

POZVÁNKA

na seminář oddělení 15 Fyzikálního ústavu AV ČR, v.v.i.

Seminář se koná

ve čtvrtek 4. dubna 2013 v 11:00

v zasedací místnosti budovy A Fyzikálního ústavu, Cukrovarnická 10,
Praha 6.

Na programu je přednáška

Super Efimov effect

kterou prosloví

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Abstrakt

Three-body problems are notoriously difficult to solve both in classical and quantum physics. More than four decades ago Vitaly Efimov found a surprisingly simple solution of a quantum mechanical problem of three resonantly interacting non-relativistic bosons. He discovered an infinite tower of geometrically spaced three-body bound states arising at the two-body resonance. Only recently, the advent of beautiful experiments with ultracold atoms allowed us to see the signatures of the Efimov effect experimentally. It turns out that in two spatial dimensions resonantly interacting non-relativistic fermions form few-body bound states similar to the ones predicted by Efimov. I will explain how this super Efimov effect can be derived from the renormalization group calculation and describe its possible implications for the many-body physics of topological chiral superfluids.