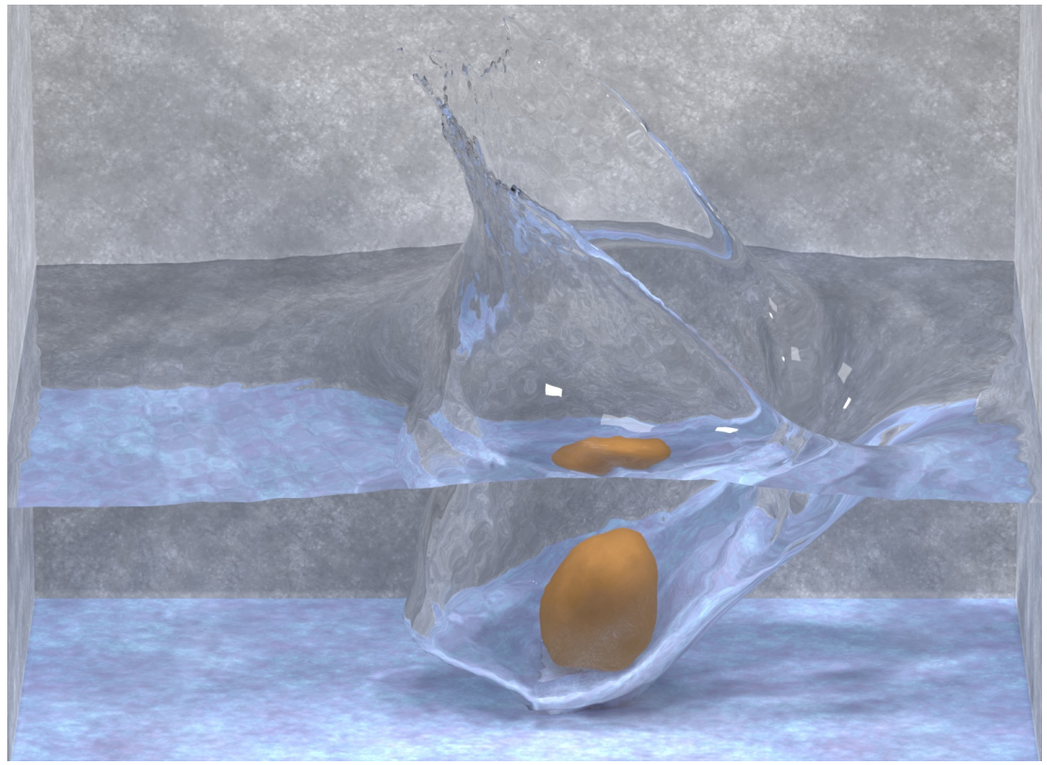
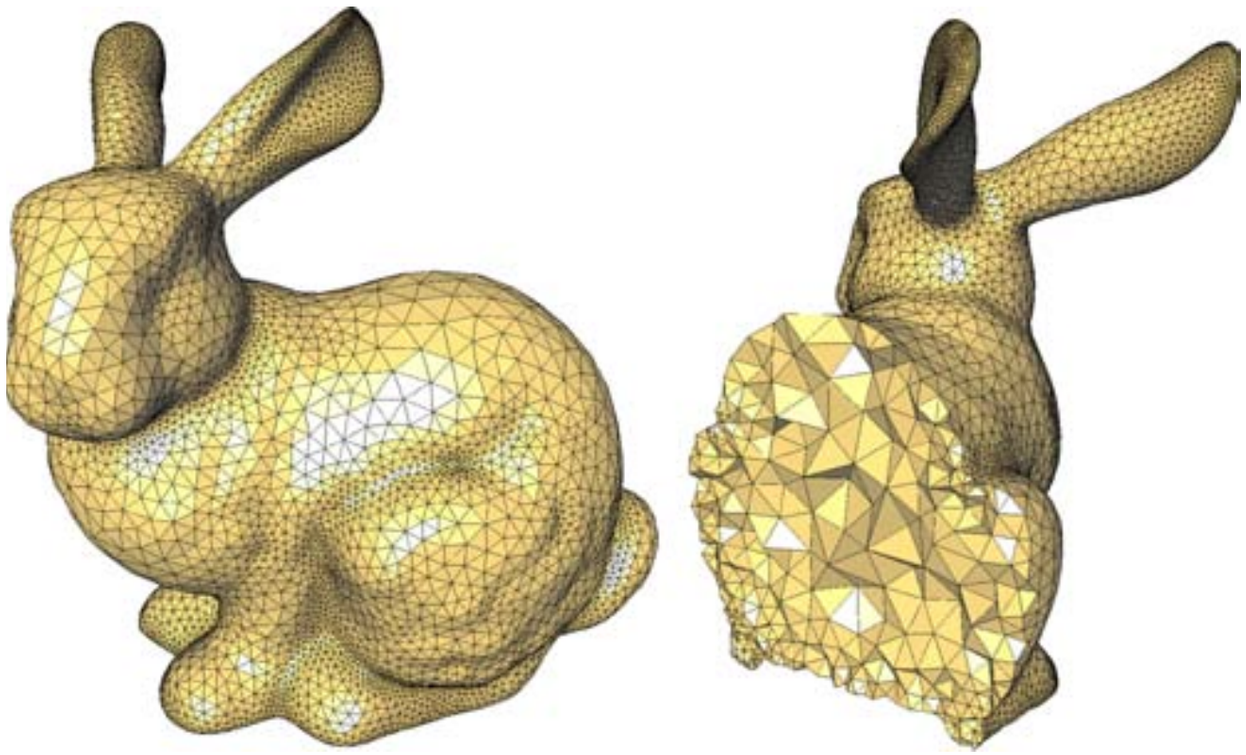
Discrete representations of geometric objects: Features, data structures and adequacy for dynamic simulation.





