PAP Seminar Announcement

Thermodynamics of Ultracold Gases
By
Prof. Frederic Chevy
Laboratoire Kastler Brossel, ENS

Date: 16 May 2013, Thursday
Time: 4.00pm to 5.00pm
Venue: Hilbert Space (SPMS-PAP-02-02)
Host: Assoc. Prof. David Wilkowski

Abstract

The understanding of the properties of strongly correlated quantum systems is one of the most challenging open problems in modern physics, since it is relevant to fields as different as condensed matter, astrophysics or nuclear physics. Using the latest techniques of manipulation of ultracold vapors, it is now possible to probe the quantum many body problem using the tools of atomic physics. In this talk, I will show that it is possible to engineer model experimental systems reproducing faithfully some of the most popular hamiltonians used in theoretical physics. I will illustrate this on the study of the thermodynamic properties of strongly correlated gases that can now be benchmarked accurately using advanced experimental and theoretical techniques.

Short Biography

Prof. Frederic Chevy research activity is on classical and quantum fluids. Prof. Chevy is currently working at Laboratoire Kastler Brossel at ENS in the team: Ultracold fermi gases.

Since 2010: Professor at Ecole Polytechnique Since 2010: Full professor at Ecole Normale Supérieure
2001-2003: Post-doc at the laboratoire de physique de la matière condensée at Collège de France
2001: PhD at UPMC in quantum physic - Ecole Normale Supérieure