

**Kumaun University, Nainital**  
**Curriculum Vitae**

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Name : Dr. Bimal Pande

Designation : Professor

Department : Physics

Contact Information

• Email Address : pandebimal@yahoo.co.in

• Mobile No : 9412044061

LinkedIn Profile (Optional) :

ORCID ID : <https://orcid.org/0000-0001-8563-3680>

Scopus ID :

<https://www.scopus.com/authid/detail.uri?authorId=7006426970>

Vidwan ID :

**Educational Qualification**

| Degree    | University          | Subjects                             | Year |
|-----------|---------------------|--------------------------------------|------|
| Ph.D.     | Kumaun University   | Physics                              | 2002 |
| NET (JRF) | CSIR                | Physical Sciences                    | 1998 |
| M.Tech.   | GBPUAT<br>Pantnagar | Cold Region Science &<br>Engineering | 1997 |
| M.Sc.     | Kumaun University   | Physics                              | 1993 |
| B.Sc.     | Kumaun University   | Physics, Chemistry,<br>Mathematics   | 1991 |

**Work Experience (add row if required)**

| Position                       | Department       | University/Organization                   | Year         |
|--------------------------------|------------------|---|--------------|
| Professor                      | Physics          | Kumaun University                         | 2020 onwards |
| Associate Professor            | Physics          | Kumaun University                         | 2017 -2020   |
| Assistant Professor            | Physics          | Kumaun University                         | 2005 -2017   |
| Assistant Professor (Contract) | Physics          | Kumaun University                         | 2002 -2005   |
| Contract Faculty               | Physics          | Govt. P.G. College<br>Kashipur            | 2001-2002    |
| Scientist 'B'                  | SASE, Chandigarh | DRDO, Defence Ministry,<br>Govt. of India | 1997-1998    |

**Administrative Responsibilities NA**

| Position | Nature of responsibility | University/Organization | Year |
|----------|--------------------------|-------------------------|------|
|          |                          |                         |      |

## Research Interests

Presently I am working on study of different solar activities, its effect on space weather and MHD study of solar eruptive phenomenon. I have also initiated and successfully implemented the installation of Lightning Detection System (LDS) at the Department of Physics DSB Campus Kumaun University for monitoring & investigations on lightning phenomena and its associated processes (in collaboration with National Remote Sensing Centre (NRSC) ISRO, Department of Space, Govt. Of India).

## Publications (start from recent publications)

### a) Research Papers (add row if required)

| Authors name   | Title of the paper  | Journal, Vol, Page no  | Year |
|--|---|--|------|
| Mahesh Mathpal,<br>Alankrita Joshi,<br>Raj Kumar,<br>Seema Pande &<br><b>Bimal Pande</b> | Dependence of Total Column Ozone on Different Solar Activity Features   | Indian Journal of Pure & Applied Physics<br>62<br>245-255          | 2024 |
| Deepak Pandey,<br><b>Bimal Pande</b> et al.  | Comparative analysis of type III solar radio bursts associated with solar particle events and its impact on space weather for solar cycle 23 & 24 | Astrophysics and Space Science<br>367(9)<br>1-9                    | 2022 |
| Y.Chandra,<br><b>Bimal Pande</b> et al.  | N-S Asymmetry and Periodicity of Daily Sunspot number during solar cycles 22-24   | Astrophysics<br>65(3)<br>404 - 413                                 | 2022 |
| Charita Pant,<br><b>Bimal Pande</b> et al.   | Evaluation of reconnection parameters for collision less dispensation in solar  | Jnanabha (The Vijnana Parishad of India)<br>52(1)<br>22-29         | 2022 |
| Seema Pande<br>Deepak Pandey,<br><b>Bimal Pande</b>                                      | Analysis of associated and non – associated type II radio bursts in relationship to flares and CME's for solar cycle 24                           | Bulgarian Journal of Physics<br>48<br>320-337                      | 2021 |
| Y Chandra, <b>Bimal Pande</b> et al  | Variability of total column ozone with solar activity features at northern and eastern regions of India   | Applied Ecology and Environmental Sciences<br>8(6)<br>441- 450     | 2020 |
| Raj Kumar,<br>Ramesh Chandra,<br><b>Bimal Pande</b> ,                                    | Statistical study of north–south asymmetry during   | Journal of Astrophysics and Astronomy (Indian Academy of Sciences) | 2020 |

