

CURRICULUM VITAE

Y. P. SINGH

(M.Phil., Ph.D. A.M.U.)

(CSIR-NET JRF, SRF, PHYSICS)

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Scopus ID: 12787424400

Web of Science Researcher ID: ABF-6885-2021

CURRENT POSITION & TEACHING experience: 15 years

- Professor, Institute of Applied Sciences, Mangalayatan University, Aligarh, U.P., India (Oct. 01, 2021– till date)
- Associate Professor, Institute of Applied Sciences, Mangalayatan University, Aligarh, U.P., India (Dec. 26, 2015– Sept. 30, 2021)
- Lecturer/Assistant Professor in the Department of Physics, IET, Mangalayatan University, Aligarh, U.P., India (Sept. 01, 2007 – Dec. 25, 2015)

Laboratory EXPERIENCE: 5 years

- Five years undergraduate lab classes in the Department of Physics, Aligarh Muslim University, Aligarh, U.P., India (2002-2007). Experience: Five year

SWAYAM ARPIT Online Refresher Course

“Introduction To Quantum Physics and Its Applications” From Dec. 01, 2020 to Mar. 31, 2021; by IIT-Bombay.

Administrative Post held

1. Director, IQAC Mangalayatan University, Aligarh (27/09/2019 to till date).
2. Head, Department of Applied Sciences, Mangalayatan University (21/01/2014 to till date).
3. In charge, Department of Physics, Mangalayatan University (24-12-2013 to 20-01-2014).
4. Major Examination coordinator/In charge during various semester of academic years.

PhD Thesis Supervised - 01 (one) Awarded

Title: "Dielectric and conductivity studies on CCTO:PVC and CCTO:PET 0-3 connectivity ceramic polymer composites" **Awarded 2017.**

Research Field

Solar Physics:

- Solar modulation of cosmic ray intensity in the heliosphere,
- Variations of solar wind plasma and field parameters, geomagnetic and cosmic ray intensity,

Material Science:

- Synthesis and characterization of CCTO and composites.

ACADEMIC QUALIFICATIONS

- ❖ CSIR NET-JRF Physical Science, June-2002.
- ❖ CSIR NET-SRF Physical Science.
- 1. **Doctorate, Ph.D.** (PHYSICS) Solar Physics (*Study of Short-Term Modulation of Galactic Cosmic Rays in the Heliosphere*), Aligarh Muslim University, Aligarh, (**Awarded, 2008**).
- 2. **M. Phil** (PHYSICS) Solar Physics (*Study of Transient Modulation of Galactic Cosmic Ray in the Heliosphere*), Aligarh Muslim University, Aligarh, 2004.
- 3. **M.Sc.(Physics)** Atmospheric Physics, Aligarh Muslim University, 2001.
- 4. **B.Sc.(Hons)** Physics, Aligarh Muslim University, 1999.
- 5. **12th** Physics, Chemistry, Maths, UP Board, 1995.
- 6. **10th** Science, Maths, Biology, UP Board, 1992.

COMPUTATIONAL SKILLS

- MATLAB, Wavelet analysis
- LINUX based software like LATEX, XFIG, XMGR, XMGRACE etc.
- Programming in FORTRAN.

FELLOWSHIP

- **Junior Research Fellowship (JRF)** Council of Scientific and Industrial Research (CSIR), New Delhi, India. (Jan. 2003 – Dec. 2004).
- **Senior Research Fellowship (SRF)** Council of Scientific and Industrial Research (CSIR), New Delhi, India. (Jan. 2005 – Aug. 2007).

Papers (selected) in peer-reviewed Journals along with their Impact Factors

S. No.	Journal	No. of papers	Impact Factor
1.	Astronomy & Astrophysics (A&A)	01	5.7
2.	Earth and Space Science AGU, America (Wiley)	01	2.9
3.	JGR-Space Physics, AGU, America (Wiley)	03	2.8
4.	Solar Physics, SPRINGER	03	2.5

5.	Journal of Atmospheric & Solar-Terrestrial Physics (JASTP-ELSEVIER)	04	1.9
6.	Planetary & Space Science (PSS- ELSEVIER)	03	1.8
7.	Progress in Electromagnetic Research-M (PIER)	01	1.9

LIST OF PUBLICATIONS

Book

- Saurabh Kumar Mukerji, Ahmad Shahid Khan, **Yatendra Pal Singh**, "Electromagnetics for Electrical Machines", **CRC press, Taylor & Francis group, USA**. March, 2015. [ISBN 978-1-4987-0913-2].

