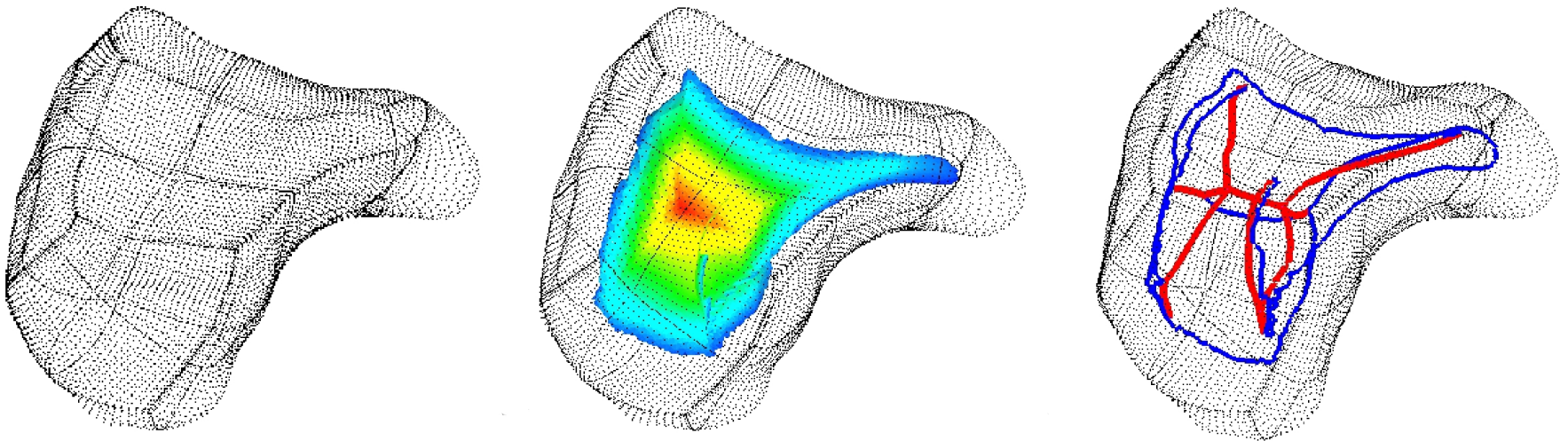


3D Shape Understanding with Medial Scaffolds

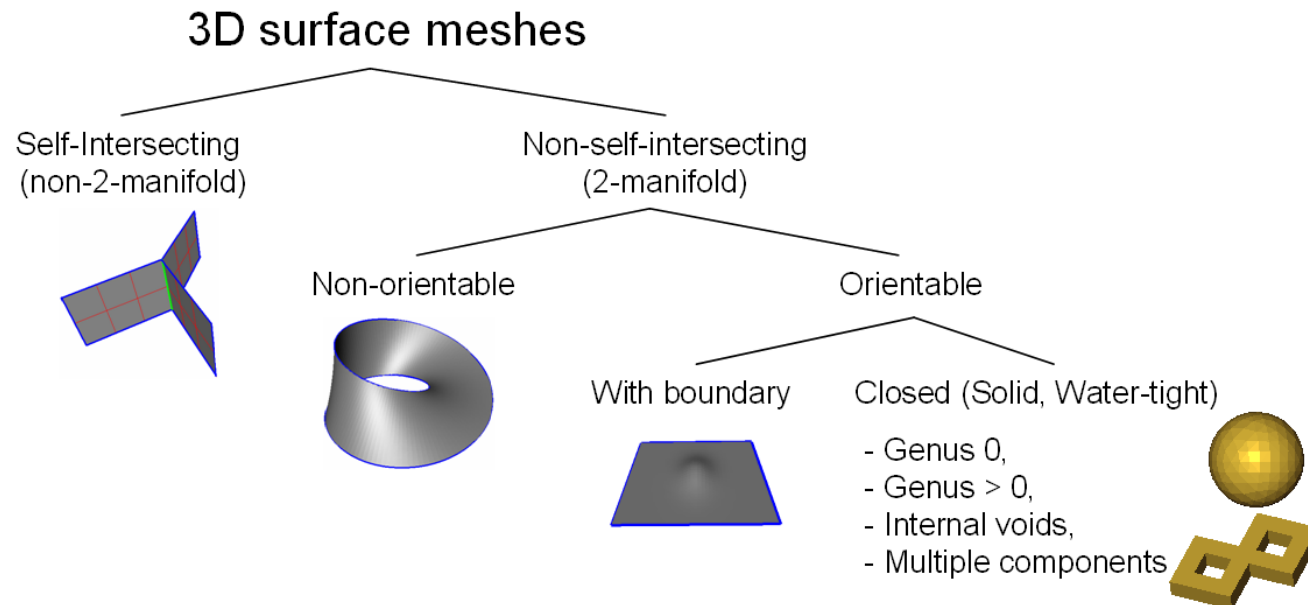


Frederic Fol Leymarie
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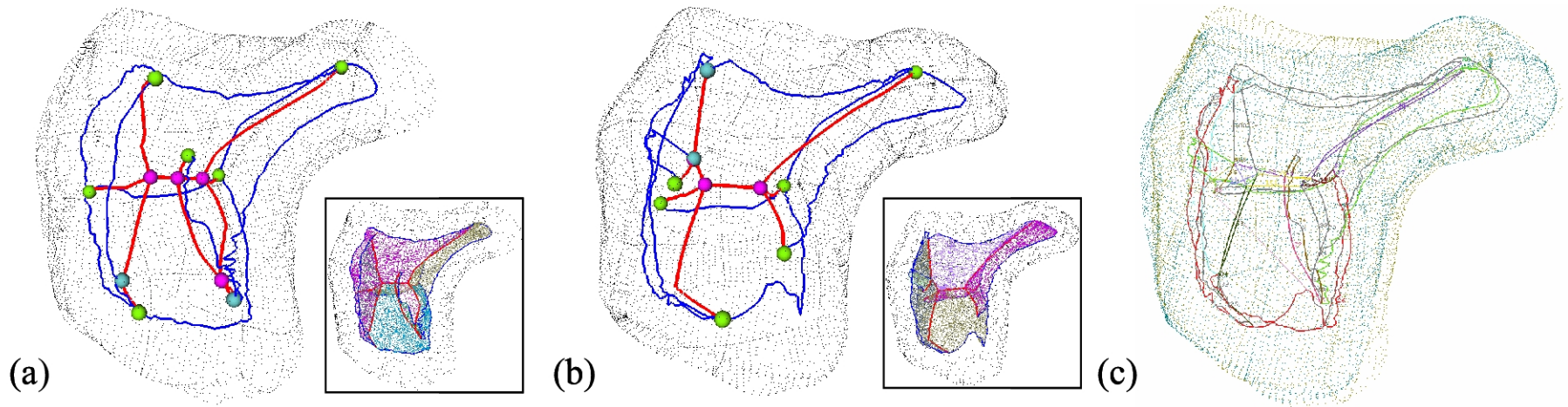
Goal: study shape with minimal assumptions

To find a *general* approach, **applicable to various topologies**, without assuming strong *input constraints*, e.g.:

- No surface **normal** information.
- Unknown **topology** (with boundary, for a solid, with holes, non-orientable).
- No a priori surface **smoothness** assumptions.
- Practical sampling condition: **non-uniformity**, with varying degrees of **noise**.
- Practical **large** input size (> millions of points).



3D Shape Matching/Registration



Art, Perception, Computing

Consider Art as “a way of seeing,”
apprehending the world in alternative ways.

Consider also Art as a window on the human mind.

Theories of perception

try to pinpoint the thought processes
at play e.g. when we observe an artefact,
but also when we create the artefact.

Computational models help marry the two fields.



Aikon: Automated Ikonograph
In collaboration with Patrick Tresset
Ph.D. Project: AIKON-2
Vision, sketching, feedback, robotics
With the support of the Leverhulme Trust

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