|   |   |  |      |
|---|---|--|------|
| Seema Pande   | solar cycles<br>21,22,23and 24  | 41(1)<br>1-8   |      |
| <b>Bimal Pande,</b><br>et al.                                       | Study of alfven waves<br>using magneto<br>hydrodynamic<br>equations in solar<br>atmosphere  | Jnanabha (The Vijnana<br>Parishad of India)<br>50(2)<br>236-243                                      | 2020 |
| <b>Bimal Pande,</b><br>Seema Pande et al.                           | Statistical analysis of<br>the asymmetric<br>behavior of different<br>solar activity features<br>during solar cycles 20-<br>24                    | Jnanabha<br>(The Vijnana Parishad of<br>India)<br>49(2)<br>64-81                                     | 2019 |
| <b>B Pande,</b> Seema<br>Pande, R Chandra,<br>M C Mathpal           | Solar Flares, CMEs<br>and solar energetic<br>particle events during<br>solar cycle 24   | Advances in Space<br>Research<br>61(2)<br>777- 785   | 2018 |
| <b>Bimal Pande</b><br>et al   | Application of soft<br>computing (ANN)<br>Techniques to study<br>the relationship<br>between solar activity<br>features and total<br>column ozone | Journal of Mountain<br>Research<br>14(1)<br>69-71  | 2019 |
| <b>Bimal Pande,</b><br>Sneh Joshi,<br>Seema Pande                   | Statistical study of<br>variability in rainfall<br>and analysis of<br>extreme rainfall<br>events for hill stations<br>of Uttarakhand.             | Journal of Mountain<br>Research<br>14(1)<br>55-58  | 2019 |
| Raj kumar,<br>Mahesh Mathpal,<br><b>Bimal Pande,</b><br>Seema Pande | Statistical study of<br>north –south<br>asymmetry during<br>solar cycles<br>21,22,23 and 24   | Journal of Mountain<br>Research<br>14(1)<br>73-75  | 2019 |
| Mahesh Mathpal,<br><b>Bimal Pande</b><br>Seema Pande                | Dependance of<br>rainfall on solar<br>activity features   | Journal of Mountain<br>Research<br>14(1)<br>77-79  | 2019 |
| <b>S. Pande, M.</b><br>Mathpal and <b>B.</b><br><b>Pande</b>        | Dependance of<br>Intense Geomagnetic<br>Storms on the<br>interplanetary field/<br>plasma parameters<br>during solar cycle 23<br>&24               | Internationa lAdvanced<br>Research Journal in Science,<br>Engineering and<br>Technology<br>4<br>5-12 | 2017 |
| <b>B. Pande,</b> S.Pande<br>et al                                   | Statistical analysis of<br>geomagnetic activity<br>and solar activity<br>features during solar  | Research and Reviews:<br>Journal of Physics<br>6(2)<br>14-20   | 2017 |