PAPERS PUBLISHED IN REFEREED JOURNALS (Peer-reviewed papers)

1. Prithvi Raj Singh, A. I. Saad Farid, **Y. P. Singh**, A. K. Singh⁴ and Ayman A. Aly - Solar rotational period of cosmic rays and solar activity during the maximum phase of solar cycle 24, *Physica Scripta*, **IOP Science**, 2021, doi: [10.1088/1402-4896/ac3c5b](https://doi.org/10.1088/1402-4896/ac3c5b).
2. **Y.P. Singh** - Solar rotational oscillation and its sub-harmonics in solar wind plasma field, geomagnetic and cosmic ray intensity indicator in the solar cycle 24/25 minimum, *Earth and Space Science*, American Geophysical Union, **Wiley**, 2020, 7, e2019EA001068
3. **Y. P. Singh**, Badruddin - The 27-day periodicity and its sub harmonics, *Astrophysics and Space Science*, **Springer Nature**, 2019, 364 (11), doi:10.1007/s10509-019-3694-x.
4. **Y. P. Singh**, Badruddin - Study of the solar rotational period and its harmonics in solar activity, interplanetary, geomagnetic, and cosmic-ray intensity indicators during solar polarity reversal Periods, *Solar Physics*, **Springer Nature**, 2019, 294:27, doi.org/10.1007/s11207-019-1413-y.
5. **Y. P. Singh**, Badruddin - Short- and mid-term oscillations of solar, geomagnetic activity and cosmic-ray intensity during the last two solar magnetic cycles, *Planetary & Space Science*, **Elsevier**, 2017 doi.org/10.1016/j.pss.2017.02.011. (0032-0633)
6. Ajay Pratap Singh, **Y. P. Singh** - Dielectric behavior of CaCu₃Ti₄O₁₂:Poly Vinyl Chloride ceramic polymer composites at different temperature and frequencies, *Modern Electronic Materials*, **Elsevier**, 2016 doi.org/10.1016/j.moem.2017.01.001. (2452-1779)
7. Ajay Pratap Singh, **Y. P. Singh** - Structural properties of CCTO:PVC ceramic polymer composites, *Global Journal for Research Analysis*, 5(5), 180-183, 2016. (2277-8160)
8. **Y. P. Singh**, Badruddin - Short-term variations of cosmic ray particles during recent deep solar minimum and previous four solar minima: A wavelet analysis, *Solar Physics*, **Springer**, 290, 3071-3079, 2015 doi: 10.1007/s11207-015-0762-4. (0038-0938)
9. **Y. P. Singh**, Badruddin - Solar-rotational oscillation and its harmonics in the solar-wind, geomagnetic and cosmic ray particles during the last two solar minima, *Astrophysics and Space Science*, **Springer**, 359, article 60, 2015 doi: 10.1007/s10509-015-2503-4. (0004-640X)
10. **Y. P. Singh**, Badruddin - Prominent short, mid- and long-term periodicities in solar and geomagnetic activity: Wavelet analysis, *Planetary and Space Science*, **Elsevier**, **96**, 120-124, 2014. (0032-0633)
11. **Y. P. Singh**, S. Gautam and Badruddin - Temporal variations of short- and mid-term periodicities in solar wind parameters and cosmic-ray intensity, *Journal of Atmospheric & Solar-Terrestrial Physics*, **Elsevier**, **89**, 48-53, 2012. (1364-6826)
12. **Y. P. Singh** and Badruddin - Study of the influence of magnetic fluctuations and solar plasma density on the solar wind magnetosphere coupling, *Journal of Atmospheric & Solar-Terrestrial Physics*, **Elsevier**, **75-76**, 15-21, 2012. (1364-6826)

