Curriculum Vitae

Personal information

Name	Nitin Yadav (Female, DOB: 01/01/1989)
Occupation	Assistant Professor, Indian Institute of Science Education and Research (IISER) Thiruvananthapuram
Nationality	Indian
Phone	+91 9873553413
Digital identifier	0000-0002-8976-516X (ORCID), YWbcsFwAAAAJ (google scholar)

Education

07.2011 - 10.2015	Ph.D. in space plasma physics, Indian Institute of Technology (IIT) Delhi, India, thesis title 'Nonlinear Alfvénic Localized Structures and Turbulence in Magnetized Plasmas', supervisor: Prof. R. P. Sharma
07.2009 - 06.2011	M. Tech. Energy Studies, IIT Delhi, India, thesis title 'Laser-Matter Interaction: Resonance Absorption and Surface Plasmon-Polariton Excitation', supervisor: Prof. R. P. Sharma (97 %)
07.2007 - 06.2009	M.Sc. Physics with a specialization in 'Experimental Techniques in Nuclear and Particle Physics', Panjab University, Chandigarh, India, thesis title 'Inverse Compton scattering', supervisor: Prof. A. K. Bhati (81.6 %)
07.2004 - 06.2007	B.Sc. in Physics, Chemistry, and Mathematics, University of Bikaner, Rajasthan, India. (79.25 %)

Past appointments

10.2020 - 08.2022	Postdoc, KU Leuven, Belgium
04.2017 - 09.2020	Postdoc, Max Planck Institute for Solar System Research, Göttingen, Germany
01.2015 - 03.2017	Research Associate (Postdoc), IIT Delhi, India

Research interests

- Magnetohydrodynamics (MHD): Theory and simulations
- Solar atmosphere and radiative transfer
- Waves and mode transformation processes
- Solar plasma dynamics and heating
- Space plasma physics: Magnetic reconnection and energetic events

Grant applications and merits

07.2024	IUCCA-HPC grant for 200000 core-hours
03.2024	CSIR-ASPIRE grant
02.2024	SERB-MATRICS grant
07.2023	IUCAA Visiting Associateship
08.2022	Inspire faculty fellowship award
06.2017	Five years Postdoctoral Fellowship awarded by University Grant Commission (UGC), India (declined by the candidate)
06.2016	International travel support by Indian National Science Academy, India to participate in the conference '18th International Congress on Plasma Physics' held in Kaohsiung, Taiwan, 27 June–01 July, 2016
07.2013	Foreign travel grant by the Human Resource Development Group, Council of Scientific & Industrial Research, India for attending '50th Culham Plasma Physics Summer School' held in Culham Center for Fusion Energy, Oxfordshire,United Kingdom, 15–26 July, 2013
06.2011	Secured first rank in M. Tech. Energy Studies in IIT Delhi (C.G.P.A.-9.7/10)
03.2009	Qualified 'Graduate Aptitude Test (GATE)', 2009, with GATE percentile 97% (National level test for admission in IITs for pursuing M. Tech. and PhD program)
12.2008	Qualified 'National Eligibility Test (NET)', 2008, conducted by Council of Scientific and Industrial Research (CSIR), India (National level test to determine eligibility for lectureship and for the award of Research Fellowship for pursuing research)

Scientific collaborations

- Prof. Rony Keppens: computational MHD, Numerical algorithms, KU Leuven, Belgium
- Prof. Sami Solanki: solar magnetism, Max Planck Institute for Solar System Research, Germany
- Dr. Robert Cameron: solar dynamo, Max Planck Institute for Solar System Research, Germany
- Prof. R. P. Sharma: magnetic turbulence in plasmas, IIT Delhi, India
- Dr. Beatrice Annemone Popescu B.: partial ionization in the solar atmosphere, KU Leuven, Belgium
- Dr. Eamon Scullion, solar observations, Northumbria University, UK
- Dr. Viktor Fedun: MHD waves in inhomogeneous media, University of Sheffield, UK
- Dr. Elena Khomenko: MHD wave mode conversion, Instituto de Astrofisica de Canarias, Spain

- Core member of an International ISSI team "The nature and physics of vortex flows in solar plasmas"
- Associate member of a focused international science team on Waves in the Lower Solar Atmosphere (WaLSA)

