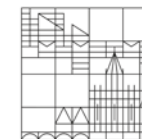


SFB 767

# Colloquium

Universität  
Konstanz



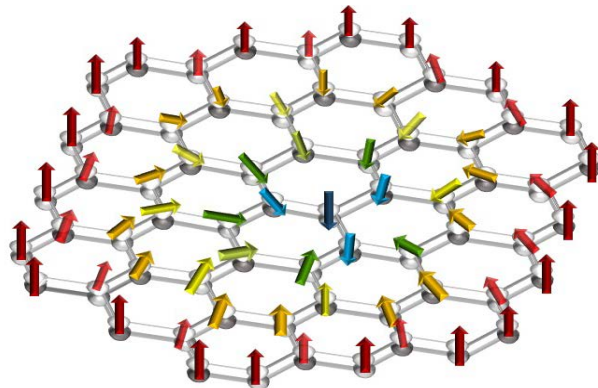
Thu 12 July 2018  
Coffee and tea 15:15  
Talk 15:30  
P 603



**Prof. Dr. Alexei Kolezhuk**

Taras Shevchenko National University of Kyiv  
and Institute of Magnetism, NAS of Ukraine

## Stabilization of magnetic skyrmions by RKKY interactions



We propose a novel mechanism of stabilizing skyrmions in a magnetic monolayer by placing the system on a conducting substrate (normal metal or graphene) which makes the spins interact via the long-range Ruderman-Kittel-Kasuya-Yosida (RKKY) exchange. It is shown that for a metallic substrate skyrmions can be stabilized by fine-tuning the Fermi surface parameters, while for a graphene substrate the stabilization occurs naturally in several geometries.

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