13. S. K. Mukerji, D. S. Srivastava, **Y. P. Singh** and D. V. Awasthi – Eddy current phenomenon in laminated structure due to travelling electromagnetic field, Progress in Electromagnetics Research M (PIER-M), **18**, 159-169, 2011. (1937-8726)
14. V. Gupta, **Y. P. Singh** and Badruddin – Characteristic features of ICMEs associated with big storms in geomagnetic activity and large Forbush decreases in cosmic rays intensity, Indian Journal of Radio & Space Physics, **39**, 265-269, 2010. (0367-8393)
15. Badruddin and **Y. P. Singh** - Geoeffectiveness of magnetic cloud, shock/sheath, interaction region, high speed stream and their combined occurrence, Planetary and Space Science, **Elsevier**, **57**, 318-331, 2009. (0032-0633)
16. M. Singh, **Y. P. Singh** and Badruddin - Solar modulation of galactic cosmic rays during last five solar cycles, Journal of Atmospheric & Solar-Terrestrial Physics, **Elsevier**, **70**, 169-183, 2008. (1364-6826)
17. **Y. P. Singh** and Badruddin - Effects of interplanetary magnetic clouds, interaction regions and high speed streams on transient modulation of galactic cosmic rays, Journal of Geophysical Research, **Wiley online Library**, **112**, A02101, doi: 10.1029/2006JA011780, 2007. (2169-9402)
18. Badruddin, M. Singh, and **Y. P. Singh** - Modulation loops, time lag and relationship between cosmic ray intensity and tilt of the heliospheric current sheet, Astronomy & Astrophysics, **466**, 697-704, doi: 10.1051/004-6361:20066549, 2007. (0004-6361)
19. **Y. P. Singh** and Badruddin - Corotating high-speed solar wind streams and recurrent cosmic ray modulation, Journal of Geophysical Research, **Wiley online Library**, **112**, A05101, doi: 10.1029/2006JA011779, 2007. (2169-9402)
20. **Y. P. Singh** and Badruddin - Statistical considerations in superposed epoch analysis and its applications in space research, Journal of Atmospheric & Solar-Terrestrial Physics, **Elsevier**, **68**, 803-813, 2006. (1364-6826)
21. **Y. P. Singh** and Badruddin - Effects of the polarity states of the heliospheric magnetic field and particle drifts in cosmic radiation, Solar Physics, **Springer**, **234**, 339-352, 2006.
22. **Y. P. Singh**, M. Singh and Badruddin - Analysis of plasma and field conditions during some intense geoeffective transient solar/interplanetary disturbances of solar cycle 23, Journal of Astronomy & Astrophysics, **27**, 361-366, 2006. (0250-6335)
23. Badruddin and **Y. P. Singh** - Forbush decreases in cosmic radiation: effects of solar flares associated with type IV radio bursts and with different field orientations at flare sites, **Indian Journal of Physics**, **Springer**, **77B**, 195-206, 2003. (0973-1458)

PAPERS PUBLISHED IN PROCEEDINGS OF THE INTERNATIONAL CONFERENCES

1. **Singh, Y. P.**, & Badruddin (2003). Large-scale heliospheric magnetic field and drift effects during Forbush decreases, Proc. 28th International Cosmic Ray Conference, Tsukuba, Universal Academy Press, 6, 3605-3608.
2. Badruddin & **Singh, Y. P.**, (2003). CME types, their interplanetary manifestations (ICMEs) and effects on cosmic ray intensity, Proc. 28th International Cosmic Ray Conference, Tsukuba Universal Academy Press, 6, 3631-3634.
3. Badruddin & **Singh, Y. P.**, (2003). Statistical procedure to test significance in the analysis of cosmic ray data by superposed epoch method-I, Proc. 28th International Cosmic Ray Conference, Tsukuba, Universal Academy Press, 6, 3639-3642.
4. Badruddin & **Singh, Y. P.**, (2003). Statistical procedure to test significance in the analysis of cosmic ray data by superposed epoch method-II, Proc. 28th International Cosmic Ray Conference, Tsukuba, Universal Academy Press, 6, 3643-3646.
5. **Singh, Y. P.**, & Badruddin (2003). Statistical procedure to test significance in the analysis of cosmic ray data by superposed epoch method-III, Proc. 28th International Cosmic Ray Conference, Tsukuba, Universal Academy Press, 6, 3647-3650, 2003.

