TECHNISCHE UNIVERSITÄT DRESDEN

Faculty of Physics

PHYSICS COLLOQUIUM

Speaker: **Prof. Michael Kramer**
Max-Planck-Institut für Radioastronomie,
DZA,
University of Manchester

Topic: **The hum of space-time - A new window on Einstein's universe**

Time and place: Tuesday, July 16, 2024, **2:50 pm** – hybrid event
The colloquium will be held in REC/C213.
Online participation possible:
Zoom-Meeting: Meeting-ID: 631 3817 8900 / passcode: PC-SoSe24
https://tu-dresden.zoom-x.de/j/63138178900?pwd=am9nSzYyeUh3SWxMdnNBWkpUaXl5UT09

Host: Prof. Günther Hasinger

Abstract: Pulsars, the natural beacons of the universe, put physics to extreme test. As neutron stars, they are not only the densest objects in the observable universe, but they also serve as high-precision laboratories for testing the general theory of relativity. Pulsars not only allow the observation of predicted effects that cannot be observed by other methods, but they provide also extremely precise tests of the properties of gravitational waves. The latest results even use pulsars as galactic gravitational wave detectors, which detect a continuous "hum" of space-time. This buzz is, most likely, caused by the merging of supermassive black holes in the early universe. The talk gives an overview of the fascination of Einstein's universe and how it can be explored with the help of pulsars.

Bio: Michael Kramer graduated Physics in Cologne and Bonn, and obtained a PhD at the University of Bonn in 1995. He was a staff astronomer at MPIfR (1996-1998), a Max-Planck Otto-Hahn fellow at the University of California at Berkeley (1998-1999), Lecturer (1999-2003), Senior Lecturer (2003-2005), Reader (2005-2006) and since 2006 Professor at the University of Manchester. From 2007 to 2009 he was Associate Director of Jodrell Bank Observatory before being appointed as Director at the MPIfR in Bonn in 2009. He won a number of awards, was a member of the ERC Scientific Council, President of the German Astronomical Society, and is a founding member of the DZA.

Get-Together:

The colloquium will be followed directly by a Get-Together with Prof. Michael Kramer in REC/B101 (around 4:00 p.m.). All students and staff are invited to talk to the speaker and discuss perspectives on the academic career, work-life balance and the professional life as a scientist.