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  - Implicit surfaces
  - Point clouds

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- Discuss the features of these representations that are specific to simulation, as opposed to general geometry processing and rendering
  - Objects need to support *dynamic deformation*
  - Volumetric objects need internal structure
  - Discrete geometry needs to be *simulation-quality (well-conditioned)*

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  - "Shape memory" and deformation drift
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Next topic : Introduction to PhysBAM data structures and scene layout

Meshes

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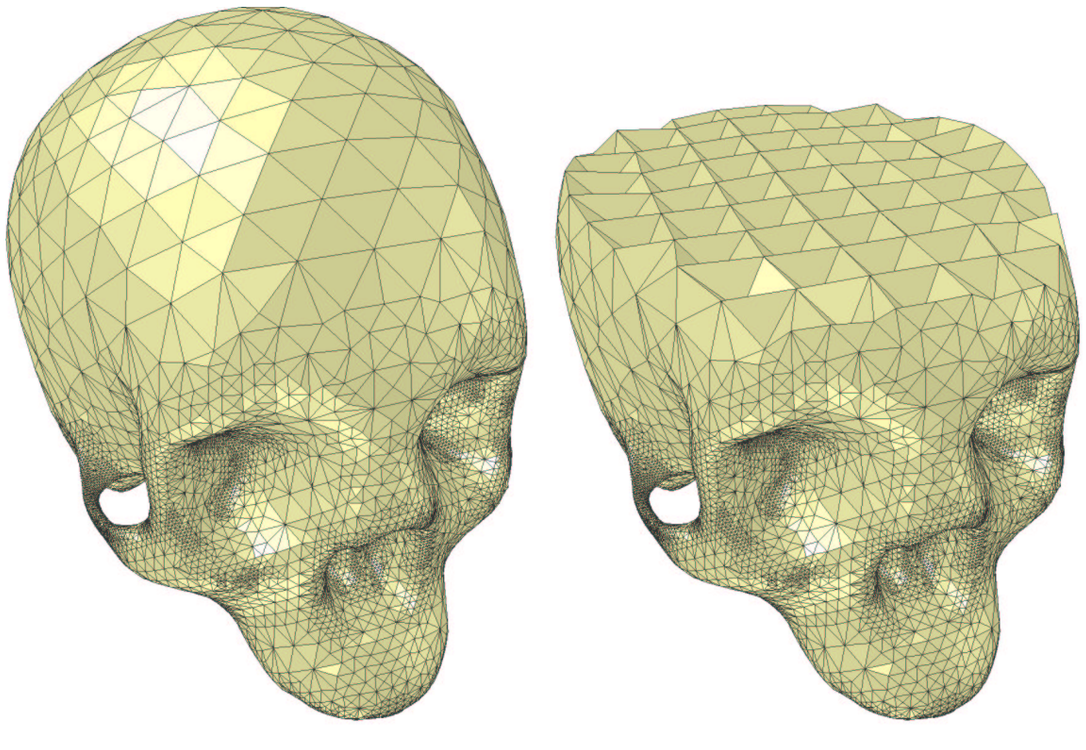
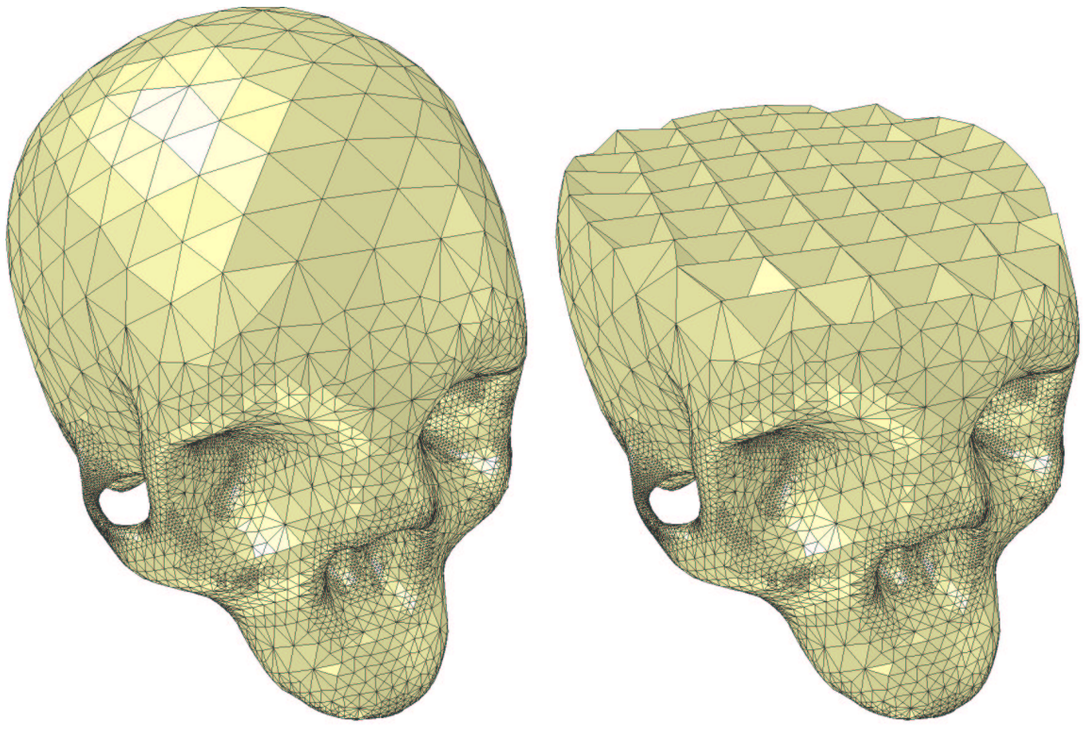


