



# EULERS VENNER

Foreningen af Matematikere – Aarhus Universitet  
Institut for Matematik – Aarhus Universitet – 8000 Aarhus C  
Email: euler@imf.au.dk – Hjemmeside: euler.au.dk

---

## Probing 3D Topology via Shapes

---

Cristiano Spotti

Torsdag den 3. maj klokken 16 i Aud. G2

In early 2000s G. Perelman proved the long standing Poincaré Conjecture: any simply connected closed 3-manifold is homeomorphic to the 3-sphere. Despite being a purely topological statement, the proof makes use of the study of how shapes of 3-manifolds evolve along a natural deformation (Ricci flow) which aims to decompose any 3-manifold in simpler geometric building blocks. An essential ingredient in the proof consists in understanding how the shapes can degenerate, i.e., form singularities, along the flow.

In this talk we will present the basic ideas of this beautiful story, which started in the '80s with the works of R. Hamilton and culminated in Perelman's proof of the full Thurston Geometrization Conjecture, which indeed implies the Poincaré Conjecture as a special case.

*Mød op, hør foredraget og grib chancen for at blive medlem af Eulers Venner.  
Vi giver kaffe, te og kage.*