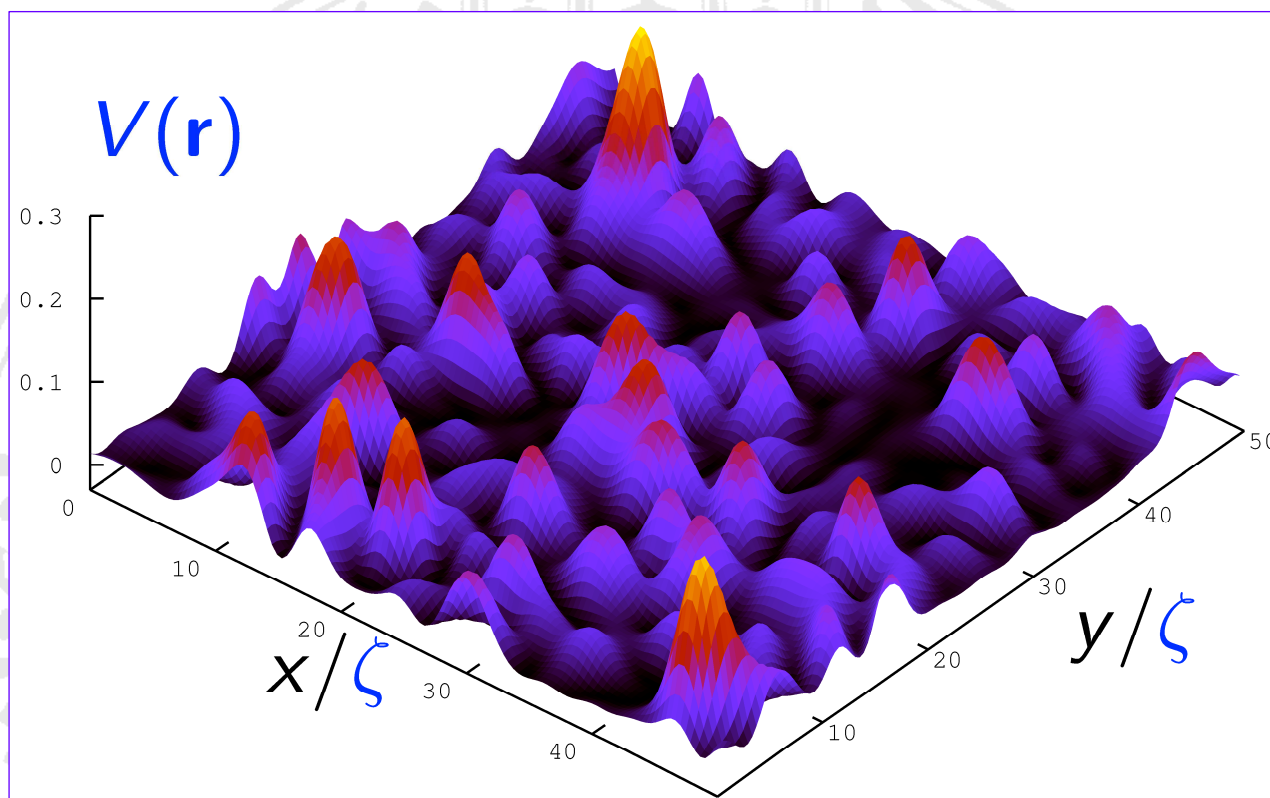


# PHYSIKALISCHES KOLLOQUIUM

AM 17. JUNI 2013 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



## THROUGH MOUNTAINS HIGH AND VALLEYS LOW – ULTRACOLD ATOM DYNAMICS IN RANDOM POTENTIALS

PROF. DR. CORD MÜLLER

UNIVERSITÄT KONSTANZ

A fine understanding of phase-coherent transport in random potentials is of vital importance for comprehending the properties of complex physical systems, ranging from electrons in semiconductors to excitations in biomolecules.

This talk will highlight recent progress, both theoretical and experimental, in tracking the coherent expansion dynamics of ultracold matter waves in disordered optical potentials. Specifically, I will present fairly recent experimental results on coherent backscattering in bulk randomness and discuss a newly found signature of phase-coherent Anderson localization in strong disorder, where transport comes to a complete stop.