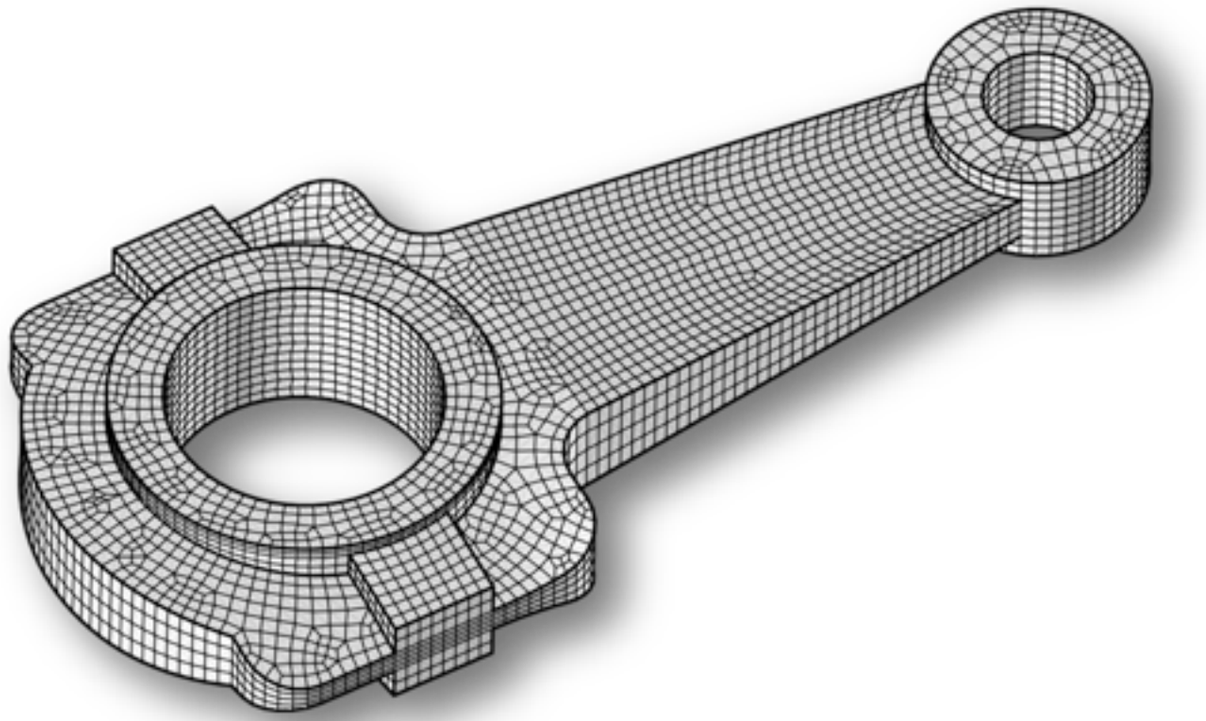
Tetrahedral meshes
(volumetric)

