复旦大学物理系物质科学报告

Physics Department Colloquium

A unification of matter and information -- a second quantum revolution

Prof. Xiao-Gang Wen

Perimeter Institute, Canada and MIT, USA

Abstract: Physics, in particular, condensed matter physics, is a very old field. Many people are thinking that the exciting time of physics has passed. We enter the beginning of the end of physics. The only important things in physics are its engineering applications, such as optical fiber and blue LED. However, I feel that we only see the end of the beginning. The exciting time is still ahead of us. In particular, now is a very exciting time in physics, like 1900 - 1930. We are seeing/making the second quantum revolution which unifies information, matter and geometry. Here I will describe the previous four revolutions in physics: mechanical revolution, electromagnetic revolution, general relativity revolution, and quantum revolution, as well as the fifth -- the second quantum revolution. Each revolution unifies seemingly unrelated phenomena. Each revolution requires new mathematics to describe the new theory. Each revolution changes our world view.

Time：2:00pm, Tuesday, 30th December, 2014.

Location：Physics Building, Room 221B.

(Cookies and coffee will be served from 1:30 pm)