

THEORIEKOLLOQUIUM

Freitag, den 24.11.2017 um 12:00 Uhr in MC 351

Professor Dr. Mariusz Gajda

Polish Academy of Sciences, Warsaw

Studying correlated systems with ultracold atoms

Experimental achievements in cooling and manipulating ultracold atoms introduced atomic physics into the world of many-body correlated systems – the domain of condensed matter physics. With optical lattices mimicking crystalline structures, and atoms substituting for electrons, such ultracold systems became a very universal playground for studying a variety of many-body effects. Precise control of many essential parameters and the possibility of a direct observation are the important advantages of atomic systems. In my talk I will concentrate on some aspects of ultracold atoms physics starting with exotic phases in optical lattices, discussing results of single shot images of quantum many-body systems and describing the recent discovery of liquid atomic droplets.

Kontakt: Prof. Dr. Jürgen König, koenig@thp.uni-due.de