




Faculty Details proforma for College Web-site



Title	Prof.	First Name	SUBHASH	Last Name	KUMAR	Photograph
Designation	Professor					
Address	Department of Physics Acharya Narendra Dev College (University of Delhi) Govindpuri, Kalkaji, New Delhi 110019, India					
Phone No Office						
Email/ Web-Page	subhashkumar@andc.du.ac.in https://wikieducator.org/User:Sks					
Educational Qualifications						
Degree	Institution			Year		
Ph.D	Department of Physics & Astrophysics, University of Delhi			2011		
M.Sc - Physics	Department of Physics & Astrophysics, University of Delhi			1995		
B. Sc (Honours) Physics	Ramjas College, University of Delhi			1993		
Career Profile						
Since 18 August 2019: Professor, Dept. of Physics, Acharya Narendra Dev College (DU)						
Nov 2014 – 17 August 2019: Associate Professor, Dept. of Physics, Acharya Narendra Dev College(DU)						
Nov 2006 – Nov. 2014: Assistant Professor (Permanent), Dept. of Physics, Acharya Narendra Dev College (DU)						
16 Oct 2000 - 12 Nov 2006: Lecturer (Adhoc), Dept. of Physics, Acharya Narendra Dev College (DU)						
Administrative Assignments						
<ol style="list-style-type: none"> Public Information Officer (PIO), Acharya Narendra Dev College: 2019-2022 Teacher in Charge of the Department of Physics (2010-2012) and Course Coordinator- B. Sc. Physical Science (with Electronics) (2010-12, 2020-22) 						
Areas of Interest / Specialization						
<ol style="list-style-type: none"> Astrophysical Plasma Astronomy and Astrophysics Variable star Astronomy, machine learning and stellar spectroscopy Software Reliability of Open Source Software 						
Subjects Taught						

Undergraduate: Astronomy & Astrophysics, Advanced Mathematical Physics-I, Mathematical Physics-III, Classical Dynamics, Electromagnetic Theory, Computational Physics etc...

Postgraduate(*Guest Faculty at Department of Physics & Astrophysics, DU*): (i) Plasma Physics -I (for two semesters) and (ii) Applied Thermodynamics (for one semester) in the course M. Tech. - Nuclear Science and Technology (Aug 2013 - Dec 2014)

Research Guidance

Supervised a research dissertation at UG level in even semester 2018- 19.

Title of dissertation: "Astrometric Analysis of some Open Clusters using the Gaia data"

Publications Profile

International Journals

1. "Ensemble learning-based early detection of influenza disease" (2023) Kumar, R., Maheshwari, S., Sharma, A. **Kumar, Subhash.**, et al. *Multimedia Tools Appl. (In Press)*<https://doi.org/10.1007/s11042-023-15848-2>
2. "[Ensemble-based unsupervised machine learning method for membership determination of open clusters using Mahalanobis distance](https://doi.org/10.1093/mnras/stac2116)" (2022), Sukanta Deb, Amiya Baruah, **Subhash Kumar**, *Monthly Notices of the Royal Astronomical Society*, Vol. 515, Issue 4, October 2022, 4685-4701, <https://doi.org/10.1093/mnras/stac2116> Indexing: *Scopus*, **Impact Factor: 5.287**
3. "Morphology of the Small Magellanic Cloud using multiwavelength photometry of classical Cepheids" Sukanta Deb, Kerdaris Kurbah, Harinder P Singh, Shashi M Kanbur, Chow-Choong Ngeow, Biman J Medhi, **Subhash Kumar**, *Monthly Notices of the Royal Astronomical Society*, Volume 489, Issue 3, November (2019), pp. 3725-3738, <https://doi.org/10.1093/mnras/stz2328s> Indexing: *Scopus*, **Impact Factor: 5.356**
4. "A study of software reliability on big data open source software". Kumar, R., **Subhash Kumar** & Tiwari, S.K. *Int J Syst Assur Eng Manag* **10**, 242–250 (2019). <https://doi.org/10.1007/s13198-019-00777-> Indexing: *Scopus*
5. 'A Case Study on R: a powerful OSS and data analysis platform', Ranjan Kumar, **Subhash Kumar**, Sanjay K. Tiwary, *International Journal of Applied Engineering Research* ISSN 0973-4562 Volume 14, Number 9 (2019) pp. 2260-2269; UGC approved Journal No. 64529
6. "Geometry of the Large Magellanic Cloud using multiwavelength photometry of classical Cepheids", Sukanta Deb, Chow-Choong Ngeow, Shashi M Kanbur, Harinder P Singh, Daniel Wysocki, **Subhash Kumar**, *Monthly Notices of the Royal Astronomical Society*, Volume 478, Issue 2, August 2018, Pages 2526–2540, <https://doi.org/10.1093/mnras/sty1124> Indexing: *Scopus*, **Impact Factor: 5.231**
7. "Adoption of Free and Open Source Software in India" Ranjan Kumar, **Subhash Kumar**, Sanjay K. Tiwari, *International Journal of Applied Engineering Research* ISSN 0973-4562 Volume 13, Number 16 (2018) pp. 12725-12731 UGC approved Journal No. 64529

