ICPR 2012 Tutorial
3D Shape Analysis and Retrieval
Recent Advances and Trends
Hamid Laga(1) and Ryutarou Ohbuchi(2)

(1) School of Mathematics and Statistics, University of South Australia, Australia.
(2) Computer Science and Engineering Department, University of Yamanashi, Japan.

I. Descriptor-based 3D shape analysis
   # Global descriptors [1 – 6]
   # Local descriptors [7 – 12]

II. Shape similarity
   # Bag of words [13, 14]
   # Isometry invariant shape analysis [15-17]
   # Diffusion Geometry [18 – 20]
   # Elastic shape analysis [21]

III. Some semantics [22, 23]

IV. Supervised / unsupervised Learning for 3D shape analysis and retrieval [24-27]

V. Querying 3D shape databases [28-33]

VII. Applications [34-38]

VIII. Datasets and benchmarks [39-42]

IX. Other (related / similar) tutorials [43-46]

References


[40] Shape Retrieval Evaluation Context (SHREC): http://www.aimatshape.net/event/SHREC


[42] Shape Retrieval Contest: http://www.aimatshape.net/event/SHREC

http://www.mpi-inf.mpg.de/resources/deformableShapeMatching/EG2011_Tutorial/

[44] Shape-based retrieval and analysis of 3D models.
Siggraph 2004 course: http://www.cs.jhu.edu/~misha/MyPapers/SIG04Course.zip
