



Singularity Reduction in Quadrilateral Meshes for Optimized Computer Simulations

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The Invention

Systems and methods for modifying and generating quadrilateral meshes for computer graphic structures include obtaining a polygon mesh representing a computer graphic structure, the polygon mesh comprising a plurality of polygonal faces and a plurality of singularities, determining, based on a first singularity of the plurality of vertices, selecting, based on one or more characteristics of the patch, a first minimum singularity template (MST) of a plurality of MSTs each representing a corresponding quadmesh that has three or fewer singularities, and replacing, within the polygon mesh, the patch with the first MST.

Applications

- Computer aided design (CAD)
- Engineering industry
- Theatrical animation
- Graphics

Additional Information

For More Information About the Inventors

- [Krishnan Suresh](#)

Tech Fields

- [Engineering : Additive manufacturing](#)
- [Information Technology : Computing methods, software & machine learning](#)

For current licensing status, please contact Emily Bauer at emily@warf.org or 608-960-9842