Meshes



Tetrahedral meshes
(volumetric)

Hexahedral meshes
(volumetric)



Meshes

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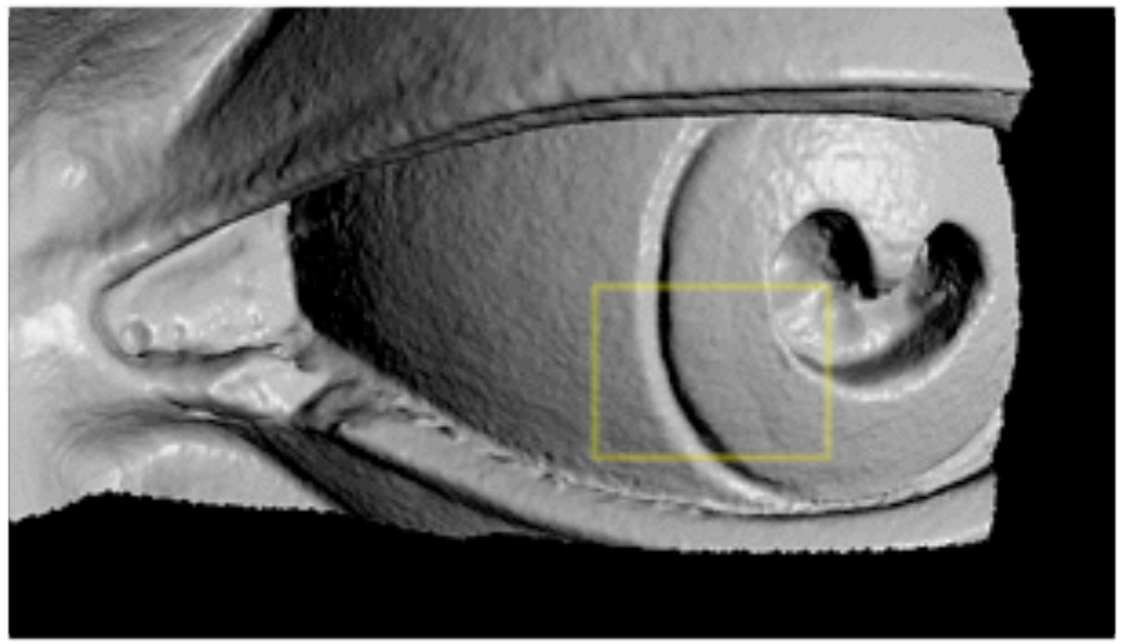
Triangular *surface* meshes
(not volumetric)

Meshes



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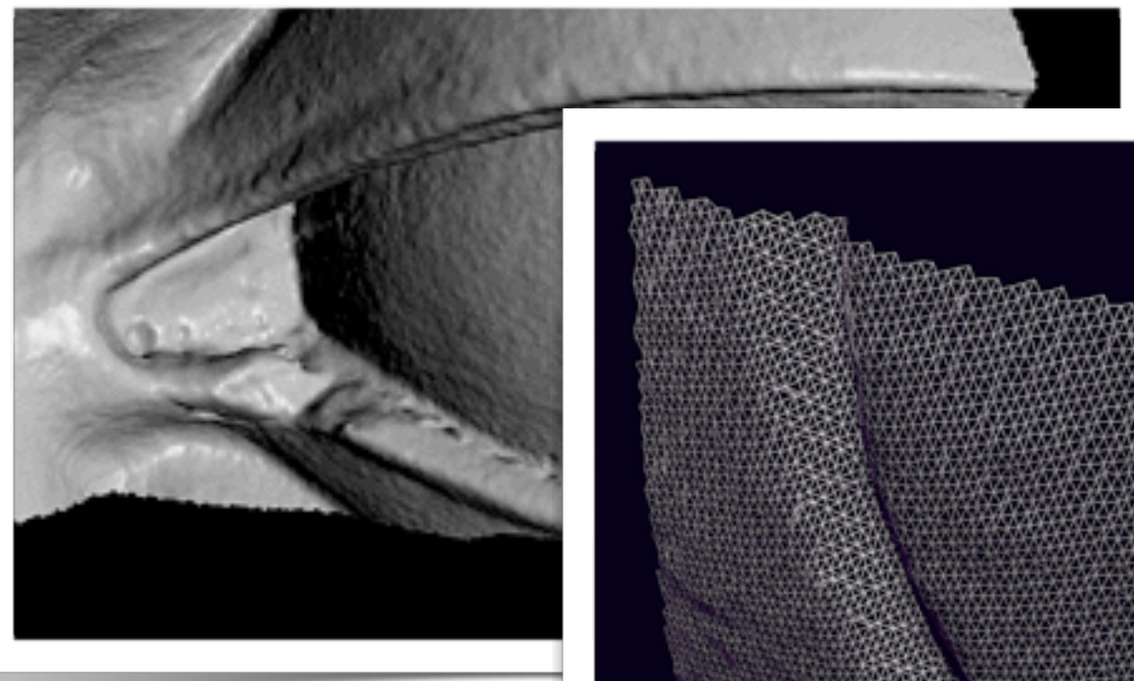