Membership in scientific societies

- Life member of International Astronomical Union (ID-20218)
- Life member of the Astronomical Society of India (ID-2266)
- Life member of the Plasma Science Society of India (ID-1059)
- Life member of Division of Plasma Physics, Association of Asia Pacific Physical Societies (ID-1906)
- 3-year membership (expires in 2024) for Asia Oceania Geo-sciences Society (ID-21A564)

Schools, Workshops, Conferences and Research visits

Invited talks

- 'Future Computational Infrastructure' during national meeting entitled "India's Next Leap in Solar and Heliospheric Exploration" held at Indian Institute for Astrophysics from July 29th to July 31st, 2024.
- Physics departmental colloquium on 'Why does the Sun, our nearest star, have a hot atmosphere?' at IISER Pune on March 4, 2024.
- 'MHD wave coupling of solar atmosphere' at the 3rd International Conference on Plasma Theory and Simulations (PTS-2023) held at JNU, New Delhi from 21-23 September 2023.
- 'MHD wave coupling of solar atmosphere' at the 3rd conference on plasma simulation (CPS-2022) held at the Raman Science Center (IIA campus in Leh, Ladakh UT) during 13-15 July, 2023.
- 'Modelling of Solar MHD waves and relevance to Aditya-L1' at a meeting entitled "Science from In-situ Measurements of Aditya-L1 (SIMA-01)" during 11-13 April 2023 at Space Physics Laboratory (SPL), Physical Research Laboratory (PRL).
- 'MHD wave coupling of solar atmosphere' at a workshop on "Multi-scale Phenomena on the Sun: Present Capabilities and Future Challenges" during April 3-5, 2023 at Udaipur.
- 'MHD waves in the Sun: theory and observations' at a workshop on "Sun and space weather-impacts on terrestrial environment" held from March 15-16, 2023 at University College, Trivandrum.
- 'Mode identification of Magnetohydrodynamic (MHD) waves in simulated solar atmospheres' at International Conference on Plasma Science and Applications held online from 28-30 December 2022.
- 'Solar Plasma Heating: Role of Vortex Flows' at New Mexico State University on 11th November 2022.
- 'Our nearest star: Sun' at the Department of Physics DDU Gorakhpur University on 9th October 2022.
- 'Three-dimensional MHD wave propagation near a coronal null point: a new wave mode decomposition approach' at 'Advances in Solar MHD Numerical Simulations in the Era of High- Resolution Observations' held from 7–10 August 2022 at Eastbourne, UK.
- 'Vortex flow properties in plage region simulations' at 5^{th} AAPPS-DPP meeting held virtually during 26 September–1 October 2021.

- ‘Slow Magneto-acoustic Waves in 3D Realistic Simulations of a Unipolar Solar Plage’ at AOGS2021 annual meeting held virtually during 1–6 August 2021.
- ‘Vortex Flows in the Solar Atmosphere’ at Sheffield University, UK on 2nd July 2020.
- ‘Energy Contribution of Vortex Flows in the Solar Atmosphere’ at Centre for mathematical plasma-astrophysics at KU Leuven, Belgium on 14th February 2020.
- ‘Energy Contribution of Vortex Flows in the Solar Atmosphere’ at Indian Institute of Astrophysics, Bangalore, India on 30th December 2019.
- ‘Role of Waves and Instabilities in Space plasmas’ at Max Planck Institute for Solar System Research, Göttingen, Germany on 29th September 2016

