

Dr Ashutosh Kumar Singh

Current Affiliation:
C.M. Science College Darbhanga
Email: ashutoshksingh.bhu@gmail.com,
Mob :9839280929

==========

Awards & Achievements
(i) UGC-Meritorious Research Fellowship in Science
(ii) Geo-Host Award
(iii) Oral-Invited Talk
(iv) AGU Chapman Grant

Conference/Seminar
(i) International (**12**)
(ii) National (**07**)
(iii) Workshop/FDP (**10**)

Abroad Visit
(i) Germany,
(ii) Singapore
(iii) Beijing, China
(iv) Jeju, South Korea
(v) Ourense, Spain

Paper Published
(i) SCIE/Scopus/Refereed (**17**)
(ii) Conference Proceeding (**05**)
Journal of Geophysical Research
Adv. Space Research (Elsevier)
Astrophys & Space Sci (Springer)
Annales Geophysicae(EGU)
Radio Science(AGU)
Adv. In Geosciencs(EGU)
Earth Planet Space, *(Springer)*

Book/Book Chapters
(i) Book Chapter (**03**)

Educational Qualifications

- Ph.D. in Physics (2014), Banaras Hindu University, Varanasi, India.
- M.Sc. in Physics, June-2007, Bundelkhand University, Jhansi, India.
- B.Sc. (Physics) 2005, V.B.S. Purvanchal University, Jaunpur, India.

Professional Experience

- Assistant Professor (G) in C.M. Science College Darbhanga, 25-07- 2022 to till date
- Assistant Professor in SRM University, Lucknow-Dewa Road, Feb-2015 to Feb-2022
- Project Scientist at RBS Eng. Tech. Campus, Bichpuri, Agra, India, Aug-2013-Jan-2015.
- Reviewer: Advances in Space Research (*Elsevier Pub*.), Indian J. of Radio and Space Physics., Radio Science (AGU), Geophysical Research Letters (AGU)Astrophysics & Space Science (Springer Nature) and many others.

Awards & Achievements

- **UGC-Meritorious Research Fellowship** in Science from July 2010-June 2013.
- **Geo-Host Award** –AOGS- IGU Annual Meeting 2010, Hyderabad, India, 5-9th July 2010.
- **Oral-Invited Talk** in AOGS IGU Annual Meeting 2010, July 5- 9, 2010.
- **Won Second Prize** in DST-SERC Training Programme held at IIG, Navi Mumbai during January 6-19, 2010.

Member of Societies

- Life member of Plasma Science Society of India (**PSSI**) & Division of Plasma Physics, Association of Asia Pacific Physical Societies (AAPPS-DPP).
- Member of American Geophysical Union (**AGU**)
- Member of Indian Science Congress Association

First Author Talk (International/National Conferences/Workshops)

- TRENDS 2024, 12th International Workshop on Long-Term Changes and Trends in the Atmosphere held in Ourense, Galicia, Spain during 6-10 May 2024. (**Oral**)
- FDP conducted by Centre for Research and Industrial Staff Performance (sponsored by DST Govt. of India New Delhi) during 19-06-23 to 01-07-23.
- IIRS Outreach Programme on "Remote Sensing and GIS Technology and Applications for University Teachers and Government Officials" on 13 June – 01 July , 2020
- AGU Chapman Conference, Jeju Island, Republic of Korea, 31 Aug - 5 Sep 2014 **(Oral)**
- AOGS-AGU (WPGM) Joint Assembly 2012, Singapore, 13-17 August 2012 (**Oral**)
- Indo-US workshop on Advanced VLF Science, Goa, India, 28 Nov-01 Dec, 2011 (**Oral**)
- 38th COSPAR scientific Assembly, Bremen, Germany,July 18-25, 2010. (**Oral**)
- AOGS-2010 held at HICC, Hyderabad, India during July 5- 9, 2010. (**Oral-Invited Talk**)
- Also attended Faculty Development Programme, Training Programme, & Workshops ,
- DST International Travel Grant (2010, 2014), CSIR International Travel Grant (2012)