6. **Singh, Y. P.,** & Badruddin (2005). Study of cosmic-ray depressions due to corotating high-speed solar wind streams and their dependence on solar polarity, Proc. 29th International Cosmic Ray Conference, Pune, 2, 73-76.
7. Munendra Singh, **Singh, Y. P.,** & Badruddin (2005). Solar wind plasma and field variations during solar wind streams and their role in modulation geomagnetic activity, Bulletin of the Astronomical Society of India, 33; 359.
8. Badruddin & **Singh, Y. P.,** (2006). Study of short term modulation of galactic cosmic ray: A new approach, International Living With a Star, Goa, Quest Publication (eds. By N. Gopalswamy and A. Bhattacharyya), 182-188.
9. Badruddin, **Singh, Y. P.,** & Singh, M. (2006). Does solar variability affect Indian (Tropical) weather and climate? An assessment, International Living With a Star, Goa, Quest Publication (eds. By N. Gopalswamy and A. Bhattacharyya), 444-447.
10. Badruddin, Gupta, V., **Singh, Y.P.,** Singh, M., (2007). Coronal hole and CME-associated solar wind streams and their effects on cosmic ray intensity – Proc. 30th International Cosmic Ray Conference, Merida, Maxico, SH. 2.1, 222.
11. Badruddin, Gupta, V., & **Singh, Y. P.** (2010). Coupling of the solar wind and the Magnetosphere, in the Magnetic Coupling between the Interior and Atmosphere of the Sun (eds. By S. S. Hasan and R. J. Rutten), Astrophysics and Space Proceedings, doi: 10.1007/978-3-642-02859-5-89, Springer-Verlag, Berlin, Heidelberg.

PAPERS PRESENTED AT NATIONAL AND INTERNATIONAL CONFERENCES

1. Transient solar events and their effects on cosmic ray modulation - Badruddin and Y.P. Singh, XXII Meeting of the Astronomical Society of India, Thruvananthapuram, Feb. 13 - 15, 2003.
2. Rigidity dependence of the amplitude and recovery time of Forbush decreases in cosmic ray intensity during different solar and magnetic conditions - Yatendra Pal Singh and Badruddin, XIII National Space Science Symposium, Kottayam, Feb 17-20, 2004.
3. Study of long-term and diurnal variations in galactic cosmic ray intensity during solar cycles 19, 20, 21, 22 and 23 - Munendra Singh, Yatendra Pal Singh and Badruddin, XIII National Space Science Symposium, Kottayam, Feb 17-20, 2004.
4. Impact of solar/heliospheric/geomagnetospheric variability on climate: Indian summer monsoon rainfall - Badruddin, Munendra Singh and Yatendra Pal Singh, International Workshop on Role of Indian Ocean in Climate Variability Over India (INDOCLIM), Pune, Feb 23-27, 2004.
5. Study of solar magnetic cycle dependence in corotating cosmic ray depressions - Y.P. Singh, Munendra Singh and Badruddin, National Seminar on Solar-Terrestrial Physics, Rewa, Nov. 30 - Dec. 01, 2004.
6. Solar wind plasma and field variations during solar wind streams and their role in modulating geomagnetic activity - Munendra Singh, Y.P. Singh and Badruddin, An International Meeting on Star Clusters and 23rd Meeting of the Astronomical Society of India, Nainital, Feb 21-24, 2005.
7. Analysis of plasma and field conditions during some intensely geoeffective transient solar/interplanetary disturbances of solar cycle 23 - Yatendra Pal Singh, Munendra Singh and Badruddin, International Solar Workshop (ISW), Nainital, Apr. 05-07, 2005.
8. Study of effectiveness of interplanetary manifestations of coronal mass ejection (ICMEs) and high-speed streams in the transient modulation of galactic cosmic rays - Badruddin and Y.P. Singh, National Space Science Symposium, Visakhapatnam, Feb. 09-12, 2006.
9. Structural and dynamical properties of inter planetary magnetic clouds in the Heliosphere and their interaction with Earth's Magnetosphere - Badruddin and Y.P. Singh, 2nd UN/NASA Workshop on International Heliophysical Year and Basic Space Science, Bangalore, Nov. 27-Dec. 01, 2006.
10. Characteristic features of ICMEs associated with big storms in geomagnetic activity and large Forbush decreases in cosmic ray intensity - Y.P. Singh, Vivek Gupta and Badruddin, International Heliophysical Year Workshop, Nainital, May 07-10, 2007.