8. Free and open source software: A key enabler for digital India” Ranjan Kumar, **Subhash Kumar**, Sanjay K. Tiwari, *South Asia Journal of Multidisciplinary Studies*, 3(5), pp. 11-15 (2017)
9. “Morphology and metallicity of the Small Magellanic Cloud using RRab stars” Sukanta Deb, Harinder P. Singh, **Subhash Kumar**, Shashi M. Kanbur, *Monthly Notices of the Royal Astronomical Society*, Volume 449, Issue 3, 21 May 2015, Pages 2768–2783, <https://doi.org/10.1093/mnras/stv358> Indexing: *Scopus*, **Impact Factor: 5.107**
10. “Light Curve Modeling of Eclipsing Binaries towards the Constellation of Carina” Abhisek, Aniruddha Dey, Sukanta Deb, **Subhash Kumar**, Hrishabh Bhardwaj, Barnmoy et. al., *Journal of Undergraduate Research and Innovation* (ISSN 2395 - 2334) 1 (1), Pages 60-78 (2015)
11. “Magnetohydrodynamic waves in the presence of relative motion between two populations of a plasma system”, **Subhash Kumar** and Harinder P. Singh, *Physics of Plasmas* **17**, 092104 (2010); <https://doi.org/10.1063/1.3483116> Indexing: *Scopus*, **Impact Factor: 2.320**
12. “Effect of He⁺⁺ ions on the propagation of low-frequency magnetohydrodynamic waves in the magnetosheath”, G. L. Kalra and **S. Kumar**, *Journal of Geophysical Research*, 111, A11226, (2006) <https://doi.org/10.1029/2005JA011453> Indexing: *Scopus*, **Impact Factor: 5.287**
13. “Propagation of hydromagnetic waves in a two-population plasma system consisting of anisotropic relativistic and nonrelativistic polytropic fluids”, **S. Kumar** and G. L. Kalra, *Physics of Plasmas* **12**, 082111 (2005); <https://doi.org/10.1063/1.2007507> Indexing: *Scopus*, **Impact Factor: 2.023**
14. “Linear Waves in an Imperfect Anisotropic MHD Fluid in a Relativistic formalism”, Sushil K. Singh & **Subhash Kumar**, *Spacetime and Substance*, Vol. 6, Issue 3 (28), Pages 128-131 (2005)

Chapters in edited books/ Full paper in Conference Proceedings

1. “What is Higgs Boson & Why is its discovery such a rage?”, **Subhash Kumar**, *I Wonder-Rediscovering School Science*, Issue. 3, August 2019, pp. 19-24, Azim Premji Foundation <https://azimpremjiuniversity.edu.in/SitePages/resources-i-wonder-issue-3-what-is-the-higgs-boson.aspx>
2. “Adoption and Evolution of FOSS: Key Factors in the development of the Apache Web Server”, Ranjan Kumar, **Subhash Kumar** & Sukanta Deb, *Recent Advances in Mathematics, Statistics & Computer Science*, pp. 362-370, ISBN: 978-981-4696-16-6, World Scientific Publishing Co. Pte. Ltd. 5 Toh Tuck Link, Singapore 596224, DOI: <http://dx.doi.org/10.1142/978>
3. “Unbalanced Magnetron Sputtered SnO₂ and SnO₂-CuO thin films for trace level H₂S gas sensing”, Arijit Chowdhuri, **Subhash Kumar** & Pawan Kumar, *Proceedings of the 27th PSSI National Symposium on Plasma Science & Technology*, 10-13 December 2012, Pondicherry

University, Puducherry, pp, 237-239

4. Effect of dust charge fluctuations on excitation of upper-hybrid waves by a gyrating relativistic electron beam in a magnetized plasma cylinder, **S. Kumar** and S. C. Sharma, Proceedings of International Congress on Plasma Physics (ICPP-2000-Quebec City, Canada), pg. 332.

Conference / Presentations /Workshops

S. No.	Title of Lecture/ Paper	Invited Lecure/ Resource Person/Paper presented	Nature of Programme*	Details	Date of Presentation	Sponsoring Agency
1.	Adoption and Evolution of FOSS: Key Factors in the development of the Apache Web Server	Paper presented (oral) also published as full paper in the edited book "Recent advances in Mathematics, Statistics & Computer Science ISBN: 978-981-4696-16-6 (hard cover) 978-9814704-84-7(e-book)	International Conference on Recent Advances in Mathematics, Statistics and Computer Science Publisher: World Scientific Publishing Singapore. (2016)	ICRAMSCS-2015, CUSB, Patna , Bihar May 29-31, 2015	May 30, 2015	Central University of South Bihar, Patna, India
2.	Memory Effects in density dependent diffusion-reaction equation	Paper presented (oral)	International Conference on Recent Advances in Mathematics, Statistics and Computer Science	ICRAMSCS-2015, CUSB, Patna , Bihar May 29-31, 2015	May 31, 2015	Central University of South Bihar, Patna, India

