



## Autumn School

### "Biomolecular Structure and Function - Computational Approaches"

Dear Young Scientist,

If you have

- ▲ a keen interest in the basic building-blocks of life, i.e. biomolecules, their structure, their interactions, their functional mechanism, and
- ▲ a good knowledge in the natural sciences proven by successful studies in biology, biochemistry, biophysics, bioinformatics, or similar,
- ▲ are studying a Master course or have begun with a PhD project in a related field,

then this international Autumn School may be a good starting point for your further studies as it will allow you to learn some of the powerful computational techniques that are available to address biomolecular issues.

The autumn school will have two parts, both with a mixture of lectures, presentations, hands-on exercises, and project work.

In week 1 (**26 – 30 November 2012, Essen**) we will focus on methods based on physical models of biomolecular systems. Topics of this week include molecular dynamics simulation, biomolecular electrostatics, protein-protein docking and matching, and machine learning for functional analysis.

In week 2 (**3 - 7 December 2012, Nijmegen**) we will deal with methods that make empirical knowledge available for modelling proteins. Topics of this week include homology modeling, ligand docking, computational solutions for structural analysis with X-ray, NMR, SAXS, or Cryo-EM.

Additionally, we have two distinguished scientists for honorary talks:

- **Robert Huber** (Noble laureate 1988)
- **Yves Moreau** University of Leuven

Further details are available at the websites:

**[swift.cmbi.ru.nl/autumnschoolbioinformatics/](http://swift.cmbi.ru.nl/autumnschoolbioinformatics/)**  
**[www.uni-due.de/autumnschoolbioinformatics/](http://www.uni-due.de/autumnschoolbioinformatics/)**

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