uttarakhand Open University, Haldwani.
- (xix) Keynote speaker for Five Days International E-Short Term Course on “Future Materials for Interdisciplinary Engineering Applications” organized by Hindu College of Engineering, Sonapat, Haryana, India during Sept. 14-18, 2020.
- (xx) Delivered an invited talk on “Exploring Career path in Physics” at Government Post Graduate College, Bazpur, Uttarakhand on 03-11-2020.
- (xxi) Delivered a talk on “Contribution of moral values in enhancing the intellectual capacity of students” at RLS Memorial Degree College, Jaspur, Uttarakhand on 17-01-2021.
- (xxii) Delivered a talk on selection of career, How to qualify NET, GATE, SLET during orientation programme organized by Career and Counseling Cell of R.H. Govt. P.G. College, Kashipur on 08-03-2021 .
- (xxiii) Delivered a talk on “Career Opportunity in Education” at Government Post Graduate College, Bazpur, Uttarakhand on 23-11-2021.
- (xxiv) Delivered a talk on Science Popularization on 24 February 2023 at Govt. Model Inter College, Bans Kheda, Kashipur, Uttarakhand.
- (xxv) Delivered a talk on “Personality Development and National Development” on 25-02-2023 during seven days camp of National Service Scheme of Radhey Hari Govt. P.G. College, Kashipur, Uttarakhand.
- (xxvi) Delivered a talk on “Career Opportunity in Education Field” at Government Post Graduate College, Bazpur, Uttarakhand on 08-05-2023.
- (xxvii) Delivered a talk on “Life introduction of Iron man Sardar Vallabh Bhai Patel, his spirit of patriotism, his role as freedom fighter, his spirit of national & society service during a joint programme of Rover-Ranger units and B.Ed. department of Radhey Hari Govt. P.G. College, Kashipur, Uttarakhand on 14-08-2023.
- (xxviii) Delivered a talk on “Soft Skills for Success” on September 25, 2024 during a training programme on Improving Professional and Personal Effectiveness organized by Fertilizer Association of India, New Delhi at The Jungle Resort, Jim Corbett National Park, Bhakrakot, Mohan, Ramnagar, Uttarakhand.
- (xxix) Delivered a talk on “Soft Skills for Success” for students and teachers of RLS Memorial Degree College, Jaspur, Uttarakhand on September 28, 2024.

- (xxx) Delivered expert talk on “Science Technology Engineering and Mathematics (STEM) at PM Shri Kendriya Vidyalay, Kashipur, District Udham Singh Nagar, Uttarakhand on 30-11-2024.

**Membership of Professional Society(ies)/Organization(s)/Body(ies):**

- (i) Life member of Indian Physics Association (IPA) [Membership No.- GEN/LM/12201]
- (ii) Life member of Indian Association of Physics Teachers (IAPT) [Membership No.- 8292 L 4870]
- (iii) Associate member of Indian Solidarity Council, New Delhi since September 6, 2013
- (iv) Individual member of International Institute of Education and Management, New Delhi since September 6, 2013
- (v) Member of SPIC MACAY Pantnagar Chapter, G.B. Pant University of Agric. & Tech., Pantnagar for 2001-2002.
- (vi) Life Member of Gyan Vigyan Bulletin [Membership No.- 1006, Life]
- (vii) Life Member of Balprahri [Membership No.- 478, Life]
- (viii) Life Member of The Indian Science Congress Association [Life Membership No. L 38070]
- (ix) Life Member of Nano & Molecular Society of India [NMS/2014/LM/102]
- (x) One year membership of VDGOD Professional Association, Tamilnadu from 26 Feb. 2021 to 27 Feb. 2022)

**Member of Jury/Judgement Committee etc.:**

- (i) Member of Jury for District level INSPIRE-Award exhibition sponsored by Ministry of Science and Technology, Govt. of India, New Delhi and Uttarakhand State Council for Science and Technology, Dehradun organized by State Council for Educational Research & Training(SCERT), Uttarakhand and Directorate of Education, Uttarakhand, Dehradun at VMJS Govt. Inter College, Bageshwar on September 26, 2013.
- (ii) Judge for “Pratirop 2018”- An inter school science model making competition on November 04, 2018 at Krishna Public Collegiate, Kashipur, Uttarakhand, India.
- (iii) Judge for State Level Children Science Exhibition-2024 on 11-12-2024 at PM Shree Kendriya Vidyalaya Kashipur, Uttarakhand, India

