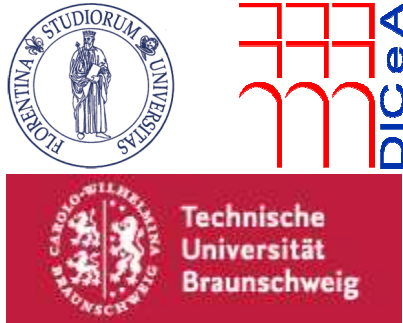


INTERNATIONAL PHD COURSE



"Processes, Materials And Constructions In Civil
And Environmental Engineering And For The
Protection Of The Historic-Monumental
Heritage"

SEMINAR

INTRODUCTION TO THE LATTICE BOLTZMANN METHOD

By

Dr. Jonas Latt

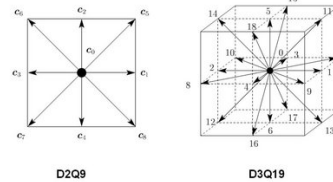
Ecole Polytechnique Fédérale de Lausanne
School of Engineering

Faculty of Engineering

**Via S. Marta, 3 Florence, Italy
November 25th room 103 – 10-12
November 26th room 117 – 10-12**

Abstract

This seminar provides a practical introduction to the lattice Boltzmann method as a tool for the numerical simulation of fluid flow. Different application areas of engineering interest are covered, including incompressible, laminar and turbulent flows, thermal convection problems, flows through porous media, and laminar multi-phase flow. The open-source library Palabos is introduced, with which all presented physical models can be simulated on a parallel machine or a simple PC, using a simple scripting interface.



Ludwig Eduard Boltzmann (1844 –1906)

The goal of the geo-engineer scientific International Doctoral Course on "Processes, Materials and Constructions in Civil and Environmental Engineering and for The Protection of the Historic-Monumental Heritage" which are sponsored by the

Deutsche Forschungsgemeinschaft (DFG) since 01.01.2002 in co-operation with the University of Florence is the deal with relevant subjects of the analysis, monitoring, control and reduction of the induced risks by the natural calamities and by human actions on the built environment.



The seminar is offered for the International PhD Course, but other participants are welcomed.

The Coordinator of the PhD Course
Prof. Eng. C. Borri

The Scientific Secretariat of the Phd Course
Dr. Eng. L. Cappiotti, cappiotti@dicea.unifi.it

