

99 Other stuff to think about

This is just a dumping ground for random things I could, in principle, write about, but probably won't.

99.1 Planar curves

- Self-overlapping curves

99.2 Planar maps

- PL terrains, contour trees
- Colin de Verdière matrices
- Planar rigidity
 - pseudo-triangulations
 - carpenter's rule
- Homotopy height
- Lots of approximation and FPT algorithms

99.3 Surface Maps

- Reeb graphs
- Curves on surfaces
 - Invariants
 - Gauss codes for lacets (via cubic Hamiltonian embedding)
 - simplification (Hass-Scott lemma)
 - selfoverlappitude
- Shortest homotopic paths on surfaces
- Normal coordinates and curve tracing
- Piecewise linear surfaces
 - Alexandrov's convexity theorem
 - Cauchy rigidity?
 - Homotopy testing?
 - Shortest paths (continuous Dijkstra, heat equation)
- Intrinsic Delaunay triangulations
- Graph minor theory
- Lots of approximation and FPT algorithms