



EXOPLANETS

A SHORT COURSE ON PLANETS ORBITING STARS OTHER THAN THE SUN.

The course will be conducted online in three parts and will cover important topics related to exoplanet studies including characterisation, atmospheres and habitability, missions, and instrumentation.

Part 1

- **Stars and Binary systems:**
Basic astronomy and astrophysics relevant to exoplanet studies
- **Exoplanet Detection:**
History of exoplanet detection, radial velocity, transits, microlensing, direct imaging, astrometry, statistics

Part 2

- **Exoplanet Characterization:**
Atmospheres, demographics, Architectures, dynamics, multi-planet/star systems, planet formation, brown dwarfs, hot Jupiter atmospheres
- **Exoplanets atmosphere and habitability:**
Solar system planets, Earth climate & weather, Habitable zone, energy balance, climate models, exoplanet atmospheric characterization and observables, interiors, biosignatures.
- **Exoplanets Missions:**
(HST, Spitzer, Kepler, TESS, CoRoT, JWST, Roman, Ariel, PLATO, LUVOIR, LIFE)
- **Exoplanets instrumentation:**
Transits, direct imaging, micro lensing

Part 3

This will consist of a series of seminars by experts on various topics on exoplanets

Eligibility:

The course is intended for Ph.D. students, young researchers, and faculty. Exceptionally motivated post-graduate students may be considered.

Duration:

- Course starts in February 2023
- About 15 sessions covering Parts 1 and 2
- Part 3 will be seminars will be delivered over a period of time following the first two parts
- Detailed schedule will be shared later with confirmed participants
- Lectures will be online on zoom platform

Registration fees: 2000 INR

To confirm your application please fill the registration form before 20th January 2023:
<https://forms.gle/YsdCRbQi3KGnkYXJ7>



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Profiles of the speakers



Dr. Abhijit Chakraborty

Affiliation: Physical Research Laboratory, Gujarat, India

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Prof. Ajit Kembhavi

Affiliation: Inter University Center for Astronomy Astrophysics, Pune Knowledge Cluster, Pune, India

Profile Link: <https://www.pkc.org.in/about-pkc/meet-our-team/prof-ajit-kembhavi/>



Dr. Jacob Haqq-Misra

Affiliation: Blue Marble Space Institute of Science (BMSIS)
Clayton, Delaware, United States

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Dr. Jayesh Goyal

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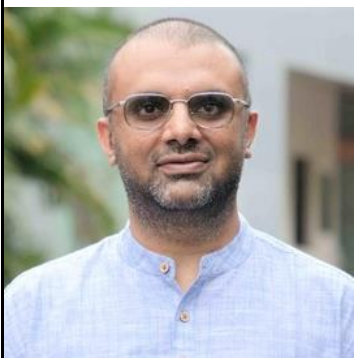
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Dr. Joe P Ninan

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Dr. Joy Monteiro

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Dr. Manoj Puravankara

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Dr. Prabal Saxena

Affiliation: NASA Goddard Space Flight Center, Greenbelt, Maryland, United States

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Dr. Ravi Kopparapu

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Dr. Sourav Chatterjee

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Dr. Sudha Rajamani

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Dr. Sujan Sengupta

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