

# Colloquium

**SFB 956**

Conditions and Impact of Star Formation

**02 December 2019**

Monday 3:00 pm

**Physikalische Institute Köln**

Lecture Hall III

Zùlpicher StraÙe 77 | 50937 Köln

**Annie Hughes**

Institut de Recherche en Astrophysique et Planetologie (IRAP), France

## **PHANGS: Star Formation, Feedback and Chemical Enrichment in Nearby Galaxies**

The Physics at High Angular resolution in Nearby Galaxies (PHANGS) project is pursuing three major observing programmes with ALMA, VLT/MUSE and the HST in order to study the interplay of the small-scale physics of gas and star formation with galactic structure and galaxy evolution across a representative sample of star-forming main sequence galaxies in the local Universe ( $d < 20$  Mpc). With observations at high angular resolution ( $< 100$  pc), the PHANGS legacy datasets provide a detailed, panchromatic view of ionised gas, stellar light and the cold molecular gas in nearby galaxies and enable statistical studies of star formation, feedback and chemical enrichment across different galaxy environments. In this talk, I will give an overview of the PHANGS project, and highlight our latest results for the physical conditions in the molecular gas reservoir, the timescales of star formation activity and chemical enrichment in PHANGS galaxies.