Contributed talks

- ‘3D MHD wave propagation near a coronal null point: New wave mode decomposition approach’ at The National Astronomy Meeting (NAM) 2022 held at The University of Warwick during 11 - 15 July 2022.
- ‘3D MHD wave propagation near a coronal null point: New wave mode decomposition approach’ at COSPAR 2022, 44th Scientific Assembly held in Athens, Greece during 16 - 24 July 2022.
- ‘3D MHD wave propagation near a coronal null point: New wave mode decomposition approach’ at Pencil code users meeting held online during 4 - 10 May 2022.
- ‘Slow magneto-acoustic wave propagation in 3D simulations of a unipolar solar plage’ at Advances in Observation and Modelling of Solar Magnetism and Variability meeting held online during 1 – 4 March, 2021.
- ‘Vortex Flow Properties in Simulations of Solar Plage Region: Evidence for their role in chromospheric heating’ at the RAS discussion meeting held virtually on 28 October, 2020.
- ‘Vortex Flows in the Chromosphere of a Solar Plage’ at the Solar Splinter session of the Virtual Annual Meeting of the German Astronomical Society (AG) held from 21–25 September, 2020.
- ‘Vortex flows at various scales in simulations’ at ISSI international team meeting ‘The nature and physics of vortex flows in solar plasmas’ from 3–7 February, 2020 in Bern, Switzerland.
- ‘Vortex Flows in Solar Plage Region Simulations’ at the IRIS-10 meeting held in Bengaluru, India from 4–8 November, 2019.
- ‘Numerical simulations of slow magneto-acoustic wave propagation’ in the conference ICPSA held in Lucknow, India from 11–14 November, 2019
- ‘Dynamics of small-scale vortices in solar plage region simulations’ and ‘Slow magneto-acoustic waves and shocks in solar plage region simulations’ at the ISSI international team meeting ‘The nature and physics of vortex flows in solar plasmas’ from 4–8 February, 2019 in Bern, Switzerland.
- ‘Role of Small-Scale Short-Lived Vortices in Energy Transport in the Lower Solar Atmosphere’ at the conference ‘The Dynamic Sun II’ held in Siem Reap, Cambodia from 12–19 February, 2018
- ‘Turbulence and Particle Acceleration in Auroral Ionosphere’ at ‘18th International Congress on Plasma Physics’ conference held in Kaohsiung, Taiwan from 27 June–01 July, 2016
- Participated in the school ’Introduction to Space Weather Concepts and Tools’ in conjunction with the workshop ‘Science for Space Weather’ held in Goa, India from 23–29 January, 2016 and delivered a talk on ‘Turbulence and Particle Acceleration in Auroral Ionosphere’

Public outreach

- Public Lecture on ‘Why and How do we study Sun: Aditya –L1 mission’ on 20th October 2023 during ANWESHA 2023 (Annual science fest of IISER Thiruvananthapuram)
- Actively participated in the ’Night of Science’ held at the Max Planck Institute for Solar System Research in 2019 which is a biennial event in Göttingen and demonstrated the convection process to public.
- Provided guided tours at the Max Planck Institute for Solar System Research for the visitors at multiple occasions raising interest in solar physics and sharing research and innovations with the public.
- Active participant in various annual events conducted by the IIT Delhi such as *Tryst* which aims at popularizing science and technology among the general public.
- Volunteered in Open House, IIT Delhi for continuous five years which introduces school children and the general public to innovative research and product development projects.

Teaching experience

- Taught Electrostatics (First-year BS-MS programs), Solar Physics (Fourth-year BS-MS students) and Fluid Mechanics and Transport Phenomena (Fourth-year BS-MS program)
- Took exercise sessions/tutorials for the course 'Differential Equations' of Bachelor in Bioscience Engineering program as a part of teaching assignment during 2020-2021.
- Supervised six 3^{rd} year bachelor students on projects based on Mathematical Models for Epidemiology (2021).
- Assisted in courses of *Plasma Physics*, *Advanced Fusion Energy* as well as assisted M. Tech (Energy Studies) students in Energy Laboratories at IIT Delhi as a part of teaching assistantship during Ph.D.
- Assisted in various academic activities e.g., exam invigilation, academic results preparation etc.

Language skills

English: C1; Hindi: C2; Punjabi: C1; German: A1; Dutch: A2
(Based on the Common European Framework of Reference for Languages)

Programming

Proficient at Fortran, Python, and IDL; familiar with C/C++, MATLAB and MATHEMATICA

Visualization softwares

VAPOR (Visualization and Analysis Platform for Ocean, Atmosphere, and Solar Researchers), Paraview, VisIt and yt-project

Professional services

PhD thesis external examiner for two PhD students (Juan Camilo Guevara Gomez, University of Oslo and Veronica Jercic, KU Leuven)
Referee for The astrophysical Journal, Monthly Notices of Royal Astronomical Society, Philosophical Transactions of the Royal Society A etc.

