# Ganesh Pawar

+917588311820 | pawarganesh1076@gmail.com | https://ganesh1076.github.io

## Education

**Department of Physics, University of Mumbai, India** CGPA 7.63/10
*Master of Science, Physics* *Aug. 2018 – Oct. 2020*

**K. J. Somaiya College of Science and Commerce, Mumbai, India** CGPA 5.58/7
*Bachelor of Science, Physics* *Jul. 2015 – May 2018*

## Research Experience

**i. Stellar activity of 'B, A and F' type stars.** Present
*ARIES, Nainital, India*

- TESS Lightcurve Data is used to generate clean lightcurves with 5-sigma clipping to remove the jumps and outliers and the LombScargle algorithm were used to find the dominating pulsating frequencies.
- I have reduced the spectroscopic data taken from 2.0-m IUCAA Girawali Observatory by writing a python script to study variations in Equivalent Widths and I am using synthetic spectrum to find projected rotational velocity.

**ii. Observation of Stellar occultations by an Asteroid.** 2019-2020
*Akashmitra Mandal, Kalyan, India*

*As a part of the team, I have observed and reduced the lightcurves of 15 Stellar occultations out of which, 9 events were positive and 6 were negative.*

**iii. DSLR photometry of a $\delta$ Scuti variable star.** 2017
*Akashmitra Mandal, Kalyan, India*

*A High Amplitude $\delta$ Scuti star, AD CMi was observed for 3 hours using 20 cm aperture reflector telescope and with a standard Canon DSLR camera.*

## M.Sc. Project

**X-Ray study of Active Galactic Nuclei.** August, 2019 – August, 2020
*Department of Physics, University of Mumbai*

- We have surveyed the available data for AGN of various classes from Chandra Data Archive.
- The corresponding X-ray data from the Chandra Data Archive was obtained and the X-ray spectra were extracted and preprocessed using Chandra Interactive Analysis of Observations (CIAO) which has also integrated by writing a BASH script to do the task in one go, corrected it for red-shift by writing python scripts.
- We found some common features which are quite easily visible from the spectrum and studied atomic radiative and collisional processes which leads to emission of X-rays in astrophysical sources.

## Publications

**Pluto's atmosphere in plateau phase since 2015 from a stellar occultation at Devasthal**
*Sicardy, B., Ashok, N. M., Tej, A.,* ***Pawar, G.,*** *et al.,* ***ApJL,*** *under review.*

***LAMOST J045019.27 + 394758.7*: A suspected C star that shows characteristics of a normal giant**
*Purandardas, M., Goswami, A., Sonamben, M.,* ***Pawar, G.,*** *et al.,* ***MNRAS,*** *under revision.*

**Measurements of 60 Double Star Systems Using a Small Telescope and Four Different Methods**
*Deshmukh, S., Deshpande, A.,* ***Pawar, G.,*** *et al. 2019,* ***Journal of Double Star Observations,*** *15, 1, p. 193.*

## Appointments

**Visiting Project Student** Feb. 2021 – Present
*Aryabhatta Research Institute of observational sciencES (ARIES)*

## Observing Runs

**Rotational state of the elusive Lucy targets**, 2-m Himalayan Chandra Telescope (HCT), cycle: HCT-2020-C3, as Co-I. PI: Prof. N. M. Ashok.

**Stellar occultations by Dwarf Planets, TNOs and Centaurs**, 3.6-m Devasthal Optical Telescope (DOT), cycle: DOT-2020-C2, as Co-I. PI: Prof. N. M. Ashok.

**Stellar occultations by Pluto**, 3.6-m DOT, 1.3-m Devasthal Fast Optical Telescope & 2-m HCT, cycle: Director's Discretionary Time-2020, as Co-I. PI: Prof. N. M. Ashok.

## Workshops/Schools

**Heidelberg Summer School 2021** — September 13-17, 2021
*Stellar Ecosystems* — *IMPRS-HD*

**TESS Science Conference-II** — August 2-6, 2021
*MIT*

**PHysics Of Eclipsing BinariEs Virtual Workshop** — June, 2021
*PHOEBE*

**AAVSO Spectroscopy Workshop** — November 6-8, 2020
*American Association of Variable Star Observers(AAVSO)*

**Regional Astronomy Meeting-VI** — July 9-10, 2020
*Research in Astronomy: Opportunities and Challenges* — *IUCAA*

**Carolyn Hurless Online Institute for Continuing Education(CHOICE) Course** — June, 2020
*How to use VStar* — *AAVSO*

**CHOICE Course** — May, 2020
*Exoplanet Observing* — *AAVSO*

**Gravitational-Wave Open Data Workshop 3** — May 26-28, 2020
*Gravitational Wave Open Science Center(GWOSC)*

**ARIES Training School in Observational Astronomy(ATSOA)** — March, 2019
***Project title**: Differential photometry of the Narrow line Seyfert-I galaxy 1H 0323+342.* — *ARIES, Nainital, India*

**IAPT Summer School** — April, 2017
*Theoretical Physics* — *IAPT*

**Certificate Course** — 2015
*Astronomy and Astrophysics* — *Centre for Extra-Mural Studies, University of Mumbai*

## Technical Skills

**Languages**: Python and C++.
**Operating System**: Linux (CentOS, Fedora & Ubuntu) and Windows.
**Plotting Software**: GNUPlot and OriginLab.
**Image Overlay software**: Aladin, Limovie and SAO Image DS9.
**Data reduction software**: AstroImageJ, CIAO, IRAF, IRIS, iSpec, PYOTE, TOPCAT and VStar.
**Libraries**: astropy, astroquery, matplotlib, numpy, and pandas.
**Other**: LaTeX and Microsoft Office.

## Extra-curricular activities

**Asteroid Search Campaign by IASC**: Participated in an asteroid search campaign held by International Astronomical Search Collaboration, 2020.

**Volunteer for CERN at Vigyan Samagam**: Volunteered for the CERN exhibits during the Vigyan Samagam mega science exhibition in Mumbai, 2019.

**Hobbies and Activities**: Watching Sci-Fi movies, reading science blogs, travelling, trekking, playing football and member of AkashMitra Mandal, Kalyan (Amateur Astronomers' Organization).