Select List of the Most Significant Five Research Publication

1. Effect of 21 June 2020 solar eclipse on the ionosphere using VLF and GPS observations and modeling. *Advances in Space Research,* 69(1), 254-265, 2022; (Elsevier Pub.)
2. Solar flare induced D-region ionospheric perturbations evaluated from VLF measurements. *Astrophys and Space Sci,* doi: 10.1007/s10509-013-1699-4, 2013, (Springer Pub.)
3. Response of low latitude D-region ionosphere to the Total Solar Eclipse of 22 July 2009 deduced from ELF/VLF analysis. *J. Adv. Space. Res*., 50, 1352-1361 2012, (Elsevier Pub.)
4. Multiflash whistlers in ELF-band observed at low latitude, *Annales Geophysicae*, 29, 91-96, doi:10.5194/angeo-29-91-2011, 2011, (Copernicus Pub., Europian Geosci. Union)
5. Modeling of Ionospheric Scintillation at Low-Latitude, *Adv. Space Research*, doi:10.1016/j.asr.2010.09.017, 2010, (Elsevier Pub.)

Research Experience and Area of Interest

- Remote sensing of ionospheric perturbations in association with the space weather events like geom.. storms, solar flare, solar eclipse; lightning discharges and associated processes: whistlers VLF emissions etc., lightning induced electron precipitation (LEP's) events. Seismo-Ionospheric Earthquake precursor studies.

Complete List of Research Publications

1. K. Tiwari1, A. Kumawat, **Ashutosh K. Singh** and A. K. Singh, Great North American Eclipse: A Multi-Platform Study of Ionospheric and Geomagnetic Disturbances on April 8, 2024. *Journal of Geophysical Research*, 131(2), 8694-8719, 2026; ISSN: 2169-9402 (**IF=3.0**) https://doi.org/10.1029/2025JA034256 (AGU Pub.) 22-02-2026.

2. G.Tripathi, **Ashutosh K. Singh**, P. Singh, A. K. Singh, Response of low-latitude lower ionosphere during solar flare events over the complete solar cycle 24. *Acta Geod Geophys* 60, 115–136, 2025; ISSN: (**IF=1.8**) https://doi.org/10.1007/s40328-025-00461-6 (Springer Pub.) 21-02-2025.

3. G.Tripathi, S.B. Singh, S. Kumar, **Ashutosh K. Singh**, R. Singh, A. K. Singh, Effect of 21 June 2020 solar eclipse on the ionosphere using VLF and GPS observations and modeling. *Advances in Space Research,* 69(1), 254-265, 2022; ISSN: 0273-1177, (**IF=2.611**) https://doi.org/10.1016/j.asr.2021.11.007 (Elsevier Pub.) 01-01-2022.

4. S. Kumar, G. Tripathi, P. Kumar, **Ashutosh K. Singh**, A.K. Singh, Ionospheric perturbations observed due to Indonesian Earthquake (Mw = 7.4) using GPS and VLF measurements at multi-stations, *Acta Geodaetica et Geophysica*, 56, 559–577, 2021; ISSN: 2213-5820 (**IF=1.768**) https://doi.org/10.1007/s40328-021-00345-5 (Springer Pub.) 26-05-2021

5. V.S. Rathore, S. Kumar, **Ashutosh K. Singh**, A. K. Singh, Ionospheric response to an intense solar flare in equatorial and low latitude region, *Indian Journal of Physics* 92(10), 1213-1222, 2018; ISSN: 0974-9845 **(IF=1.947)** https://doi.org/10.1007/s12648-018-1224-2 (Springer Pub.) 30-05-2018

6. U Pandey, **Ashutosh K. Singh**, S. Kumar, A.K. Singh, Seismogenic ionospheric anomalies associated with the strong Indonesian earthquake occurred on 11 April 2012 (M= 8.5), *Advances in Space Research,* 61(5), 1244-1253, 2017; ISSN: 0273-1177 (**IF=2.611**) https://doi.org/10.1016/j.asr.2017.12.022 (Elsevier Pub.) 01-03-2018.