Publications in peer reviewed international journals: 38

Best 5 publications

1. **Yadav, N.**, Keppens, R., & Popescu Braileanu, B., *3D MHD wave propagation near a coronal null point: New wave mode decomposition approach* (2022) Astronomy & Astrophysics, 660 A21.
2. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Slow magneto-acoustic waves in simulations of a solar plage region carry enough energy to heat the chromosphere* (2021) Astronomy & Astrophysics, 652, A43
3. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Vortex flow properties in simulations of solar plage region: Evidence for their role in chromospheric heating* (2021) Astronomy & Astrophysics 645, A3
4. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Simulations show that vortex flows could heat the chromosphere in solar plage* (2020) Astrophysical Journal Letters 894, L17
5. **Yadav, N.**, & Sharma, R. P., *Nonlinear interaction of 3D kinetic Alfvén waves and ion acoustic waves in solar wind plasmas* (2014) Solar Phys. 289 1803

List of publications

2024

1. **Yadav, N.** and Keppens, R., *Wave transformations near a coronal magnetic null-point* (2024), Astronomy & Astrophysics, 681, A43

2023

2. Tziotziou, K., Scullion, E., Shelyag, S. et al. *Vortex Motions in the Solar Atmosphere* (2023) Space Sci Rev 219 1

2022

3. **Yadav, N.**, Keppens, R., & Popescu Braileanu, B., *3D MHD wave propagation near a coronal null point: New wave mode decomposition approach* (2022) Astronomy & Astrophysics, 660 A21.

2021

4. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Slow magneto-acoustic waves in simulations of a solar plage region carry enough energy to heat the chromosphere* (2021) Astronomy & Astrophysics, 652, A43
5. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Vortex flow properties in simulations of solar plage region: Evidence for their role in chromospheric heating* (2021) Astronomy & Astrophysics 645, A3
6. Rai, R.K., Pathak, N., Sharma, P., Sharma, S., **Yadav, N.** & Sharma, R. P., *Turbulence generation of ion scale in the presence of magnetic islands and guide field at the magnetopause region* (2021) J Astrophys Astron 42, 1

2020

7. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Simulations show that vortex flows could heat the chromosphere in solar plage* (2020) Astrophysical Journal Letters 894, L17

2017

8. Sharma, R. P., Pathak, N., **Yadav, N.**, & Sharma, P., *Nonlinear propagation of whistler wave and turbulent spectrum in reconnection region of magnetopause* (2017) Phys Plasmas. 24 092902
9. Pathak, N., **Yadav, N.**, & Sharma, R. P., *Nonlinear Evolution of 3D Whistler Waves in Space Plasmas* (2017) Phys Plasmas. 24 062104
10. **Yadav, N.**, Rai, R., Sharma, P., & Sharma, R. P., *Nonlinear propagation of kinetic Alfvén wave and turbulent spectrum in reconnection region of magnetotail* (2017) Phys Plasmas. 24 062902
11. Pathak, N., **Yadav, N.**, Sharma, S., Sharma, P., & Sharma, R. P., *Localization of whistler wave and turbulent spectra in the magnetotail region* (2017) J. Geophys. Res. 122 1751
12. Sharma, R. P., Sharma, P., & **Yadav, N.**, *Self-modulation of slow magnetosonic waves and turbulence generation in solar coronal loops* (2017) Phys. Plasmas. 24 012905
13. Sharma, R. P., Nandal, P., **Yadav, N.**, & Sharma, S., *Nonlinear evolution of oblique whistler waves in radiation belts* (2017) Astrophys. Space Sci. 362 32
14. Rai, R., Sharma, S., **Yadav, N.**, & Sharma, R. P., *Nonlinear effects associated with kinetic Alfvén wave in magnetic islands* (2017) Phys. Plasmas. 24 012302

2016

15. Sharma, R. P., Nandal, P., **Yadav, N.**, & Uma, R., *Nonlinear effects associated with oblique whistler waves in space plasmas* (2016) Phys. Plasmas. 23 102905
16. Nandal, P., Sharma, S., **Yadav, N.**, & Sharma, R. P., *Formation of coherent structures and impact on turbulence scaling in solar wind plasma* (2016) Solar Physics. 291 3765
17. Pathak, N., **Yadav, N.**, Uma, R., & Sharma, R. P., *Role of nonlinear localized structures and turbulence in magnetized plasma* (2016) Astrophys. Space Sci. 361 287
18. Nandal, P., **Yadav, N.** & Sharma, R. P., *Potential role of kinetic Alfvén waves and whistler waves in solar wind plasmas* (2016) Astrophys. Space Sci. 361 239
19. Sharma, P., **Yadav, N.** & Sharma, R. P., *Nonlinear interaction of kinetic Alfvén waves and ion acoustic waves in coronal loops* (2016) Phys. Plasmas. 23 052304
20. Nandal, P., **Yadav, N.** & Sharma, R. P., *Localization and implication of oblique whistler wave in the magnetopause region* (2016) Phys. Plasmas. 23 042310
21. Sharma, P., **Yadav, N.** & Sharma, R. P., *Nonlinear evolution of 3D Inertial Alfvén Wave and its implication in particle Acceleration* (2016) Solar Physics. 291 931

