KIDS TALK

“Understanding Topological Insulators: from ultra cold quantum gases to solids”

Speaker: Fabian Grusdt, AG Fleischhauer

Abstract: Until recently, phases of matter were characterized solely by their symmetries – following Landau and Ginzburg. Since 1980 the Quantum Hall effect was known as a stand-alone counter example which did not fit into this classifcation scheme. In 2005, however, a much larger class of states – so-called topological insulators (TIs) – was discovered, which are characterized by integerquantized topological invariants. Since then, this new phase of matter has been intensely investigated and also realized experimentally.
In this talk I give an introduction to the topic of TIs and their realization in solidstate physics as well as cold atomic experiments. I will show that both systems contribute to our current understanding of TIs: While solids are best suited for observations of their unique edge physics, cold atom setups allow unprecedented insights into their bulk properties.

When: Friday, Apr 25th 2014, **10:00 am**

Where: Room 46-387/388

All undergraduate and graduate students as well as postdocs are welcome and encouraged to join our discussion!

For subscription to kids talk mailing list, questions, comments or suggestions: vlauer@rhrk.uni-kl.de

********** COFFEE, TEA AND COOKIES WILL BE SERVED **********

MATERIALS IN MAINZ SCIENCE

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