

Course on Supersymmetry 9-11th of February 2009
Vrije Universiteit Brussel

Dr. Filip Moortgat (ETH Zurich)

**“An introduction to low-energy supersymmetry
and its experimental aspects”**

After a short review of the shortcomings of the Standard Model, low-energy supersymmetry and the Minimal Supersymmetric Standard Model (MSSM) will be introduced. The basic phenomenology of supersymmetric particles, including the MSSM Higgs sector, will be discussed. Accelerator-based search techniques for these particles will be reviewed, as well as methods that may allow the determination of their masses and quantum numbers. Finally, non-accelerator searches for supersymmetric Dark Matter will be briefly reviewed.

Location: Vrije Universiteit Brussel – Campus Oefenplein – 1.G.003 (1st level of building G, room 003; large seminar room of the IIHE)

Lecture 1 : Supersymmetry, MSSM, sparticle phenomenology and MSSM Higgs bosons (9th of February between 14:00 – 17:00)

Lecture 2 : Searches for sparticles and MSSM Higgs bosons with colliders (10th of February between 10:00 – 13:00), including hand-out of exercises

Lecture 3 : Dark Matter searches (11th of February between 10:00 – 13:00), including follow-up of exercises

For more information please contact Prof. J. D'Hondt (jodhondt@vub.ac.be)