2015

22. Rai, R., Sharma, S., **Yadav, N.** & Sharma, R. P., *Effect of magnetic islands on the localization of kinetic Alfvén wave* (2015) Phys. Plasmas. 22 122106
23. Kumari, A., Sharma, R. P. & **Yadav, N.**, *Effect of background density fluctuations on the localized structures of inertial Alfvén wave and turbulent spectrum* (2015) Phys. Plasmas. 22 112303
24. Sharma, P., **Yadav, N.** & Sharma, R. P., *Study of nonlinear 3-D evolution of kinetic Alfvén wave and fluctuation spectra* (2015) Astrophys. Space Sci. 360 18
25. Kumari, A., Sharma, R. P. & **Yadav, N.**, *Study of localized structures of kinetic Alfvén wave and generation of turbulence* (2015) Phys. Plasmas. 22 062304
26. Pathak, N., Das, B. K., **Yadav, N.** & Sharma, R. P., *Numerical simulation to study the nonlinear interaction between slow magnetosonic wave and ion acoustic wave in solar wind plasmas* (2015) Solar Physics. 290 1827

2014

27. Rinawa, M. L., Sharma, R. P., Modi, K. V. & **Yadav, N.**, *The nonlinear evolution of kinetic Alfvén with the ion acoustic wave and turbulent spectrum in the magnetopause region* (2014) J. Geophys. Res. 120 1238
28. Sharma, P., Sharma, R. P. & **Yadav, N.**, *Localization of 3D inertial Alfvén wave and generation of turbulence* (2014) Astrophys. Space Sci. 357 110
29. Das, B. K., **Yadav, N.**, & Sharma, R. P., *Numerical Simulation to study the nonlinear coupling of fast magnetosonic wave with ion acoustic wave in solar wind plasmas* (2014) Phys. Scr. 90 035604
30. Kumari, A., Sharma, R. P., & **Yadav, N.**, *Inertial Alfvén wave induced turbulent spectra in aurora* (2014) Astrophys. Space Sci. 351 81
31. Kumari, A., **Yadav, N.**, & Sharma, R. P., *Effect of linear waves on kinetic Alfvén wave localization and turbulent spectrum* (2014) Astrophys. Space Sci. 352 201
32. Sharma, P., **Yadav, N.**, & Sharma, R. P., *Nonlinear interaction of 3D kinetic Alfvén wave and fast magnetosonic wave* (2014) J. Geophys. Res. 119 6569
33. Sharma, R. P., Kumari, A., & **Yadav, N.**, *Inertial Alfvén wave localization and turbulent spectrum* (2014) J. Geophys. Res. 119 7709
34. Sharma, R. P., **Yadav, N.**, & Pathak, N., *Density cavity formation through nonlinear interaction of 3D Inertial Alfvén wave and ion acoustic wave* (2014) J. Geophys. Res. 119 10561
35. Sharma, R. P., **Yadav, N.**, & Pathak, N., *Role of 3D dispersive Alfvén waves in coronal heating* (2014) Astrophys. Space Sci. 351 75
36. **Yadav, N.**, & Sharma, R. P., *Nonlinear interaction of 3D kinetic Alfvén waves and ion acoustic waves in solar wind plasmas* (2014) Solar Phys. 289 1803

2013

37. Sharma, R. P., **Yadav, N.**, & Kumari, A., *Coherent structures and turbulent spectrum in solar wind plasmas* (2013) Phys. Plasmas. 20 082308
38. **Yadav, N.** & Sharma, R. P., *Nonlinear interaction of obliquely propagating Alfvén waves and kinetic Alfvén waves in solar wind plasmas* (2013) J. Plasma Phys. 79 927
39. Das, B. K., Sharma, R. P., & **Yadav, N.**, *Nonlinear interaction of slow Alfvén wave with ion acoustic wave and applications to space plasma* (2013) J. Plasma Phys. 79 833

List of publications

2024

1. **Yadav, N.** and Keppens, R., *Wave transformations near a coronal magnetic null-point* (2024), Astronomy & Astrophysics, 681, A43 [Impact Factor: 6.5]

