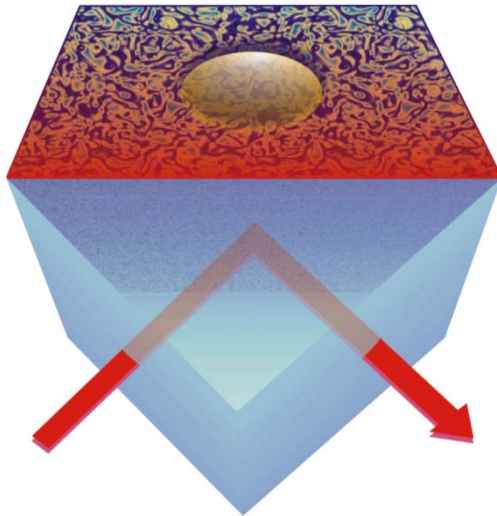


Physikalisches Kolloquium

Di 03.07.18
15:15 Uhr
14:45 Uhr, Kaffee/Tee
R 513



Prof. Dr. Siegfried Dietrich
MPI Stuttgart



Critical Casimir Forces

Long-ranged correlations in a fluid near its critical point lead to clearly identifiable effective forces acting on confining walls. The corresponding universal scaling functions are discussed for various boundary conditions and geometries. The theoretical predictions are compared with high precision experimental data for He^4 and He^3/He^4 wetting films near the superfluid phase transition as well as with synchrotron scattering data from classical binary liquid mixtures. Direct measurements and applications for colloidal suspensions are discussed in detail.