**Responsibilities/ Recognition in Research Journals:**

- (i) Honorary Member of Editorial Review Board(Physics)-RdE Journals since April 1, 2012
- (ii) Editor-International Journal of Advance Research in Science and Engineering(IJARSE) (An International Refereed Electronic and Print Journal) since October 25, 2013
- (iii) Reviewer for Indian Journal of Pure and Applied Physics(IJPAP)-A research journal of CSIR-NISCAIR since October 22, 2013
- (iv) Reviewer for Advances in Nanoparticles (ANP), Scientific Research Publishing since July 15, 2014
- (v) Reviewer for Journal of Materials Nanoscience since August 16, 2016
- (vi) Member-Editorial Board, AR Research Publication & Conference World since 2017-18
- (vii) Reviewer for International Journal of Engineering and Technology
- (viii) Reviewer for Journal of Nanoscience and Technology since 2017-18.
- (ix) Editor- Journal of Nanoscience and Technology since 2017-18.



- (x) Editorial Board Member-Advances in Nanomedicine and Nanotechnology Research since March 2019.
- (xi) Member- Editorial Board, Shodhmanthan, Vol X, May 2019, Special Issue-8
- (xii) Reviewer for Journal of Materials Science: Materials in Electronics, publisher – Springer Nature
- (xiii) Reviewer for Prabha Materials Science Letters

**Responsibilities in Seminars/Conferences etc.:**

- (i) Member-Special Coordination Committee- 3<sup>rd</sup> Uttarakhand State Science and Technology Congress-2008
- (ii) Member-Reception/Registration Committee- Organizing Committee- 4<sup>th</sup> Uttarakhand State Science and Technology Congress-2009
- (iii) Official- 4<sup>th</sup> Uttarakhand State Science and Technology Congress-2009
- (iv) Official- 5<sup>th</sup> Uttarakhand State Science and Technology Congress-2010
- (v) Session Rappporteur- 5<sup>th</sup> Uttarakhand State Science and Technology Congress-2010
- (vi) Member-Local Organizing Committee- 2<sup>nd</sup> Rashtriya Yuva Vaigyanik Sammelan-2010 organized by Vijnana Bharati (VIBHA), Uttarakhand State Council for Science and Technology, Dehradun and Doon University, Dehradun at Dehradun during February 6-7, 2010.
- (vii) Official- 6<sup>th</sup> Uttarakhand State Science and Technology Congress-2011
- (viii) Member- Session Management (Oral) Committee- Organizing Committee- 6<sup>th</sup> Uttarakhand State Science and Technology Congress-2011
- (ix) Member- Advisory Committee and Publication Committee of National Seminar on “Environmental Economics & Social Sustainability” sponsored by Ministry of Earth Science, Govt. of India; University Grants Commission, New Delhi; Uttarakhand Council for Science and Technology, Dehradun and UGC Academic Staff College, Nainital organized by Department of Botany, Govt. Post Graduate College, Dwarahat, Almora, Uttarakhand during December 4-5, 2014
- (x) Member- National Advisory Committee of National Seminar on “Foreign Direct Investment in India: Opportunities and Challenges” sponsored by University Grants Commission, New Delhi organized by Department of Economics, PNG Government PG College, Ramnagar (Uttarakhand) during February 26-27, 2015.
- (xi) Member-Organizing Committee- International Seminar on International Seminar on “Role of E-learning in quality education” sponsored by Department of Higher Education, Govt. of Uttarakhand organized by Deptt. of B.Ed., R.G. Govt. P.G. College, Kashipur (Uttarakhand), India during 22-23 February 2015.
- (xii) Coordinator- Brain Storming Session and Technical Session of 09<sup>th</sup> Uttarakhand State Science and Technology Congress organized during 26-28 February 2015.
- (xiii) Member – Steering Committee (Organizing Committee) – 2<sup>nd</sup> International Conference on Global Initiatives for Sustainable Development: Issues and Strategies organized by Gochar Educational and Welfare Society at Bangkok, Thailand during June 23-27, 2019.
- (xiv) Member-Poster Evaluation Committee for Theme “Interdisciplinary Innovations in Basic Sciences, Life Sciences, Engineering, Management and Technology regarding Sustainable Development” during 2<sup>nd</sup> International Conference on Global Initiatives for Sustainable Development: Issues and Strategies organized by Gochar Educational and Welfare Society at Bangkok, Thailand during June 23-27, 2019.