|   |  |  |      |
|---|--|--|------|
|   | cycle 23 &24   |  |      |
| H. Bisht, <b>B. Pande</b> et al                                     | Geoeffectiveness of solar eruptions during the rising phase of solar cycle 24  | New Astronomy (Elsevier) 51 74-85                                | 2017 |
| H. Bisht, <b>B. Pande</b> , R. Chandra, S.Pande                     | Statistical study of different solar activity features with total column ozone at two hill stations of Uttarakhand               | Indian Journal of Radio and Space Physics 43 251- 262            | 2014 |
| Sneh Joshi, <b>Bimal Pande</b> et al                                | Rainfall Variability and indices of extreme Rainfall-analysis and perceptions study for two station over central Himalaya, India | Natural Hazards(Springer) 72(2), 361-374                         | 2013 |
| Sneh Joshi, <b>Bimal Pande</b> et al                                | GPS-derived precipitable water vapour and its comparison with MODIS Almora central Himalayan India                               | Meteorology and Atmospheric Physics (springer) 013, 242          | 2013 |
| M.R.Samal, <b>Bimal Pande</b> , et al                               | Star formation and young population of the HII Complex Sh2-294   | Astrophysical journal 755,20                                     | 2012 |
| A.Guharay, <b>Bimal Pande</b> et.al.                                | Observation of the Ultra-Fast Kelvin Kelvin wave in the tropical mesosphere during equinox                                       | International Journal of Remote Sensing (Taylor & Francis) 32,11 | 2011 |
| Indira Krakoti, <b>Bimal Pande</b> and Kavita Pande                 | Evaluation of different diffuse radiation models for Indian Stations and predicting the best fit model                           | Renewable and Sustainable Energy Reviews(Elsevier) 15,2378-2384  | 2011 |
| NS Bankoti, NC Joshi, S Pande, <b>B Pande</b> , K Pandey            | Correlative study of different solar activity features with all India homogeneous rainfall during 1963– 2006                     | Quaternary International 229 (1) 8-15                            | 2011 |
| N C Joshi, N S Bankoti, S Pande, <b>B Pande</b> , W Uddin, K Pandey | Statistical analysis of soft X-ray solar flares during solar cycles 21,22 and 23.  | New Astronomy 15,6 538- 546                                      | 2010 |
| N C Joshi, N S Bankoti, S Pande, <b>B Pande</b> , K Pandey          | North- South Asymmetry of different solar activity features during solar cycle 23.   | New Astronomy 15,6 561- 568                                      | 2010 |
| A.Guharay, <b>Bimal Pande</b> et al                                 | Observation of semiannual.....pattern  | Ann. Geophysicae 27,4273-4280                                    | 2009 |

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|--|---|---|------|
| A.Guharay, <b>Bimal Pande</b> et al                        | Middle atmospheric.....<br>A comparative Study  | Journal of Geophysical Research<br>114                      | 2009 |
| A.Guharay, <b>Bimal Pande</b> et al                        | First ground based ....<br>Himalayas  | Current Science<br>97,5, 664-669                            | 2009 |
| N C Joshi, N S Bankoti, S Pande, <b>B Pande</b> , K Pandey | Study of distribution and Asymmetry of Solar Active prominences during Solar Cycle 23 | Solar Physics<br>260<br>451- 463                            | 2009 |
| S. Pande, <b>B Pande</b> , W Uddin, K Pandey               | H $\alpha$ , EUV and UV analysis of an eruptive 3B/X1.2 flare                         | Indian Journal of Radio and Space Physics<br>37<br>386- 390 | 2008 |
| S. Pande, <b>B Pande</b> , K Pandey                        | Study of MHD modes of oscillations in Solar coronal arcades                           | Journal of Ultra Scientist of Physical<br>20(1)<br>27-34    | 2008 |

b) Patents (start from recent publications) **NIL**

| Authors name | Title of the patent | Patent no (Granted or filed) | Year |
|--------------|---------------------|------------------------------|------|
|              |                     |                              |      |

c) Books (start from recent publications) **NIL**

| Authors name | Title of the book | Publisher | ISBN | Year |
|--------------|-------------------|-----------|------|------|
|              |                   |           |      |      |

d) Book chapters (start from recent publications) **NIL**

| Authors name | Title of the book | Publisher | ISBN | Year |
|--------------|-------------------|-----------|------|------|
|              |                   |           |      |      |

e) Conference Publications/Proceedings (start from recent publications) **(add row if required)**

| Authors name                                  | Title of the paper  | Conference name                                | Year |
|---|---|--|------|
| <b>Bimal Pande</b> et al                      | Application of soft computing (ANN) Techniques to study the relationship between solar activity features and total column ozone | Advances in physics from small to large scales | 2018 |
| <b>Bimal Pande</b> , Sneha Joshi, Seema Pande | Statistical study of variability in rainfall and analysis of extreme rainfall events for hill stations of                       | Advances in physics from small to large scales | 2018 |

