

## EDUCATION

Savitribai Phule Pune University <i>Master of Science in Physics</i>	Aug. 2021 – May. 2023 Pune, India
St. Xavier's College <i>Bachelor of Science in Physics</i>	May. 2018 – April. 2021 Ahmedabad, India

## RESEARCH EXPERIENCE

Studying the central region of Galaxy Clusters and their Morphological Study <i>Advisor: Dr. Viral Parekh</i>	Aug. 2023 - Present NRAO, USA
Cosmological Models in Modified Theory of Gravity with Observational Constraints <i>Advisors: Dr. Saibal Ray, Dr. Anil K. Yadav, Dr. Lokesh K. Sharma</i>	Jun. 2023 - Present Mathura, India
Extended X-Ray Jets in Radio-loud Quasars: A Morphological Study <i>Advisor: Dr. Vaidehi Paliya</i>	Aug. 2022 - May. 2023 IUCAA, India
Detecting and studying Vela Pulsar timing using Ooty Radio Telescope <i>Advisor: Prof. Avinash Deshpande</i>	Sep. 2022 - Dec. 2022 IUCAA, India
Methods of Increasing Efficiency of Solar Cells <i>Advisor: Dr. Sanjeev Gupta</i>	May. 2020 - April. 2021 St. Xavier's College, Ahmedabad

## PUBLICATIONS

A power law solution for FRLW Universe with observational Constraints <i>L. Sharma, S. Parekh, S. Maurya, K. Singh, S. Ray, et al.</i>	arXiv IJGMMP (under review)
Modified power law cosmology: theoretical scenarios and observational constraints <i>L. Sharma, S. Parekh, S. Ray, A. Yadav et al.</i>	arXiv MDPI (under review)
Constraining anisotropic universe under $f(R, T)$ theory of gravity <i>L. Sharma, S. Parekh, S. Ray, A. Yadav et al.</i>	arXiv JHEAP (under review)
A power law solution for Bianchi-I Universe with observational constraints <i>L. Sharma, S. Parekh, S. Ray, A. Yadav et al.</i>	arXiv IJGMMP (under review)
Generation of Bulk Viscous Cosmological Model in $f(R, T)$ Gravity & observational constraints <i>L. Sharma, S. Parekh, S. Ray, A. Yadav et al.</i>	arXiv PRD (under review)
Cosmological aspects of a hyperbolic solution in $f(R, T)$ theory of gravity & observational constraints <i>L. Sharma, S. Parekh, S. Ray, A. Yadav et al.</i>	arXiv PRD (under review)
Overcoming the hurdles in imparting Astronomy education in Schools <i>Vaibhav Trivedi, S. Parekh</i>	Publication Link IAU Proceedings
Innovative computational experiment on projectile motion <i>S. Parekh</i>	Publication link IAPT Publication

## TEACHING EXPERIENCE

Trainer for The International Astronomical Search Collaboration (IASC) <i>St. Xavier's College, Ahmedabad</i>	May. 2022 - Dec. 2022 Ahmedabad, India
Tutor: Introduction to Python and Simulations <i>Bajaj Science Education Center</i>	May. 2021 - June. 2021 Wardha, India

## WORKSHOPS / CONFERENCES / TALKS

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10 <sup>th</sup> International Conference on Gravitation and Cosmology (ICGC 2023)	Dec. 2023
<i>Invited to present my paper on Power Law solution for FRW Universe with Observational Constraints</i>	IIT Guwahati, India
4th Shaw-IAU Workshop on Astronomy for Education	Nov. 2022
<i>Invited to present my paper on Overcoming the hurdles in imparting Astronomy Education in Schools</i>	Virtual
Talk and Debate on opportunities for students and Indian Space missions	Nov. 2022
<i>News Channels: Sandesh News, ETV, TV9, VTV, ABP Asmita</i>	Virtual
Meerkat Pulsar Timing Student Workshop by SARA0, South Africa	Sep. 2021
<i>Hands-on workshop with measuring the relativistic time delay</i>	SARA0, South Africa
2021 African Radio Interferometry Winter School	Jun. 2021
<i>Flagging, calibration, and imaging of continuum and spectral line data and time-domain pulsar science</i>	SARA0, South Africa
Introductory Summer School in Astronomy and Astrophysics (ISSAA)	May 2021
<i>Introduction to Astronomy, Hands-on Pulsar timing array, General Relativity and Cosmology</i>	IUCAA, Pune
34 <sup>th</sup> IAPT National Convention	Oct. 2019
<i>Invited to present my innovative work on <a href="#">Understanding Projectile Motion in an Interactive Manner</a></i>	IIIT Allahabad, India

## ACHIEVEMENTS

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Earned a Gold Medal for excellence in research for Bachelor's thesis at St. Xavier's College, Ahmedabad (2021)

Honoured as Citizen Scientist by NASA for the discovery of the 2020 HS24 asteroid in the [IASC campaign](#) (2020)

Received a Certificate of Excellence in National Anveshika Experimental Skill Test ([NAEST](#)) (2020)

Earned Gold Honour in the International Astronomy and Astrophysics Competition ([IAAC](#)) 2020

Winner of National Competition for Innovation in Computational Physics ([NCICP](#)) 2019

Winner of State Level Competition for Innovation in Computational Physics held in Gujarat sector (2019)

## LEADERSHIP AND COMMUNITY OUTREACH

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Founder and Team Lead of Astronomica: Astronomy Club of St. Xavier's College, Ahmedabad (2019 - 21)

Co-ordinated and organized astronomy outreach events in local schools/colleges (2020)

Co-founder and Editor of Infinoscope Magazine, an initiative to popularize STEM (2019 - 22)

Member and Educator at Universe Science Forum (USF), conducting local school outreach (2019 - 21)

Writer at Volume Stories for Space and Beyond carousel Blog (2021 - 22)

Volunteer at the National Science Day event organized by the Institute of Plasma Research (2020)

## SKILLS

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Programming: Python | Fortran | MATLAB | Mathematica | R

Modules: CIAO | CASA | Scipy | Astropy | DS9

Markup:  $\text{\LaTeX}$  | HTML | CSS

Designing: Canva | Adobe Premiere Pro

Language Proficiency: Gujarati | Hindi | English

Designing: Canva | Adobe Premiere Pro