

PHYSICS COLLOQUIUM

Konstantin Novoselov
University of Manchester
"QED in a Pencil Trace"

Monday, January 14, 2008
4:00 PM, Ronald Geballe Auditorium, Rm. A-102

Seminars



January 14-18, 2008

Abstract: When one writes by a pencil, thin flakes of graphite are left on a surface. Some of them are only one angstrom thick and can be viewed as individual atomic planes cleaved away from the bulk. This strictly two dimensional material called graphene was presumed not to exist in the free state and remained undiscovered until the last year. In fact, there exists a whole class of such two-dimensional crystals. The most amazing thing about graphene probably is that its electrons move with little scattering over huge (submicron) distances as if they were completely insensitive to the environment only a couple of angstroms away. Moreover, whereas electronic properties of other materials are commonly described by quasiparticles that obey the Schrödinger equation, electron transport in graphene is different: It is governed by the Dirac equation so that charge carriers in graphene mimic relativistic particles with zero rest mass. The very unusual electronic properties of this material make graphene a promising candidate for future electronic applications.

INT Seminar
1:00 PM, Rm. C-421, PAT

Huey-Wen Lin, Jefferson Lab
"Strange Baryon Physics in Full Lattice QCD"
INT 5-Year/Research Assistant Candidate

Tuesday, January 15

Condensed Matter Seminar
4:00 PM, Rm. C-421, PAT

Roman Krems, UBC Chemistry
"Dynamics of cold and ultracold molecules in external electromagnetic fields"

Wednesday, January 16

INT Seminar
1:00 PM, Rm. C-421, PAT

Ionel Stetcu, Los Alamos National Laboratory
"From Nuclei to Cold Atoms and Back"
INT 5-Year/Research Assistant Candidate

Thursday, January 17

Astronomy Colloquium
4:00 PM, Rm. A-102, PAA

David Hogg, New York University
"The Fastest, Largest, and Least Well-Organized Observatory in the World"