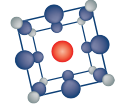




UNIVERSITÉ
DE GENÈVE

FACULTÉ DES SCIENCES
Section de physique



MaNEP
SWITZERLAND

Doctoral program – Geneva
Autumn semester 2008

Special Course

by

Markus Müller

Harvard University

Transport and Magnetism in Disordered Systems

Description — This graduate level course will give an introduction to various important concepts governing transport and glassy ordering phenomena in disordered systems, encompassing impure metals and superconductors, (Anderson) insulators, doped semiconductors, spin glasses and random ferromagnets.

Specific topics which will be covered are:

- The theory and phenomenology of Anderson localization and the ensuing transport characteristics for dirty metals, insulators and superconductors
- Strongly doped semiconductors: the Coulomb gap and Coulomb glass
- Disordered magnets: spin glasses and random ferromagnets; domain wall pinning

The course addresses both experimentalists and theorists and aims to give an overview of the theoretical concepts and tools and their experimental context and relevance.

Format — The course lasts one semester in the form of one 2-hours lecture per week.

Date and place — The first lecture will be given on

Thursday September 25, 2008 at 14:00

in room 102 (Sciences I). The subsequent dates will be decided following the demands of participants.