7. U Pandey, **Ashutosh K. Singh**, O.P. Singh, Birbal Singh, V.Sarswat, A study of early/slow VLF perturbations observed at Agra, India, *Acta Geophysica*, 64(3), 755-771, 2016, ISSN:1895-7455, (**IF=2.293**) De Gruyter (Polish Academy of Sciences) https://doi.org/10.1515/acgeo-2016-0016 (Springer Pub.) 02-12-2016

8. S.B. Singh**,** V.S. Rathore, **Ashutosh K. Singh**, A. K. Singh, Ionospheric irregularities at low latitude using VHF scintillations during extreme low solar activity period (2008–2010), *Acta Geodaetica et Geophysica*, 51(1), 1-17, 2016, ISSN: 2213-5820, **(IF=1.768)** https://doi.org/10.1007/s40328-016-0168-2 (Springer Pub.) 16-03-2016

9. **Ashutosh K. Singh**, A. K. Singh, R. Singh, R.P. Singh, K. Adams, and R. L. Dowden, Subionospheric VLF perturbations observed at a low latitude station Varanasi (L = 1.07) using SoftPAL receiver *Advances in Space Research* 55(2), 575-585, 2015; ISSN: 0273-1177, (**IF=2.611**) https://doi.org/10.1016/j.asr.2014.10.032 (Elsevier Pub.) 01-11-2014

10. **Ashutosh K. Singh,** A. K. Singh, Rajesh Singh, R.P. Singh, Solar flare induced D-region ionospheric perturbations evaluated from VLF measurements. *Astrophysics and Space Science,* 350(1), 1-9, 2013, ISSN:1572-946X, (**IF=1.909**) https://doi.org/10.1007/s10509-013-1699-4, (Springer Pub.) 03-12-2013

11. **Ashutosh K. Singh**, R. Singh, B. Veenadhari and A. K. Singh, Response of low latitude D-region ionosphere to the Total Solar Eclipse of 22 July 2009 deduced from ELF/VLF analysis. *Advances in Space Research*, 50(10), 1352-1361; 2012, ISSN: 0273-1177, (**IF=2.611**) https://doi.org/10.1016/j.asr.2012.07.005, (Elsevier Pub.) 11-07-2012

12. **Ashutosh K. Singh**, K. K. Singh, S. B. Singh, A. K. Singh and Lalmani, Multiflash whistlers in ELF-band observed at low latitude, *Annales Geophysicae*, 29(1), 91-96, 2011, ISSN: 0992-7689, (**IF=2.190)** https://doi.org/10.5194/angeo-29-91-2011, (Copernicus Pub., Europian Geosci. Union) 10-01-2011

13. **Ashutosh K. Singh**, K. K. Singh, A. K. Singh and Lalmani, Simultaneous observation of whistlers and emissions during a magnetically quiet period at low latitude, *Astrophysics and Space Science*, **331**, 459-468, 2010, ISSN:1572-946X, (**IF=1.909**) https://doi.org/10.1007/s10509-010-0465-0, (Springer Pub.) 24-08-2010

14. K. Patel, **Ashutosh K. Singh**, P. Subrahmanyam and A. K. Singh, Modeling of Ionospheric Scintillation at Low-Latitude, *Advances in Space Research*, **47**(3), 515-524, 2011, ISSN: 0273-1177, (**IF=2.611**) https://doi.org/10.1016/j.asr.2010.09.017, (Elsevier Pub.) 25-09-2010

15. K. K. Singh, J. Singh, M. Altaf, **Ashutosh K. Singh**, S. Kumar, A. K. Singh, Shyampati and Lalmani, Simultaneous observation of some unusual whistler and VLF hiss emission at a low L-value (L = 1.17). *Advances in Space Research*, **45**(6), 790-797, 2010, ISSN: 0273-1177, (**IF=2.611**) https://doi.org/10.1016/j.asr.2009.10.016, (Elsevier Pub.) 15-03-2010

