Royal Astronomical Society

Professor Shrinivas Kulkarni – Gold Medal (A)

Professor Shrinivas (Shri) Kulkarni has made sustained, innovative and ground-breaking contributions to multi-wavelength transient astrophysics. He has made field-defining discoveries in time-domain astronomy, spanning milli-second pulsars, gamma-ray bursts and supernovae.

He instigated and led the Palomar Transient Factory, a truly innovative time-domain project which led to the discovery of superluminous supernovae, transients with intermediate luminosities between classical novae and supernovae, plus tidal disruption events in galactic nuclei. He led the successor project, the Zwicky Transient Facility, which is pioneering techniques required to exploit the upcoming Rubin Observatory.

Professor Kulkarni has also been highly influential in the field of high energy transients, having demonstrated that gamma-ray bursts were cosmological in origin, identified the neutron star origin of short gamma-ray bursts, discovered the first millisecond pulsar, and showed that some fast radio bursts arise from highly magnetized neutron stars. He has also been instrumental in the development of upcoming ultraviolet space missions ULTRASAT and UVEX.

Professor Kulkarni has mentored dozens of students and postdocs, who have gone into successful careers in science, technology or engineering.

His achievements have previously been recognised by election as a Fellow of the Royal Society, US National Academy of Sciences and receiving the 2024 Shaw Prize in Astronomy.

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