UNIKASSEL VERSITÄT

Physikalisches Kolloquium

Thursday, 22.10.2026, 16:15, HS 100
Reception with coffee & cookies 16:00
(For university staff: please bring your own cup for sustainability reasons)

Prof. Dr. Jan Forbrich, European Space Agency (ESA)
and University of Hertfordshire, UK:

From Molecular Clouds to Young Suns: Exploring the Origins of Stars and Planets with Radio Astronomy

Abstract

How do molecular clouds give rise to stars and planetary systems, and how do young stars shape the environments in which planets form? In this talk I will use new radio-astronomical capabilities to address these questions across a wide range of scales. I will begin with studies of molecular clouds in the Andromeda Galaxy (M31), where simultaneous observations of dust and gas at ~10 pc resolution reveal the conditions associated with star formation across an entire spiral galaxy. I will then move to the Orion Nebula Cluster, where recent advances in very-long-baseline radio interferometry allow us to study the magnetic activity, high-energy environments, and motions of many young stars simultaneously. Finally, I will discuss the synergy between VLBI and ESA's Gaia mission, and the new opportunities that Gaia DR4 will provide for understanding young stellar populations and their evolution.

All of you interested in physics are cordially invited!

Contact: Prof. Dr. Jochen Mikosch, Structural Molecular Dynamics

For more Information: