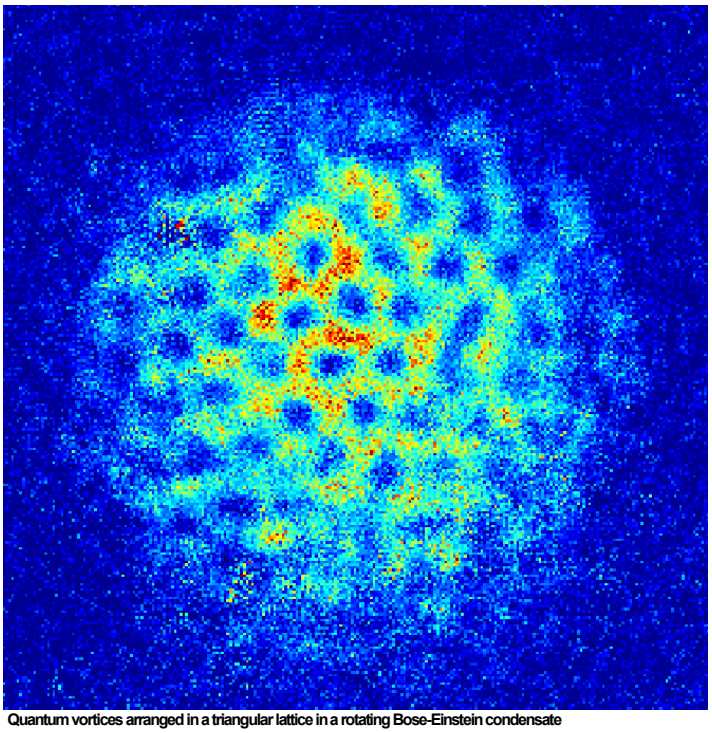
Physikalisches Institut
Fakultät für Mathematik und Physik
Albert-Ludwigs-Universität Freiburg

PHYSIKALISCHES KOLLOQUIUM

AM 12. JANUAR 2026 UM 16 UHR C.T.
IM GROßEN HÖRSAAL



Quantum vortices arranged in a triangular lattice in a rotating Bose-Einstein condensate

BOSE-EINSTEIN CONDENSATES: FOCUS ON SUPERFLUID DYNAMICS

HÉLÈNE PERRIN
UNIVERSITY PARIS

Quantum gases offer an exquisite playground for the study of superfluid dynamics: they can be easily manipulated, confined in arbitrary potential landscape, and imaged efficiently. In this talk, I will introduce Bose-Einstein condensates and explain their superfluid behavior. I will then present some examples of experiments where a quantum gas is restricted to evolve on the surface of an immaterial shell. I will discuss the fate of the gas as it rotates fast at the bottom of the shell, as well as tentatives to fill the shell with atoms to get a full bubble of superfluid.