

KOLLOQUIUM

Informatik-Kolloquium

Sylvain Pion, Ph.D.
INRIA Sophia-Antipolis

CGAL, THE COMPUTATIONAL GEOMETRY ALGORITHMS LIBRARY

This talk will give a general overview of the CGAL software project. After a short description of its history and current status, I will survey the data structures and algorithms available from the library, with examples how and by whom they are used. Topics include triangulations, Voronoi diagrams, mesh generation, geometry processing, Boolean operations on polygons and polyhedra, and arrangements of curves.

I will then get into more technical details concerning the implementation. The first point is our use of the Generic Programming paradigm through C++ templates, which eases code re-use and interoperability. The other point will be the Exact Geometric Computing paradigm, which is about how we obtain provably robust algorithms when faced with numerical roundoff errors, in an efficient way.

Montag, 20.07.09, 17:30 Uhr

Informatik-Hauptgebäude (50.34), HS -101 (UG), Am Fasanengarten 5, 76131 Karlsruhe



Fakultät für Informatik

Fakultät für Informatik, Universität Karlsruhe (TH), Am Fasanengarten 5,
Geb. 50.34, 76131 Karlsruhe, Tel.: +49 721 608 8660, Fax.: +49 721 697 760,
E-Mail: ines.himpel@kit.edu, www.informatik.kit.edu

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