2023

2. Tziotziou, K., Scullion, E., Shelyag, S. et al. *Vortex Motions in the Solar Atmosphere* (2023) Space Sci Rev 219 1 [Impact Factor: 8.9]

2022

3. **Yadav, N.**, Keppens, R., & Popescu Braileanu, B., *3D MHD wave propagation near a coronal null point: New wave mode decomposition approach* (2022) Astronomy & Astrophysics, 660 A21 [Impact Factor: 6.5]

2021

4. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Slow magneto-acoustic waves in simulations of a solar plage region carry enough energy to heat the chromosphere* (2021) Astronomy & Astrophysics, 652, A43 [Impact Factor: 6.5]
5. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Vortex flow properties in simulations of solar plage region: Evidence for their role in chromospheric heating* (2021) Astronomy & Astrophysics 645, A3 [Impact Factor: 1.1]
6. Rai, R.K., Pathak, N., Sharma, P., Sharma, S., **Yadav, N.** & Sharma, R. P., *Turbulence generation of ion scale in the presence of magnetic islands and guide field at the magnetopause region* (2021) J Astrophys Astron 42, 1 [Impact Factor: 6.5]

2020

7. **Yadav, N.**, Cameron, R. H., & Solanki, S. K., *Simulations show that vortex flows could heat the chromosphere in solar plage* (2020) Astrophysical Journal Letters 894, L17 [Impact Factor: 7.9]

2017

8. Sharma, R. P., Pathak, N., **Yadav, N.**, & Sharma, P., *Nonlinear propagation of whistler wave and turbulent spectrum in reconnection region of magnetopause* (2017) Phys Plasmas. 24 092902 [Impact Factor: 2.4]
9. Pathak, N., **Yadav, N.**, & Sharma, R. P., *Nonlinear Evolution of 3D Whistler Waves in Space Plasmas* (2017) Phys Plasmas. 24 062104 [Impact Factor: 2.4]
10. **Yadav, N.**, Rai, R., Sharma, P., & Sharma, R. P., *Nonlinear propagation of kinetic Alfvén wave and turbulent spectrum in reconnection region of magnetotail* (2017) Phys Plasmas. 24 062902 [Impact Factor: 2.4]
11. Pathak, N., **Yadav, N.**, Sharma, S., Sharma, P., & Sharma, R. P., *Localization of whistler wave and turbulent spectra in the magnetotail region* (2017) J. Geophys. Res. 122 1751 [Impact Factor: 2.5]
12. Sharma, R. P., Sharma, P., & **Yadav, N.**, *Self-modulation of slow magnetosonic waves and turbulence generation in solar coronal loops* (2017) Phys. Plasmas. 24 012905 [Impact Factor: 2.4]
13. Sharma, R. P., Nandal, P., **Yadav, N.**, & Sharma, S., *Nonlinear evolution of oblique whistler waves in radiation belts* (2017) Astrophys. Space Sci. 362 32 [Impact Factor: 1.9]
14. Rai, R., Sharma, S., **Yadav, N.**, & Sharma, R. P., *Nonlinear effects associated with kinetic Alfvén wave in magnetic islands* (2017) Phys. Plasmas. 24 012302 [Impact Factor: 2.4]

2016

15. Sharma, R. P., Nandal, P., **Yadav, N.**, & Uma, R., *Nonlinear effects associated with oblique whistler waves in space plasmas* (2016) Phys. Plasmas. 23 102905 [Impact Factor: 2.4]
16. Nandal, P., Sharma, S., **Yadav, N.**, & Sharma, R. P., *Formation of coherent structures and impact on turbulence scaling in solar wind plasma* (2016) Solar Physics. 291 3765 [Impact Factor: 3.0]
17. Pathak, N., **Yadav, N.**, Uma, R., & Sharma, R. P., *Role of nonlinear localized structures and turbulence in magnetized plasma* (2016) Astrophys. Space Sci. 361 287 [Impact Factor: 1.9]
18. Nandal, P., **Yadav, N.** & Sharma, R. P., *Potential role of kinetic Alfvén waves and whistler waves in solar wind plasmas* (2016) Astrophys. Space Sci. 361 239 [Impact Factor: 1.9]
19. Sharma, P., **Yadav, N.** & Sharma, R. P., *Nonlinear interaction of kinetic Alfvén waves and ion acoustic waves in coronal loops* (2016) Phys. Plasmas. 23 052304 [Impact Factor: 2.4]
20. Nandal, P., **Yadav, N.** & Sharma, R. P., *Localization and implication of oblique whistler wave in the magnetopause region* (2016) Phys. Plasmas. 23 042310 [Impact Factor: 2.4]

