

# ASTROPHYSIK MIT SCHWERPUNKT ASTEROSEISMOLOGIE (§ 99 Abs.4 UG)

Montag, den 24. Juni 2024 – 14:00 Uhr

Konstanze Zwintz

Hörsaal  
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Forschungsvortrag und Diskussion:

*“The early lives of pulsating stars”*

*Stars have been born countless times in our Universe in the past through the collapse of molecular clouds; star formation is still going on today. Stellar evolution strongly depends on the properties that the stars are imbued with at birth - such as initial mass, chemical composition and angular momentum. During the star formation process, planetary systems are formed, connecting the dynamical evolution and chemistry of young planets with their host stars. This illustrates why understanding the physics of early stellar evolution is essential.*

*Our general concept of how stars and planets form and pass through their early stages lacks important physical ingredients that are either not well understood or not taken into account properly in our models. Some of the currently open questions in early stellar evolution include the imprint that accretion processes leave on the stellar structure over a wide range of masses, the search for "the young Sun", or the calibration of the lifetimes and ages of young stars. Studying the oscillations in young, so-called pre-main sequence stars has the potential to address these questions and to yield improved input physics for our theoretical models. I will introduce the method of asteroseismology and its application to young stars and illustrate the potential and challenges of this research field.*