16. K. Patel, **Ashutosh K. Singh**, A. K. Singh and R. P. Singh, Characteristics of Quasi-Periodic Scintillation Observed at Low Latitude, *Radio Science.*, **44**(6), RS6007, 2009, ISSN:1944-799X, (**IF=1.680**) https://doi.org/10.1029/2008RS003975, (American Geophysical Union, Pub.) 16-12-2009

17. **Ashutosh K. Singh**, R. P. Patel, R. Singh, K. K. Singh and A. K. Singh, Characteristics of discrete VLF falling-tone chorus emissions observed at low latitude ground station Jammu, *Earth, Planets and Space*, **61**, 1179-1183, 2009; ISSN:1880-5981, (**IF=3.362**). https://doi.org/10.1186/BF03352969 (Terra Pub. SGEPSS, Japan) 23-11-2009

Full Paper in Conference Proceedings

1. A. K. Singh, G. Tripathi and **Ashutosh K. Singh**, "Response of D-region ionosphere due to solar flares during solar cycle 24 using VLF measurement," *2022 URSI Regional Conference on Radio Science (USRI-RCRS)*, Indore, India, 2022, pp. 1-4, **ISBN:**978-9-4639-6808-9 https://doi.org/10.23919/URSI-RCRS56822.2022.10118558.

2. U Pandey, **Ashutosh K. Singh**, O.P. Singh, Birbal Singh,V. K. Saraswat, A study of sub-ionospheric early VLF perturbations observed at Agra (L=1.15), India. *2014 XXXIth URSI General Assembly and Scientific Symposium (URSI GASS)*, Beijing, 2014, pp. 1-4. https://doi.org/doi: 10.1109/URSIGASS.2014.6929895 *(IEEE Xplore,) August 16-23, 2014*. ISBN: 978-1-4244-5117-3

3. **Ashutosh K. Singh**, U. Pandey, O. P. Singh and B. Singh, " Sub-ionospheric VLF propagation anomalies associated with the earthquake on 25 March 2013," *2014 XXXIth URSI General Assembly and Scientific Symposium (URSI GASS)*, Beijing, *August 16-23, 2014*, pp. 1-4. https://doi.org/10.1109/URSIGASS.2014.6929825 *(IEEE Xplore,)*. ISBN: 978-1-4244-5117-3

4. **Ashutosh K. Singh**, A. K. Singh "Phase and Amplitude Perturbations Observed on Subionospheric VLF Signal recorded at Varanasi (L = 1.07) Using SoftPAL Receiver" *2011 XXXth URSI General Assembly and Scientific Symposium*, Istanbul, 2011, pp. 1-4.). https://doi.org/10.1109/URSIGASS.2011.6051034 *(IEEE Xplore*,) *August 13-20,* 2011. ISBN: 978-1-4244-5117-3

5. **Ashutosh K. Singh,** R. P. Patel, R. Singh, K. K. Singh and A. K. Singh, "A generation mechanism of chorus emissions using BWO theory" *Journal of Physics: Conference Series*, 208(1), 1-8, https://doi.org/doi:10.1088/1742-6596/208/1/012067, 2010, ISSN 1742-6588.

6. **Ashutosh K. Singh**, S. Kumar, R. Singh, A.K. Singh, Pre-Earthquake Ionospheric Anomalies Observed using Ground Based Multi-Instruments, *International Journal of Advances in Earth Sciences*, 1 (1), 13-19, 2012, ISSN:2278-0092.

Book Chapter

1. **Ashutosh K. Singh**, A. K. Singh, Monitoring of sea level variations using GNSS technology, Book Title: *GNSS Applications in Earth and Space Observations* Chapt-12, 2025; ISBN: 9781032712444, Editor: A K Singh, D. Gupta, https://doi.org/10.1201/9781032712444, (Taylor & Francis CRC Press) 24-04-2025

