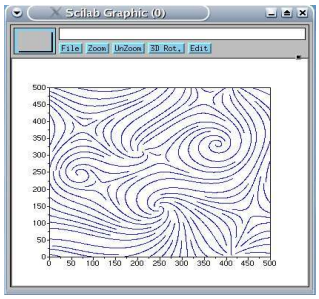
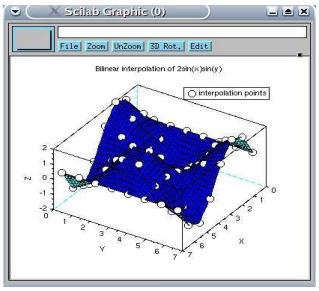
Computational geometry in SCILAB: The CGLAB toolbox makes the link between CGAL and SCILAB.

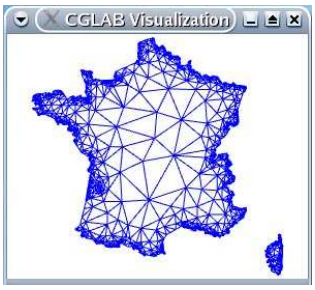
CGLAB is a SCILAB toolbox offering robust and efficient computational geometry algorithms.

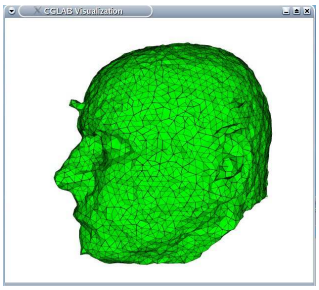
CGLAB provides:

- Convex hull in 2D and 3D.
- Delaunay triangulations in 2D and 3D.
- Constrained Delaunay triangulations in 2D.
- Delaunay mesh generator.
- Streamlines of a regular vector field in 2D.
- Linear interpolation of functions defined on unstructured points.
- Surface mesh generator for surfaces defined as grey level in 3D images.









Application Domains

CGLAB can be used in various areas with a need for geometric computing, such as: computer graphics, scientific visualization, computer aided design and modeling, geographic information systems, molecular biology, medical imaging, robotics and motion planning, mesh generation, numerical methods.

CGAL Algorithms which could be added to CGLAB

CGAL, the Computational Geometry Algorithms Library, the base for **CGLAB**, also offers:

- Voronoi diagrams for 2D and 3D points, 2D weighted points, and segments.
- Boolean operations on polygons and polyhedra.
- Arrangements of curves.
- Alpha shapes.
- Operations on polygons.
- Optimisation algorithms.
- Kinetic data structures.

Contact Information

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Web pages:
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