

PUBLIC TALK

Asteroseismology: The Real Music of the Spheres

Prof Donald Kurtz (North-West University)

DATE: Wednesday, 15 July 2026 | 18h00–19h00 SAST

VENUES:

- Road House Cinema, Stellenbosch University
- Online

--- A recording of the talk will be published on the NITheCS YouTube channel afterwards ---

ABSTRACT

Some 2,500 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 1,000 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.

BIOGRAPHY

Don Kurtz was born in San Diego in the USA. He obtained his PhD in astronomy from the University of Texas at Austin in 1976, then spent 24 years at the University of Cape Town, where he was Professor and Life Fellow. In 2000 he moved to the University of Central Lancashire, serving as Professor of Astrophysics for 20 years.

Holding dual British and American citizenship, Don is an Extraordinary Professor at North-West University, Professor Emeritus of Astrophysics at the University of Lancashire, and Visiting Professor at the University of Lincoln. He holds an A-1 research rating from the South African NRF, its highest rating.

He is a past councillor and vice-president of the Royal Astronomical Society and received its 2022 Service Award for a lifetime of service and outreach. He is frequently invited to speak internationally to both professional and public audiences.

Don has observed with some of the world's largest telescopes and now works primarily with data from the Kepler and TESS space missions. He has over 540 professional publications and is the discoverer of a class of pulsating, magnetic stars among the most peculiar known. He is co-author of the fundamental textbook *Asteroseismology* and authored a major review of it in 2022 in *Annual Reviews of Astronomy and Astrophysics*.

He is an outdoorsman, has travelled widely and delivered many public lectures around the world. He has appeared on BBC programmes including *Stargazing Live* with Dara O'Briain, *The One Show*, and *The Sky at Night* with Patrick Moore.



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