

Physics Seminar

Friday, 16th December at 10h30

(coffee at 10h15)

Campus Limpertsberg

Room BCE 3.06

Talk by Prof. Michel Pleimling

Virginia Polytechnic Institute and State University, Blacksburg

Aging processes in materials far from equilibrium

Aging and dynamical scaling are generic features in systems far from equilibrium that evolve with slow dynamics. Well known examples can be found in structural glasses, spin glasses, magnetic systems, and colloids. Interestingly, even though physical aging has been observed (and exploited) since prehistoric times, its theoretical understanding is still far from complete. In the first part of the talk I shall discuss some typical experiments and highlight the rich phenomenology of aging as well as its universal features. In the second part of the talk I shall focus on recent theoretical studies of different model systems, as for example various disordered ferromagnets, electron glasses, and interacting magnetic flux lines in disordered type-II superconductors. These studies reveal that a robust and rather universal theoretical framework can be developed in order to describe aging phenomena that take place in a large variety of systems. I shall close the talk with a discussion of open questions and an outlook on some future developments.

Next Physics Seminars

- Thursday, 12th January 2012
Belval, 14h00

Dr. Tobias Kraus

Particle films, clusters and supercrystals: the science and the process engineering of nanoparticle self-assembly