



Systems, Methods And, Media For Simulating Deformations Of Nonlinear Elastic Bodies

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The Invention

In accordance with some embodiments, systems, methods and media for simulating deformation of an elastic body are provided. In some embodiments, a method comprises: determining for each macroblock, a stiffness matrix K_i of a portion of a model of a non-linear elastic solid partitioned into cells; converting K_i into block form to include a submatrix K_{iili-1} for nodes between internal cells of a first macroblock; determining at least a portion of K_{iili-1} ; receiving input corresponding to force applied to cells of the model; determining displacements of exterior nodes of the first macroblock using the input and the portion of K_{iili-1} ; determining displacements of interior nodes of the first macroblock using the input and the displacements of exterior nodes; determining updated positions of the cells based on the displacements of the exterior nodes; and, causing the model to be presented using the updated positions.

Additional Information

For More Information About the Inventors

- [Eftychios Sifakis](#)

Tech Fields

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

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846