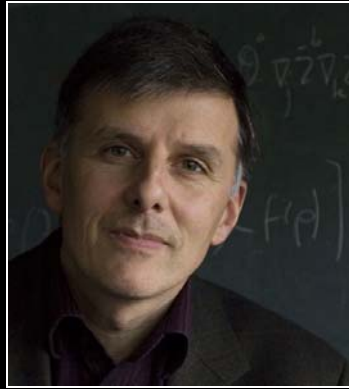




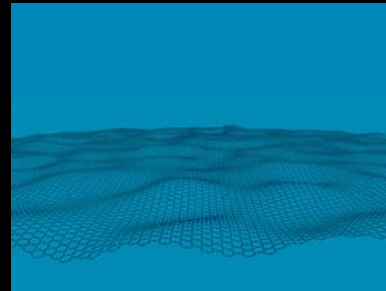
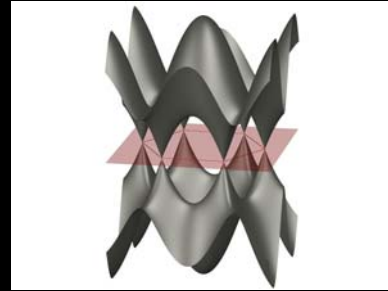
Yale University

Department of Physics

2009 Leigh Page Prize Lectures



Prof. Carlo Beenakker
Leiden University



Mesoscopic physics of graphene

Graphene is a realization of "nano chicken wire": a plane hexagonal lattice of carbon atoms. It has been studied by theorists as an academic exercise for half a century, but it was only shown recently to exist in nature as a stable form of carbon. The dynamics of conduction electrons in graphene is the same as that of relativistic massless particles, with a velocity that is 300 times smaller than the speed of light. The appearance of concepts from relativistic quantum mechanics in condensed matter physics is unusual, and provides an entirely new and surprising phenomenology. Whether or not these new phenomena have useful applications, in particular for carbon-based electronics, remains to be seen, but there is certainly much interesting physics to explore - as we hope to show in this series of lectures.

Monday, April 20, 2009

What is special about graphene?

Wednesday, April 22, 2009

Relativity meets superconductivity in graphene

Friday, April 24, 2009

Majorana fermions in graphene and topological insulators

**The lectures will be held at 4:00 p.m.
in room 59 of the Sloane Physics Laboratory, 217 Prospect Street,
New Haven, CT**

**All interested persons are invited to attend the lectures.
Tea and coffee will be served at 3:30 p.m. in the 3rd Floor Sloane Lounge**