PRESS RELEASE
Indian Institute of Astrophysics
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The Prof. Peraiah Foundation Award for 2021 goes to Dr. Shravan Hanasoge of TIFR, Mumbai

We are very happy to announce that Dr. Shravan Hanasoge, associate professor in the Department of Astronomy and Astrophysics at the Tata Institute of Fundamental Research has been chosen as the recipient of the Prof. Peraiah Foundation Award for 2021. This award, instituted by the Prof. Peraiah Foundation, and administered by the Indian Institute of Astrophysics (IIA, Bengaluru), is meant to recognise outstanding work in the field of Theoretical Astrophysics and is awarded every two years. The nominees have to be scientists working in India who are below 60 years of age. The award consists of a cash prize of Rs 1 lakh, a citation, and an invitation to deliver a special lecture at IIA.

The award for 2021 is given to Dr Hanasoge in recognitions of his contributions to the understanding of convection and rotation in the Sun and stars.

More on Dr. Hanasoge
Dr Hanasoge completed his B.Tech from IIT Madras in 2002, following which, he did his Masters and Ph.D. from Stanford University in USA. Following a joint postdoctoral fellowship between Max-Planck Institute for Solar System Research in Germany and Princeton University USA, he joined Tata Institute of Fundamental Research, Mumbai, in 2013 as a faculty member.

Shravan Hanasoge and his group work on imaging the internal structure of the Sun, stars and Earth using computational, theoretical and data-analysis techniques. His primary focus areas are the development and refinement of methods of seismology, and the application of machine learning, to enable the discovery of solar and stellar physics.

Using novel techniques of seismology, Hanasoge inferred that motions associated with convection in the Sun are more than ten times smaller than expected, an influential result that has come to be termed the "convective conundrum". Hanasoge was also part of an important study, the first of its kind, to measure the details of rotational shear in distant stars that are similar to our Sun, a result that aids our understanding of the relationship between convection and rotation in the Sun and stars.

Dr Hanasoge has won the Cray's APJ Abdul Kalam High Performance Computing award and the Max-Planck Partner Group award among others.

“It is an honour to be awarded the Peraiah Foundation prize. This award motivates me and my group to continue our work on these exciting areas in helio- and asteroseismology”, said Dr. Hanasoge.

Helio- and asteroseismology

Seismology is the science of making quantitative inferences of the hidden interior structure of an object using measurements of its surface motions. The Sun and stars are vibrating balls of gas, and we observe and measure their oscillations at their surfaces, allowing us to probe their interior structure and dynamics. High-quality observations of the Sun, which have been taken nearly continuously for many decades, and sensitive space-based measurements of the scintillations of distant stars make detailed and careful studies of solar and stellar interiors possible.

Prof Peraiah Foundation

Prof. Peraiah Foundation is a non-profit organization dedicated to promote and encourage research in Theoretical Astrophysics in particular within India, and has an MoU with IIA, Bengaluru for organizing the award related matters. The foundation was set up in the memory of Prof. Annamaneni Peraiah, a world renowned theoretical astrophysicist, who retired from IIA in 1997. He was well known for his work on radiative transfer, especially in stellar atmospheres, and had developed solutions for the propagation of light in numerous astrophysical contexts.

The Indian Institute of Astrophysics congratulates Dr Shravan Hanasoge for being selected as the recipient of this award for 2021.

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