

Jeremiah Horrocks Public Lecture Series

Asteroseismology: The Real Music of the Spheres

Professor Donald Kurtz

Tuesday 14 March, 6.30-8.30pm | Darwin Lecture Theatre

University of Central Lancashire | Free admission



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Two thousand five hundred years ago Pythagoras and his followers believed in a harmony of the heavens: The Music of the Spheres. In just the last few decades we have discovered that there is a real Music of the Spheres. Sounds and other vibrations within the stars allow us literally to see to their very cores using the new techniques of asteroseismology. We are in a time of unprecedented advances in our understanding of stellar astrophysics using data from space missions. These have improved our ability to see pulsations and variability in stars by 100 to 1000 times compared with ground-based telescopes. Astrophysics that used to be purely theoretical is now also observational. This talk will introduce the concepts of asteroseismology, show its relation to music, and present a selection of the latest exciting observational results.



Bio: Don Kurtz was born in San Diego, California, to an American father and Canadian mother. He obtained his PhD in astronomy from the University of Texas at Austin in 1976, then spent 24 years in South Africa at the University of Cape Town, where he was Professor and Life Fellow. He then moved in 2000 to the University of Central Lancashire, where he was Professor of Astrophysics for 20 years. Don has dual

British and American citizenship and is now Professor Emeritus of Astrophysics at the University of Central Lancashire, Extraordinary Professor at North-West University in South Africa, and Visiting Professor at the University of Lincoln. He holds an A-1 research rating from the South African National Research Foundation, its highest rating. He is a past councillor and vice-president of the Royal Astronomical Society, and was awarded the Society's 2022 Service Award for a lifetime of service and outreach. He is frequently invited to speak internationally to both professional astronomers and to the public. Don has observed with some of the largest telescopes in the world, and now works primarily with data from the Space Missions Kepler and TESS. He has over 500 professional publications and is the discoverer of a class of pulsating, magnetic stars that are the most peculiar stars known. He is co-author of the fundamental textbook "Asteroseismology", and author of a major review in 2022 of Asteroseismology in the journal Annual Reviews of Astronomy and Astrophysics. He is an outdoorsman and has travelled widely. Don enthusiastically gives many public lectures per year to diverse audiences all over the world on a wide range of topics. He has appeared in prime time on the BBC's "Stargazing Live" with Dara O'Briain, on the BBC One Show, and on the "Sky at Night" with Patrick Moore.



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