- (xv) Member- National Advisory Committee- Two days National Seminar on “The migration challenge in India” organized by Govt. Degree College, Bhatronjkan, Almora, Uttarakhand, India during Feb. 28-29, 2020.
- (xvi) Chaired Technical Session of “Recent Advances in Physics: A promise to Society” jointly organized by Departments of Physics, Govt. P.G. College, Bazpur; R.H. Govt. P.G. College, Kashipur and PNG Govt. P.G. College, Ramnagar during 24-25 June, 2020.
- (xvii) Member- National Advisory Board- National Conference on Recent Advances in Theoretical & Experimental Sciences organized by Department of Physics, Bhakt Darshan Govt. P.G. College, Jaiharikhal (Lansdowne), Pauri Garhwal, Uttarakhand, India during 29-30 September 2023.

### **Teaching Experience:**

- (i) From Nov 20, 2002 to April 17, 2003 as Lecturer, Banasthali Vidyapith, Banasthali(Raj.)
- (ii) From April 18, 2003 to Oct 30, 2004 as Lecturer, SRMS College of Engg. & Tech., Bareilly(U.P.)
- (iii) From Nov 03, 2004 to July 20, 2005 as Lecturer, Govt. Polytechnic, Thalnadi(Pauri), Uttarakhand.
- (iv) From July 22, 2005 to July 14, 2014 as Assistant Professor(Physics), Govt. P.G. College, Bageshwar(Uttarakhand), India
- (v) From July 15, 2014 to July 21, 2017 as Assistant Professor (Physics), from July 22, 2017 to July 21, 2020 as Associate Professor (Physics) and since July 22, 2020 till date as Professor (Physics) at R.H. Govt. P.G. College, Kashipur, Distt.- Udham Singh Nagar (Uttarakhand) India [Affiliated to Kumaun University, Nainital]

### **Research Guidance:**

- (i) Mr. Krishan Chandra- registered for Doctoral Research under my supervision since November 25, 2013 (Supervisor) and Thesis submitted in June 2018 and Ph.D. degree awarded in November 2020.
- (ii) Mr. Aadarsh Kumar Chaudhri- registered for Doctoral Research under my supervision since August 24, 2015 (Supervisor) and Thesis submitted on 25-02-2022, Ph.D. degree awarded on 07-11-2022.
- (iii) Mr. Mehul Manu- registered for Doctoral Research under my co-supervision since August, 2015 (Co-Supervisor) and thesis submitted in July 2018 and awarded in 2019.
- (iv) Mr. Atul Kumar -registered for Doctoral Research under my supervision since July 28, 2016 (Supervisor)
- (v) Mr. Lav Kush Kumar- registered for Doctoral Research under my co-supervision since July 28, 2016 (Co-Supervisor)
- (vi) Mr. Amit Kumar- registered for Doctoral Research under my supervision since June 11, 2019 (Supervisor)
- (vii) Ms. Riya Gola- registered for Doctoral Research under my supervision since January 21, 2021 (Supervisor)
- (viii) Mr. Harendra Singh Bohara- registered for Doctoral Research under my supervision since February 5, 2021 (Supervisor)
- (ix) Mr. Sanjay Singh Bisht- registered for Doctoral Research under my supervision since February 5, 2021 (Supervisor)

**Responsibilities/Assignments held in the College/Outside:  
(Administrative/Supervisory/Leadership Experience)**

**At G.B. Pant University of Agriculture & Technology, Pantnagar (Uttarakhand) during student life**

- (i) General Secretary of Hostel Chitranjan Bhawan-I for session 1997-1998, 1998-1999 and 1999-2000.
- (ii) Food Secretary in the hostel Chitranjan Bhawan-I for session 1997-1998
- (iii) Chief Editor of Wall Magazine of Chitranjan Bhawan-I for session 1998-1999.
- (iv) Chairman- Science and Humanities Society for session 1998-1999
- (v) Wing Counsellor of Chitranjan Bhawan-I for session 1998-1999 and 1999-2000.
- (vi) Chairman- Post Graduate Society during session 1999-2000
- (vii) Chairman- Shastri Society during session 2000-2001

