

Umang Kumar

Name of University: Ashoka University

Department: Department of Physics

Location: Sonapat,Haryana, (INDIA)

umang_ku@yahoo.co.in

umang.kumar_phd21@ashoka.edu.in

linkedin.com/in/umang240415/

Phone: +91 8588034291

Education	Ph.D, Cosmology Ashoka University (INDIA) Session 2021, Pursuing (Proposal Defended: September, 2023) General Relativity, Computational Physics, Modern Cosmology as Coursework
	M.Sc.(Hons.), Physics Lovely Professional University (INDIA) Session 2019-21, Completed with Above 80% Score Condensed Matter Physics as Specialisation Elective
	B.Tech, Electrical and Electronics Engineering SRM Institute of Science and Technology (INDIA) Session 2015-19, Awarded First Class with Distinction German as Special Elective
	Senior School Certificate Examination Central Board of Secondary Education (CBSE) (INDIA) Session 2013-15 Physics, Mathematics, Chemistry, English, Computer Science
	Secondary School Examination Central Board of Secondary Education (CBSE) (INDIA) Session 2011-13 Science, Mathematics, English, German
Publications	Schwarzschild Metric from Arbitrary Choice of Function Advanced Functional Materials and Devices, Springer (2022), 131-138
	An extensive analysis of Schwarzschild exterior solution Journal of High Energy Astrophysics, Elsevier (2022), Volume 36, 111-119
	Existence of Multiverse due to infinite possibilities International Journal of Pure and Applied Mathematics Volume 119 No. 12 (2018), 13211-13219
Projects	Constraining Neutron Star Equation of State Ph.D. Breadth Presentation Solutions to Einstein's Field Equations (Schwarzschild and Kerr) Master's Thesis
Achievements	International Astronomy and Astrophysics Competition (2020) Awarded "Bronze Honour", Certificate ID F-2020-E5EA59EDAF5
	International Youth Math Challenge (2020) Participated in the pre-final round, Certificate ID PF-2020-E8A04F89140
Skills	CosmoMC/Cobaya, CAMB, C++, Python, MATLAB, Mathematica, \LaTeX Networking, Linux SysAdmin

Certifications	Understanding Einstein: The Special Theory of Relativity Stanford University (Coursera)
	Quantum Mechanics University of Colorado (Coursera)
	Astro 101: Black Holes University of Alberta (Coursera)
	Astronomy: Exploring Time and Space University of Arizona (Coursera)
	Python for Everybody (Specialization) University of Michigan (Coursera)
	What is “the mind” and what is artificial intelligence? University of Colorado (Coursera)
Internships	Largest Cosmological Surveys and Big Data Science (2023) International Centre for Theoretical Sciences (ICTS), Bengaluru (INDIA)
	Introductory Summer School in Astronomy and Astrophysics (2020) IUCAA, Pune (INDIA)
	IIST Astronomy & Astrophysics School (2020) Indian Institute of Space Science and Technology, Trivandrum (INDIA)
Experience	Teaching Fellow for Astronomy Module: Lodha Genius Programme 2023
	Teaching Fellow for Electromagnetism in Light of Special Relativity 2022
	Teaching Fellow for Mathematical Physics-1 2022
	Teaching Fellow for Statistical Mechanics 2021
Languages	Hindi (native), English (fluent), German (basic)
Special Interests	Particle Physics
	Machine Learning and AI
	Data Analysis
	Tinkering with Computers and Devices
	Exploring The Unknowns - How Things Work like - Mind(Psychology), Brain(Neuroscience), Body(Physiology), Plants(Botany)