

**FAKULTÄT für PHYSIK
LUDWIG-MAXIMILIANS-UNIVERSITÄT
MÜNCHEN/GARCHING**

**PHYSIK-DEPARTMENT
TECHNISCHE UNIVERSITÄT MÜNCHEN
MÜNCHEN/GARCHING**

Garching Maier-Leibnitz-Kolloquium

Donnerstag, 17.11.2022, 16¹⁵ Uhr

Hörsaal der LMU in Garching, Am Coulombwall 1
Treffen zum gemeinsamen Kaffee 16 Uhr

Prof. Dr. Dominik Kraus
(Universität Rostock)

Extreme Experiments - Investigating Planets and Stars in the Laboratory

The interiors of planets and stars exhibit extreme conditions: High temperatures and enormous pressures create environments which are not fully understood and hard to encompass for state-of-the-art physics models. Applying the largest and most brilliant laser light sources, it is now possible to investigate such conditions in the laboratory. Recent efforts provide seminal insights into chemistry and phase transitions occurring deep inside giant planets and elucidate the electronic structure of elements in the interiors of brown dwarfs and stars. At the same time, highly interesting materials can be formed via these conditions. Finally, the applied methods also allow for testing the response of materials at extreme conditions and ultrafast timescales. I will present a showcase of recent experiments investigating these topics and provide an outlook for future developments.

Hybrid online access via ZOOM:

<https://lmu-munich.zoom.us/j/98457332925?pwd=TWc3V1JkSHpyOTBPQVlMelhuNnZ1dz09>

Meeting ID: 984 5733 2925

Passcode: 979953

gez. Peter Thirolf
Tel. 289-14064

gez. Norbert Kaiser
Tel. 289-12367