21. Sharma, P., **Yadav, N.** & Sharma, R. P., *Nonlinear evolution of 3D Inertial Alfvén Wave and its implication in particle Acceleration* (2016) Solar Physics. 291 931 [Impact Factor: 3.0]

2015

22. Rai, R., Sharma, S., **Yadav, N.** & Sharma, R. P., *Effect of magnetic islands on the localization of kinetic Alfvén wave* (2015) Phys. Plasmas. 22 122106 [Impact Factor: 2.4]
23. Kumari, A., Sharma, R. P. & **Yadav, N.**, *Effect of background density fluctuations on the localized structures of inertial Alfvén wave and turbulent spectrum* (2015) Phys. Plasmas. 22 112303 [Impact Factor: 2.4]
24. Sharma, P., **Yadav, N.** & Sharma, R. P., *Study of nonlinear 3-D evolution of kinetic Alfvén wave and fluctuation spectra* (2015) Astrophys. Space Sci. 360 18 [Impact Factor: 1.9]
25. Kumari, A., Sharma, R. P. & **Yadav, N.**, *Study of localized structures of kinetic Alfvén wave and generation of turbulence* (2015) Phys. Plasmas. 22 062304 [Impact Factor: 2.4]
26. Pathak, N., Das, B. K., **Yadav, N.** & Sharma, R. P., *Numerical simulation to study the nonlinear interaction between slow magnetosonic wave and ion acoustic wave in solar wind plasmas* (2015) Solar Physics. 290 1827 [Impact Factor: 3.0]

2014

27. Rinawa, M. L., Sharma, R. P., Modi, K. V. & **Yadav, N.**, *The nonlinear evolution of kinetic Alfvén with the ion acoustic wave and turbulent spectrum in the magnetopause region* (2014) J. Geophys. Res. 120 1238 [Impact Factor: 2.8]
28. Sharma, P., Sharma, R. P. & **Yadav, N.**, *Localization of 3D inertial Alfvén wave and generation of turbulence* (2014) Astrophys. Space Sci. 357 110 [Impact Factor: 1.9]
29. Das, B. K., **Yadav, N.**, & Sharma, R. P., *Numerical Simulation to study the nonlinear coupling of fast magnetosonic wave with ion acoustic wave in solar wind plasmas* (2014) Phys. Scr. 90 035604 [Impact Factor: 2.9]
30. Kumari, A., Sharma, R. P., & **Yadav, N.**, *Inertial Alfvén wave induced turbulent spectra in aurora* (2014) Astrophys. Space Sci. 351 81 [Impact Factor: 1.9]
31. Kumari, A., **Yadav, N.**, & Sharma, R. P., *Effect of linear waves on kinetic Alfvén wave localization and turbulent spectrum* (2014) Astrophys. Space Sci. 352 201 [Impact Factor: 1.9]
32. Sharma, P., **Yadav, N.**, & Sharma, R. P., *Nonlinear interaction of 3D kinetic Alfvén wave and fast magnetosonic wave* (2014) J. Geophys. Res. 119 6569 [Impact Factor: 2.8]
33. Sharma, R. P., Kumari, A., & **Yadav, N.**, *Inertial Alfvén wave localization and turbulent spectrum* (2014) J. Geophys. Res. 119 7709 [Impact Factor: 2.8]
34. Sharma, R. P., **Yadav, N.**, & Pathak, N., *Density cavity formation through nonlinear interaction of 3D Inertial Alfvén wave and ion acoustic wave* (2014) J. Geophys. Res. 119 10561 [Impact Factor: 2.8]
35. Sharma, R. P., **Yadav, N.**, & Pathak, N., *Role of 3D dispersive Alfvén waves in coronal heating* (2014) Astrophys. Space Sci. 351 75 [Impact Factor: 1.9]
36. **Yadav, N.**, & Sharma, R. P., *Nonlinear interaction of 3D kinetic Alfvén waves and ion acoustic waves in solar wind plasmas* (2014) Solar Phys. 289 1803 [Impact Factor: 3.0]

2013

37. Sharma, R. P., **Yadav, N.**, & Kumari, A., *Coherent structures and turbulent spectrum in solar wind plasmas* (2013) Phys. Plasmas. 20 082308 [Impact Factor: 2.4]
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