3.	Unbalanced Magnetron Sputtered SnO ₂ and SnO ₂ - CuO thin films for trace level H ₂ S gas sensing	Paper presentation. Published as a full paper in edited Proceedings: ISBN:9789382062820 Excel India Publishers, New Delhi (2013)	27 th National Symposium on Plasma Science and Technology PLASMA-2012, December 10 - 13, 2012.	Organised by Plasma Science Society of India (PSSI) at Pondicherry University, Puducherry	December 11, 2012	PSSI and Pondicherry University, Puducherry
4.	Invited Talk on 'Initiative of AND College in promoting Open Source'	Presented talk (oral)/presentation	International Conference on Open Paradigms in Education: OPEN 2011	Organised at India International Centre, New Delhi	Jan 31- Feb 2, 2011	ANDC
5.	'MHD Waves and Instabilities in an Anisotropic Plasma Medium consisting of Ultrarelativistic and Nonrelativistic components in relative motion'	Presentation (Poster)	26 th National Symposium on Plasma Science & Technology- PLASMA -2011	Organised by Plasma Science Society of India (PSSI) at BIT Mesra_Patna Campus	December 20-23, 2011	PSSI and BIT Mesra-Patna Campus
6.	'Vigyan Siksha ke liye Misran Shikshan aur Anusandhan'	Paper presentation	Conference at IISER, Mohali	Annual National Conf. On 'Vigyan aur Vigyan Shiksha''	14 October 2019	Azim Premji University, Bengaluru and IISER, Mohali
7.	School Teachers'	Resource Person	School Teachers'	Vidya Bhawan	2 - 9, June, 2008	Vidya Bhawan

	Trainer Workshop		Trainer Workshop (FDP)	Education and Research Centre (VBERC)		Society, Udaipur
8.	WikiEd 2008 & WikiEd 2009	Resource Person	L4C (Learning for Content) Workshop (FDP)	Organised at ANDC	Oct 3, 4 & 6, 2008 and Jan 9, 10, 11 & 13, 2009	Commonwealth of Learning (COL), Vancouver, Canada and ANDC
9.	L4C (Learning for Content) Workshop	Resource Person	L4C 42 & L4C43 (parallel) Workshop (FDP)	Organised at UDSC, New Delhi	13 – 17 April, 2009	COL, ANDC and UDSC
10.	WikiEducator	Resource Person	Workshop at Uttarakhand Open University, Haldwani (FDP)	Organised at UOU, Haldwani	June 14-16, 2010	CEMCA-COL, ANDC and UOU, Haldwani
11.	WikiEducator	Resource Person	FDP at Central Institute of Education Technology, NCERT, New Delhi	Organised at CIET-NCERT, New Delhi	May 25-28, 2010	CIET-NCERT, ANDC and CEMCA-COL

Research Projects (Major Grants/Research Collaboration)

2015 – 2016: DU Innovation Project (ANDC-309): Leveraging Big Data for Astronomy and Health Care

Funds sanctioned: Rs. 5 lakhs, Joint-P. I

2013 – 2015: DU Innovation Project (ANDC-203): Astronomy using Archival Data

Funds sanctioned: Rs. 4.5 lakhs, Joint-P. I

2012 – 2013: DU Innovation Project (ANDC-102) : CO₂ Gas Sensing – an ICT based investigation for pollution control.

Funds sanctioned: Rs. 9 lakhs, Joint-P. I

Awards and Distinctions
Selected as an Indian delegate for the “ <i>China Innovation Tour for Indian Young Scientists</i> ” – a tour for Indian Scientists to various Universities/Research Institutions of China (cities of Kunming & Shanghai) to build mutual understanding and exchange ideas in interactive communication among Scientists of both countries. Accomplished this tour between 22-29 September 2019. The tour was sponsored by Ministry of Science and Technology of the People’s Republic of China.
Association With Professional Bodies
<ol style="list-style-type: none"> 1. Plasma Science Society of India (PSSI) – Life Member (since 2011) 2. Astronomical Society of India(ASI)
Other Activities
<ul style="list-style-type: none"> ➤ Member of the IQAC (Internal Quality Assurance Cell of the University of Delhi: AY 2022-21, 2021-22 and 2022-23 ➤ Member of the Editorial Board of the University of Delhi: AY 2022-21 and 2021-22 ➤ Member of the University of Delhi’s Special Task Force on Global Ranking ➤ Member Admission Committee of Foreign Students Registry: AY 2018-19 & 2019-20 ➤ Member of organising team of QUEST- Inter college Science competition of CSEC for many years.

Subhash Kumar

Signature of Faculty Member

- You are also requested to also give your complete resume as a DOC and PDF file to be attached as a link on your faculty page.