

# SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **czwartek**

**21 marca 2019 r., o godz.10:00**

w sali 203 (bud. 1) odbędzie się seminarium, na którym

**Prof. dr hab. Maciej Maśka**

*Zakład Fizyki Teoretycznej w Instytut Fizyki im. Augusta Chełkowskiego,  
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wyłosi referat na temat:

**„ Stany Majorany w ciałach stałych”**

Majorana fermions (particles that are their own anti-particles) have been proposed in 1937, but thus far they remain unobserved in the realm of elementary particles. Recently, the search has turned to condensed matter systems in which they can be constructed out of electron and hole excitations. In this case much of the focus has been on the idea of "Majorana zero-modes" appearing in topologically non-trivial phases of matter. The term "fermion" is intentionally avoided here because they generically obey non-Abelian anyonic exchange statistics. This property makes them promising candidates for building blocks of fault-tolerant topological quantum computers.

In one of the proposed realizations Majorana states are created at edges of one-dimensional nanostructures coupled to a superconducting substrate. In this talk it will be explained how such states can be formed in two kinds of such systems: a semiconductor nonwire with spin-orbit coupling and in a chain of magnetic atoms.

Serdecznie zapraszamy

Roman Puźniak / Henryk Szymczak / Andrzej Szewczyk