11. Solar and interplanetary events of different field structures and their effects on cosmic rays - V. Gupta, Y.P. Singh and Badruddin, 27th Meeting of the Astronomical Society of India, Bangalore, Feb. 18 - 20, 2009.
12. Influence of Magnetic Fluctuations and Solar Plasma Density on the Solar Wind Magnetosphere Coupling Efficiency, International Conference on Solar Magnetic Coupling, Bangalore, Dec. 2-5, 2008.
13. **Study of short- and mid-term periodicities in solar data using wavelet analysis:** 5th Asia Pacific Solar Physics Meeting, Inter University Centre for Astronomy & Astrophysics (IUCAA), Pune, Feb. 03-07, 2020

CONFERENCES ATTENDED

1. XXII Meeting of the Astronomical Society of India - University of Kerala, Thiruvananthapuram, Feb. 13-15, 2003.
2. National Space Science Symposium - M.G. University, Kottayam, Feb. 17-20, 2004.
3. International Workshop on Role of Indian Ocean in Climate Variability over India - I.I.T.M., Pune, Feb. 23-27, 2004.
4. National Seminar on Solar-Terrestrial Physics - A.P.S. University, Rewa, Nov. 30 - Dec. 01, 2004.
5. An International meeting on Star clusters and 23rd Meeting of the Astronomical Society of India - ARIES, Nainital, Feb. 21-24, 2005.
6. International Solar Workshop - ARIES, Nainital, Apr. 04-07, 2005.
7. 29th International Cosmic Ray - Pune University, Pune, Aug. 03-10, 2005.
8. XIV National Space Science Symposium - Andhra University, Visakhapatnam, Feb. 09-12, 2006.
9. International Living With a Star Workshop - IIGM, Goa, Feb. 19-24, 2006.
10. Winter School on Astroparticle Physics – CRL (TIFR), Ooty, Dec. 20-28, 2006.
11. 27th Meeting of the Astronomical Society of India – IIA, Bangalore, Feb. 18-20, 2009.
12. 16th National Space Science Symposium - Saurashtra University, Rajkot, Feb. 24 -27, 2010.
13. Workshop on ‘Matlab and its Applications in Engineering’ – Mangalayatan University, Aligarh, April 23-24, 2011.
14. 1st National Conference on “Recent Advances in Technology and Engineering” – Mangalayatan University, Aligarh, Jan. 20-22, 2012.
15. International Symposium on Solar-Terrestrial Physics – IISER – Pune, Nov. 06 – 09, 2012.
16. Two-week ISTE Workshop on ANALOG Electronics, Conducted by IIT-Kharagpur, Mangalayatan University, Aligarh, June 04-14, 2013.
17. 18th National Space Science Symposium - Dibrugarh University, Dibrugarh, Jan. 28 -31, 2014.
18. One-week Coordinators’ Workshop on Engineering Physics, IIT-Bombay, Sept. 07-11, 2015.
19. National Space Science Symposium (NSSS-2016), Space Physics Laboratory, Vikram Sarabhai Space Centre, Thiruvananthapuram, Feb. 09-12, 2016.
20. Workshop on Fundamental of GNSS/IRNSS and Applications to Atmospheric Science, National Atmospheric Research Laboratory, Department of Space, Govt. of India, Gadanki, Feb. 26, 2016.
21. 5th Asia Pacific Solar Physics Meeting, Inter University Centre for Astronomy & Astrophysics (IUCAA), Pune, Feb. 03-07, 2020.

Dr. Y.P. Singh
Mangalayatan University, Aligarh

Ref.: MU/RO/Exp./2022-23/049

Dated: 27 Jul 2022

Experience Certificate

This is to certify that Dr. Yatendra Pal Singh S/o Mr. Gaj Pal Singh is working as Professor in the Institute of Applied Sciences at Faculty of Engineering & Sciences of the University since 01 Oct. 2021 to till date. Prior to 01 Oct. 2021, he was working as:

Lecturer	-	01 Sep 2007 to 31 May 2012
Assistant Professor	-	01 June 2012 to 25 Dec 2015
Associate Professor	-	26 Dec 2015 to 30 Sep 2021



Registrar
Mangalayatan University
Beswan, ALIGARH