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DESCRIPTION

Graphical Models is recognized internationally as a highly rated, top tier journal and is focused on the creation, geometric processing, animation, and visualization of **graphical models** and on their applications in engineering, science, culture, and entertainment. *GMOD* provides its readers with thoroughly reviewed and carefully selected papers that disseminate exciting innovations, that teach rigorous theoretical foundations, that propose robust and efficient solutions, or that describe ambitious systems or applications in a variety of topics.

We invite papers in five categories: research (contributions of novel theoretical or practical approaches or solutions), survey (opinionated views of the state-of-the-art and challenges in a specific topic), system (the architecture and implementation details of an innovative architecture for a complete system that supports model/animation design, acquisition, analysis, visualization), application (description of a novel application of know techniques and evaluation of its impact), or lecture (an elegant and inspiring perspective on previously published results that clarifies them and teaches them in a new way).

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The following are examples of topics typically covered in *GMOD*:

Shape Processing: Analysis of local properties. Averaging and relative convex hulls. Correspondence, registration, matching and retrieval. Detection of ridges, features, patterns, and symmetries. Measures of volume, compactness, or convexity. Morphological operations (offsetting, rounding, tightening). Segmentation. Similarity measures, comparison, variability statistics.

Points: Analysis. Interpolation. Multi-resolution. Rendering. Segmentation. Separation.

Curves: Parametric. Implicit. Fitting. Smoothing, Subdivision. Constant length. Extraction. Segmentation. Matching. Comparison. Averaging. Curves on surfaces. Rounding, Offsetting, Regularity.

Skeletons: Animation and Skinning. Medial axis or curve skeleton (construction, approximation, properties)

Meshes: Compact data structures. Feature extraction and replication. Feature exaggeration. Levels of Detail. Simplification. Shape measures. Parameterization. Re-sampling. Smoothing. Subdivision. Volume/area preservation. Feature sharpening.

Surfaces: Implicit. Parametric. Curvature. Hole filling. Geodesics. Intersection. Interpolating. Reconstruction. Sampling.

Solids: Boolean operations. Boundary representations. CSG. BSP. Non-manifold models. Inhomogeneous models. Non-manifold models and complexes. Offsets. Reconstruction from drawings, images, videos. Repair. Rounding and smoothing. Sweeps.

Volumes/Images/Video: Matching. Searching. Filtering. Compression. Segmentation. Stitching. Merging. In-painting. Isosurfaces. Rendering.

Design: Constraint-based. Feature-based. Variational. Direct manipulation. Haptics. Multimodal interfaces. Multiuser interfaces. Pen-based Procedural models and patterns.

Motion: Rigid, affine, steady. Analysis. Capture. Pattern extraction. Synthesis. Constrained. Blending.

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INTRODUCTION

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