2. **Ashutosh K. Singh**, A. K. Singh., Trimpi Events and Other amplitude Perturbations Observed at Varanasi using SoftPAL Receiver, Book Title: *Advances in Geosciences, Solar Terrestrial (ST)* **27**, 23-30, 2011, ISBN: 978-981-4355-40-7, Editor: Kenji Satake, Marc Duldig https://doi.org/10.1142/9789814355414_0003, (World Scientific Publishing Company) 20-07-2011

3. S.B. Singh**, Ashutosh K. Singh**, K. K.Singh, Lalmani, A.K.Singh., Explanation of observation of Multi-component ELF whistler at low latitude, Book Title: *Advances in Geosciences, Solar Terrestrial (ST)* 27, 49-54, 2011; ISBN: 978-981-4355-40-7, Editor: Kenji Satake, Marc Duldig https://doi.org/10.1142/9789814355414_0006, (World Scientific Publishing Company) 20-07-2011

Contd…

Academic Awards/Distinctions/Other Activities:

1. **UGC-Meritorious Research Fellowship in Science** from 2 July 2010 to 6 June, 2013.
2. **Geo-Host Award** – Financial Support to Present Annual Meeting 2010, Hyderabad, India, 5-9th July 2010.
3. **Oral-Invited Talk** in AOGS-2010 held at Hyderabad International Convention Centre, Hyderabad, India during July 5- 9, 2010.
4. **Won Second Prize** in overall performance in DST-SERC Training Programme on "Electrodynamical Coupling of Atmospheric Regions" held at IIG, Navi Mumbai during January 6-19, 2010
5. **Reviewer in**: Journal of Geophysical Research (Wiley), Advances in Space Research (Elsevier Pub.), Indian Journal of Radio and Space Physics., Astrophysics and Space Science (Springer Nature)

Travel support/Award to present research work in International conferences

1. AGU Chapman Travel Grant to attend and present a paper in *AGU Chapman Conference on Low-Frequency Waves in Space Plasmas* held in Jeju Island, ***Republic of Korea*** from 31 August - 5 September 2014 **(Oral)**
2. DST International Travel Grant to attend and present a paper in *XXXIth URSI General Assembly and Scientific Symposium*, held in ***Beijing, China*** on August 16-23, 2014. (**Poster**)
3. CSIR International Travel Grant to attend and present a paper in AOGS-AGU (WPGM) Joint Assembly 2012, held at Convention Centre, RWS, ***Singapore*** from 13-17 August 2012 (**Oral**)
4. DST International Travel Grant to attend and present a paper in 38th COSPAR Scientific Assembly, COSPAR-2010 held at ***Bremen, Germany*** during July 18-25, 2010. (**Oral**)

Membership of Academic Bodies:

1. Life member of Plasma Science Society of India (**PSSI**) (Membership No. LM798)
2. Life member of Division of Plasma Physics, Association of Asia Pacific Physical Societies (AAPPS-DPP)
3. Member of American Geophysical Union (**AGU**) (Membership No. 58597)
4. Member of Indian Science Congress Association (Membership No. SLM259)

Training/Workshops/Short Term Course etc.

1. Five-day online certificate course on "Satellite Data Analysis for Weather and Climate" organized by Indian Institute of Tropical Meteorology-EIACP PC-RP, Pune, and CSEE from 13th to 17th March 2026.
2. "Faculty Development Program" conducted by Centre for Research and Industrial Staff Performance (sponsored by Dept. of Science & Technology Govt. of India New Delhi) during 19-06-23 to 01-07-23.
3. Indian Institute of Remote Sensing (IIRS -ISRO) Outreach Programme on Online Certificate Course On Remote Sensing and GIS Technology and Applications for University Teachers and Government Officials on 13 June – 01 July , 2020.
4. One Day Quality Improvement (QIP) on "Introduction to e-Learniimg Softwate Tools for Educators" held at College of Commerce, Arts & Science, Patna on 26 May 2020.
5. "Intellectual Property (IP) Awareness Programme on National IPR Policy 2016" held at SRM University, Lucknow-Dewa Road on 18 August, 2018.
6. 5TH Faculty development programme on " Challenges of Assuring Quality in Higher Education and Research" organized by Internal Quality Assurance Cell, SRM University, Lucknow-Dewa Road during July 02-07, 2018
7. 4TH Faculty development programme on " New modes of learning and teaching in higher education" organized by IQAC Cell, SRM University, Lucknow-Dewa Road during July 10-15, 2017
8. Faculty development programme on "Effective teaching and learning processes" held at SRM University, Lucknow-Dewa Road during July 6-11, 2015.
9. Short term course on Remote Sensing and GIS" organized by Department of Civil Engineering, Institute of Technology, BHU, Varanasi during March 16-18, 2012.
10. DST-SERC Training Programme on "Electrodynamical Coupling of Atmospheric Regions" held at Indian Institute of Geomagnetism, Navi Mumbai during January 6-19, 2010 (*Won Second Prize*)