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|---|---|--|------|
|   | Uttarakhand.  |  |      |
| Raj kumar,<br>Mahesh<br>Mathpal,<br><b>Bimal Pande</b> ,<br>Seema Pande | Statistical study of north –south asymmetry during solar cycles 21,22,23 and 24 | Advances in physics from small to large scales | 2018 |
| Mahesh<br>Mathpal,<br><b>Bimal Pande</b><br>Seema Pande                 | Dependance of rainfall on solar activity features                               | Advances in physics from small to large scales | 2018 |

#### Projects NIL

| Title of the project | Funding agency | Amount (Rs) | Year |
|----------------------|----------------|-------------|------|
|                      |                |             |      |

#### Teaching details (add row if required)

| Name of the course/paper                          | Department | University        | Year           |
|---|------------|-------------------|----------------|
| Mathematical Physics and Classical Mechanics (PG) | Physics    | Kumaun University | 2002-2003      |
| Electricity and Magnetism (UG)                    | Physics    | Kumaun University | 2002-2005      |
| Advanced Quantum Mechanics(PG)                    | Physics    | Kumaun University | 2003- Till now |
| Advanced Electronics (PG)                         | Physics    | Kumaun University | 2005-2009      |
| Electrodynamics (PG)                              | Physics    | Kumaun University | 2010-Till now  |
| Basic Electronics (UG)                            | Physics    | Kumaun University | 2005- 2023     |
| Analog and Digital Electronics (UG)               | Physics    | Kumaun University | 2015- 2023     |

#### Professional Memberships

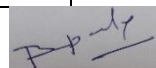
| Organization                        | Position     | Year |
|-------------------------------------|--------------|------|
| Astronomical Society of India (ASI) | Life- member | 2007 |

#### Honours and Awards (add row if required)

| Award  | Awarding Organization | Year |
|--|-----------------------|------|
| Gold Medal for First position in Kumaun University at UG | Kumaun University     | 1991 |
| Gold Medal for First position in Kumaun University at UG | U.P. Govt.            | 1991 |
| Gold Medal for First position in Kumaun University at PG | Kumaun University     | 1993 |

**Conference Presentations (add row if required)**

| Title of presentation  | Conference name  | Name of the institution                      | Year |
|--|--|--|------|
| Role of Artificial Neural Network to understand the Solar – Terrestrial relationship (Invited)                               | 3 <sup>rd</sup> IEEE International Conference on Internet of Things: Smart Innovation and Usages | Birla Institute of Applied Sciences, Bhimtal | 2018 |
| Statistical study of variability in Rainfall and Analysis of Extreme Rainfall Events for Hill Stations of Uttarakhand (Oral) | Advances in physics from small to large scales   | Kumaun University Nainital                   | 2018 |
| Importance of Solar Energetic Particles and their characteristics (Invited)  | 9 <sup>th</sup> Conference of Indian Science Congress Association (Haridwar Chapter)             | Indian Science Congress Association          | 2018 |
| Covariant Formulation of MHD Equations for Quantum Plasma (Invited)  | 8 <sup>th</sup> Conference of the Indian Science Congress Association (Haridwar Chapter)         | Indian Science Congress Association          | 2017 |
| Analysis of Geomagnetic activity during Solar Cycle 24.  | International conference on Science, Social Science, Agriculture and Management                  | Birla Institute of Applied Sciences, Bhimtal | 2017 |
| Statistical analysis of geomagnetic activity During solar cycle 23 & 24 (Poster)   | BINA International conference and workshop   | ARIES Nainital                               | 2016 |
| Multiwavelength analysis of ----- solar activity. (oral)   | National Seminar on recent development in Physics & Prosperity in Solar Physics- Space Science   | Kumaun University Nainital                   | 2014 |
| Geoeffectiveness of solar eruptions during the rising phase of solar cycle 24 (Poster)                                       | 33 <sup>rd</sup> meeting of the Astronomical Society of India held at NCRA Pune.                 | Astronomical Society of India                | 2015 |

**Signature of the faculty member**