**At Govt. P.G. College, Bageshwar (Uttarakhand)**

- (i) Head I/C -Deptt. of Physics from 22-07-2005 to 14-07-2014
- (ii) Examination In-charge- From 05-03-2011 to 21-11-2011 and from 05-09-2012 to 14-07-2014
- (iii) Member Secretary-Self-financed B.Ed. from 01-01-2009 to 14-07-2014
- (iv) Coordinator- IGNOU Centre (Convergence Scheme) from 18-12-2008 to 14-07-2014
- (v) District Coordinator-Uttarakhand State Council for Science & Technology (UCOST), Deptt. of Science and Technology, Govt. of Uttarakhand from 01-11-2007 to 14-07-2014
- (vi) Coordinator-Internal Quality Assurance Cell (IQAC) from 24-02-2007 to 10-02-2010 and from 03-09-2011 to 14-07-2014
- (vii) Convener- College Purchase Committee from 01-10-2012 to 14-07-2014
- (viii) Coordinator-NAAC Steering Committee from 01-10-2011 to 14-07-2014
- (ix) In-charge-Right to Information Cell from 11-09-2009 to 20-10-2013
- (x) Assistant Public Information Officer (APIO) from 21-10-2013 to 14-07-2014
- (xi) Coordinator-College Website from 06-01-2009 to 14-07-2014 at Govt. P.G. College, Bageshwar (Uttarakhand) India
- (xii) Member-Proctorial Board from 2006-2007 to 14-07-2014
- (xiii) Member-Parent Teacher Association from 2006-2007 to 2013-14
- (xiv) Member-Environmental Studies from 2006-2007 to 2013-14
- (xv) Member-Anti-Ragging Committee from 2011-12 to 2013-14
- (xvi) Member-Library Advisory Committee from 04-07-2011 to 2013-14
- (xvii) Member- College Sports Committee from 2006-2007 to 2013-14
- (xviii) Member- College Examination Committee from 2006-2007 to 04-03-2011 and 22-11-2011 to 04-09-2012
- (xix) Member- College Purchase Committee from 2008-2009 to 25-10-2010 and from 06-01-2011 to 30-09-2012
- (xx) Nodal Officer- EDUSAT from 15-07-2006 to 22-12-2011 and from 10-01-2013 to 21-03-2013
- (xxi) Editor- College Admission Prospectus from 2008-2009 to 2010-2011
- (xxii) Member- College Admission Prospectus for 2011-2012
- (xxiii) Election Officer - College Student Union from 2006-2007 to 2013-14

- (xxiv) Member- Internal Quality Assurance Cell from 13-02-2010 to 02-09-2011
- (xxv) In-charge-Book Bank (Art Faculty) from 23-08-2005 to 20-09-2005
- (xxvi) In-charge- Sports from 04-04-2006 to 22-05-2006
- (xxvii) Member- College Development and Maintenance Committee for 2009-2010 and from 04-07-2011 to 2013-14
- (xxviii) In-charge-UGC Cell from 03-09-2011 to 31-08-2012
- (xxix) Convener- College Building Construction Committee from 01-10-2012 to 2013-14
- (xxx) Member- College Disaster Management Cell from 06-03-2013 to 2013-14
- (xxxi) Advisor-UGC Equal Opportunity Centre from 11-05-2012 to 21-03-2013
- (xxxii) Academic Counsellor-Study Centre, Uttarakhand Open University, for session 2012-13
- (xxxiii) Theory/Practical Examiner/Question Paper setter/Subject Specialist of various Universities/Organizations
- (xxxiv) Convener- B.Sc. Admission Committee from academic session 2006-07 to 2009-10
- (xxxv) Member- College Canteen Committee for 2013-14
- (xxxvi) Coordinator- UGC Scheme- College located in rural/remote/hilly region from 18-02-2011 to 14-07-2014
- (xxxvii) Programme Officer-National Service Scheme (NSS) from 01-10-2006 to 30-09-2009
- (xxxviii) RUSA Institutional Coordinator from December 21, 2013 to July 14, 2014

**At R. H. Govt. P.G. College, Kashipur (Uttarakhand) India**

- (i) Coordinator- B.Sc.-I(Bio Gr.) admission committee for session 2014-15
- (ii) Member-Furniture auction committee for 2014-15
- (iii) Member- Income Tax calculation and Inspection Committee for 2014-15
- (iv) Member- UGC Committee from session 2014-2015 to 2017-18
- (v) Member- Sports Committee from session 2014-15 to 2017-18 and from 2018-19 till date
- (vi) Member-Alumni Cell from session 2014-2015 to 2017-18
- (vii) Member-Proctorial Board from session 2014-2015 to 2016-17
- (viii) Member- NSS implementation committee for session 2014-15
- (ix) Member-RTI Cell for session 2014-15
- (x) Member- Committees for Student Union election for session 2014-15
- (xi) Rover Scout Leader from academic session 2015-16 to December 11, 2018
- (xii) Assistant Public Information Officer from November 30, 2015 to January 01, 2023.
- (xiii) Member Purchase Committee from session 2016-17 to 2017-18
- (xiv) Member- Cultural Committee from session 2016-17 to 2017-18
- (xv) Coordinator- Study Centre, Uttarakhand Open University since November 21, 2016**
- (xvi) Member- Unnat Bharat Abhiyan- College level committee for 2017-18
- (xvii) Chief Proctor for session 2017-18
- (xviii) District Coordinator-Uttarakhand Science Education and Research Centre since July 18, 2017**
- (xix) In charge- College Student Union since session 2018-19**
- (xx) Regional Director- Uttarakhand State, Nano and Molecular Society of India from February 02, 2021.**
- (xxi) Head- Department of Physics since 27-05-2022 till date**
- (xxii) Nodal Officer- All India Survey on Higher Education (AISHE) from May 27, 2022 to August 02, 2023.
- (xxiii) Member – Internal Quality Assurance Cell (IQAC) since February 03, 2023**