International Conferences (First Author Talk)

1. TRENDS 2024, 12th International Workshop on Long-Term Changes and Trends in the Atmosphere held in Ourense, Galicia, Spain during 6-10 May 2024. (**Oral**)
2. International Conference on Recent Trend in Mathematical, Physical & Computational Sciences *(ICRTMPCS-2019)* held at Dr.Hari Singh Gour Vishwavidyalaya Sagar, December 12-14, 2019(**Oral**)
3. AGU Chapman Conference, Jeju Island, Republic of **South Korea**, 31 August - 5 September 2014 **(Oral)**
4. XXXIth URSI General Assembly and Scientific Symposium, held in **Beijing**, China, August 16-23, 2014. (**Poster**)
5. AOGS-AGU (WPGM) Joint Assembly 2012, held at Convention Centre, RWS, ***Singapore***, 13-17 August 2012 (**Oral**)
6. International Symposium on Solar-Terrestrial Physics (ISSTP-2012) held at IISER, Pune, India, November 6 - 9, 2012.(**Poster**)
7. Indo-US workshop on Advanced VLF Science, *Goa*, India, 28 Nov-01 Dec, 2011 (Presented a Paper-**Oral**)
8. 38th COSPAR scientific Assembly, COSPAR-2010 held at Bremen, **Germany**, July 18-25, 2010. (**Oral**)
9. AOGS-2010 held at HICC, Hyderabad, India, July 5- 9, 2010. (**Oral-Invited Talk**)
10. International Conference on Perspectives in Vibrational Spectroscopy (ICOPVS-2010) held at Deptt. of Physics BHU, Varanasi, February 21-24, 2010. (**Participated**)
11. International Workshop on Seismo-Electromagnetics and Atmospheric Science, (IWSE AS-2010) held at RBS College, Bichpuri Agra, 16-18 November, 2010 (Presented a Paper-**Oral**)
12. International Conference on Geophysical Sciences (ICON GSECCES-2010) held at Dept. of Geophysics BHU, Varanasi, India, December 21-23, 2010 **(Poster)**

National Conferences (First Author Talk/Organizing Member)

1. SOLARIS 2020: National Conference on Sustainable Environment and Climate, February 07-09, 2020, held in SRMU Barbanki, Uttar Pradesh India (Organizing Committee Member)
2. A Workshop on Recent Trend in Space Physics, Atmospheric Physics & Space Physics, held at Dept of Physics BHU Varanasi from 12-17th March 2012.
3. "National Conference on Mathematical Modeling and Computer Simulation, MMCS-2011" held at Dept. of App. Mathmetics IT, BHU, India during 25-27 March, 2011. (**Poster**)
4. 3rd one day conference held at Deptt. of Physics, B.H.U, Varanasi on Mar. 30, 2010 **(Oral)**
5. PLASMA-2009 held at NIT Hamirpur, Himanchal Pradesh during Dec 8-11,2009. (**Poster**)
6. PLASMA-2008 held at BARC Mumbai during 8-11 December 2008.(**Poster**)
7. National Workshop on Advanced Optoelectronic Materials and Devices (AOMD-2007) organized by Centre for Research in Microelectronics, Dept of Electronic Engineering, IT, BHU Varanasi during December 27 – 29, 2007.(**Participated**)