

## Lecture Series - Professor Burkhard Duenweg

**Monday 24 Oct 2011 - Friday 02 Dec 2011 10am-12pm**

**Room S13, Building 29, Clayton campus**

Professor Burkhard Duenweg, who is visiting Monash University from the Max Planck Institute for Polymer Research, Mainz, Germany, will deliver a 6 week course of lectures starting next week entitled: "Introduction to theoretical polymer physics". The topics to be covered in the course include:

- Random Walk models of polymer conformations
- Gaussian chain
- Self-avoiding walks and excluded-volume interaction
- Scale invariance
- Relation between self-avoiding walks and critical phenomena
- Self-consistent field theory for polymers
- Screening of excluded volume interactions
- Flory-Huggins theory
- Theta collapse
- Blob concept
- Generic phase diagram of polymer solutions
- Rouse model
- Zimm model
- Hydrodynamic screening in semidilute solutions
- Reptation model

The schedule of lectures and venue are as follows:

Dates: 24 October to 2 December

Monday: 2 PM to 4 PM

Wednesday: 10 AM to 12 noon

Friday: 10 AM to 12 noon

Room: Room: S13 Building: 29

All are welcome to attend the lectures. If you wish to attend, please send an email to [ravi.jagadeeshan@monash.edu](mailto:ravi.jagadeeshan@monash.edu).