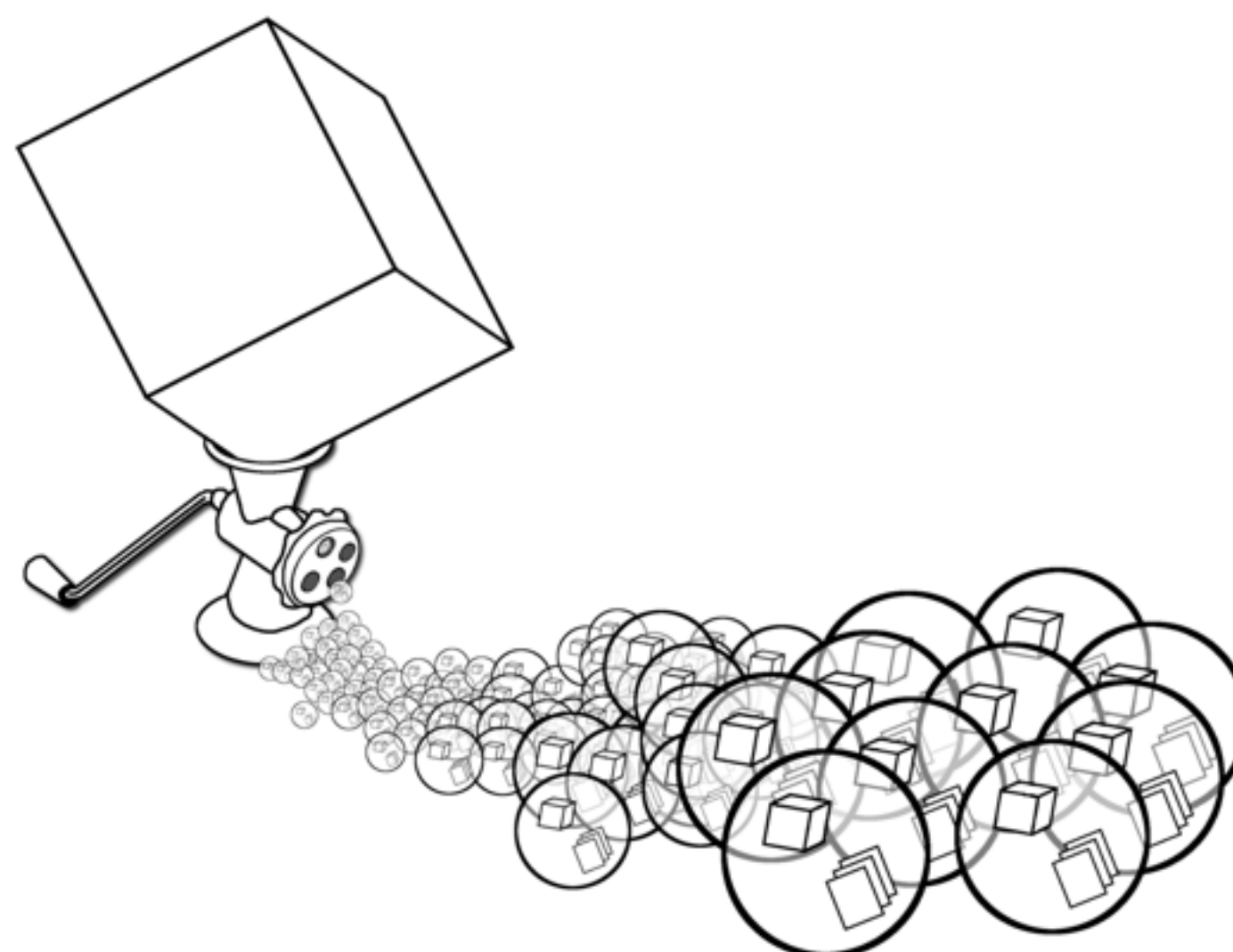




# Tutorial: Tensor Approximation in Visualization and Computer Graphics

# Closing

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# Summary

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- Introduction to tensor approximation and its models
- Properties and features of TA
- Applications in scientific visualization
- Implementation examples in scientific visualization
- Graphics applications
- Clustering and sparsity

# Conference Material

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- Tutorial overview (PDF)
  - ▶ Motivation and tutorial outline
  - ▶ Summary of related papers
  - ▶ References
- Tensor approximation compendium (PDF )
  - ▶ Background theory on tensor approximation
- Tutorial slides (PDF)
  - ▶ TA theory and applications in scientific visualization and computer graphics
- <http://vmml.ifi.uzh.ch/links/TutorTensorAprox.html>

# Download TA Toolboxes

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- MATLAB tensor toolbox
  - ▶ <http://www.sandia.gov/~tgkolda/TensorToolbox>
- MATLAB N-way toolbox
  - ▶ <http://www.models.life.ku.dk/nwaytoolbox>
- vmmlib tensor classes
  - ▶ <http://vmml.github.io/vmmlib/>
    - vmmlib
    - demo/play project
    - slides on the vmmlib tensor classes

# Download Datasets



**128MB**



**1GB**



**3GB**



**32GB**

- $\mu$ CT volume datasets acquired at the University of Zürich can be used for research purposes
  - ▶ <http://vmml.ifi.uzh.ch/research/datasets.html>
- Please acknowledge the data source as indicated
  - ▶ We acknowledge the Computer-Assisted Paleoanthropology group and the Visualization and MultiMedia Lab at University of Zurich for the acquisition of the  $\mu$ CT datasets.
- BTF datasets from the University of Bonn
  - ▶ <http://cg.cs.uni-bonn.de/en/projects/btfdbb/download/>

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