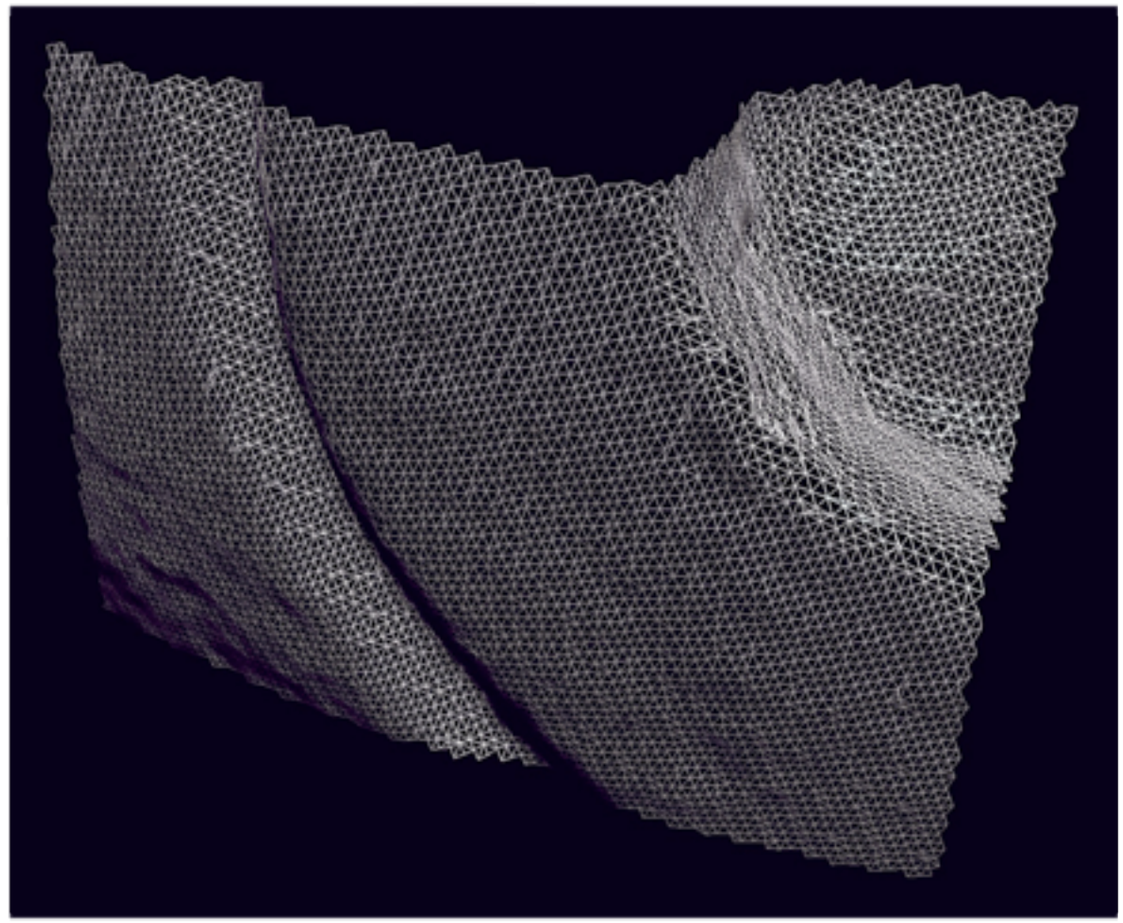

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