- (xxiv) **Criteria Coordinator AQAR [Research, Innovations and Extension] since February 03, 2023**
- (xxv) **Member NSS Advisory Committee since 2022-23**
- (xxvi) **Proctor since 2022-23.**
- (xxvii) **Coordinator- M.Sc.-I Semester Physics Admission Committee since 2022-23**
- (xxviii) **Coordinator- Parent Teacher Association (PTA) since 12-12-2024**
- (xxix) **Member- College Development Committee since 12-12-2024**
- (xxx) **Member -College UGC Committee since 12-12-2024**
- (xxxi) **Member- College NEP since 12-12-2024**
- (xxxii) **Member-College Time Table Committee since 12-12-2024**
- (xxxiii) **Member- College Advisory Committee since 2023-24**
- (xxxiv) **I/C- Parent Teacher Association since 2024-25**
- (xxxv) **I/C- Alumni Cell since 2024-25**

#### **References:**

- (i) **Prof. B.R.K. Gupta**  
Emeritus Professor, Deptt. of Physics, GLA University, Mathura(UP), India  
Mobile- 9412986609, E-mail: brk.gupta@gla.ac.in
- (ii) **Prof. O.P.S. Negi**  
Vice-Chancellor, Uttarakhand Open University, Haldwani, Uttarakhand, India,  
Phone: 09412092677, E-mail: ops\_negi@yahoo.co.in
- (iii) **Dr. Amit Pratap**  
Scientist-D  
Centre for High Energy Systems and Sciences(CHESS), DRDO  
RCI Campus, Vigyan Kancha, Hyderabad(A.P.)-500069, India  
Phone: 08332980021, E-mail: amit\_drdo@rediffmail.com
- (iv) **Dr. Govind**  
Senior Scientist, Physics of Energy Harvesting  
Room No.- 7 & 16, TEC Building  
National Physical Laboratory(CSIR)  
Dr. K.S. Krishnan Marg, New Delhi-110012, India  
Phone: 09811930735, E-mail: govind@nplindia.org
- (v) **Dr. S.P. Singh**  
Senior Scientist  
TEC-115, National Physical Laboratory(NPL)  
Dr. K.S. Krishnan Marg, New Delhi-12, India  
Mobile-09968193616, E-mail- singh.uprm@gmail.com, singhsp@mail.nplindia.org
- (vi) **Prof. (Dr.) Madan Singh**  
Department of Physics and Electronics  
National University of Lesotho, Roma 180, Lesotho, South Africa  
E-mail: [m.singh@nul.ls](mailto:m.singh@nul.ls)
- (vii) **Dr. Ajay**  
Professor, Department of Physics  
Indian Institute of Technology, Roorkee  
Uttarakhand, India  
Mobile: 9758328484, E-mail: [ajaypfph@iitr.ac.in](mailto:ajaypfph@iitr.ac.in)

- (viii) Dr. Monika Tomar  
Professor, Department of Physics  
Miranda House, University of Delhi, Delhi, India  
Mobile: 9871346452, E-mail: [monikatomar@gmail.com](mailto:monikatomar@gmail.com)
- (ix) Dr. Vinod Prakash Agrawal  
Principal, Govt. P.G. College, Raipur Maaldevtaa, Dehradun (Uttarakhand)  
Phone: 08445471481
- (x) Prof. (Dr.) Sumita Shrivastava  
Principal, R.H. Govt. P.G. College, Kashipur, Distt.- Udham Singh Nagar (Uttarakhand)  
Phone: 8077919619, E- mail: [rhgpgc@gmail.com](mailto:rhgpgc@gmail.com)

It is to certify that the information given above is correct and true to the best of my knowledge and belief.

Date: February 01, 2025  
Place: Kashipur



**(MAHIPAL SINGH)**