Umang Kumar

Name of University: Ashoka University

Department: Department of Physics
Location: Sonepat,Haryana, (INDIA)

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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, 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)