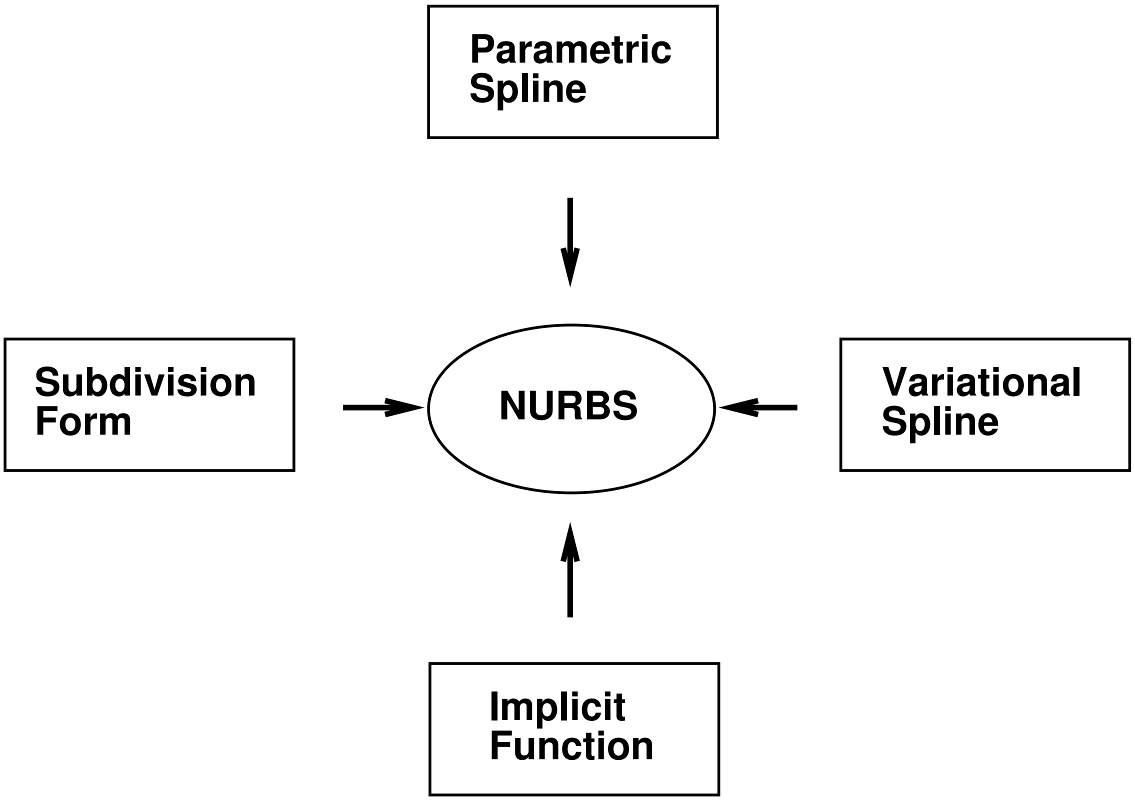
Standard Representation



Relevant Projects

- Modeling and animation with special geometric shapes
- 3D shape morphing of sculptured solids
- Optimal shape approximation using dynamic models
- Efficient algorithms for voxelization and display of NURBS objects
- Constraint-based dynamic shape modeling for computer animation
- Accurate shape representation and reconstruction from range and volumetric data
- Representation, creation, and manipulation of sweep surfaces
- Optimal approximation of curved shape offset

using physics-based models

- Constructing 3D geometry through user sketch
- Reverse engineering of large CAD datasets
- Volumetric FEM-based modeling for graphics and visualization
- Free-form deformation techniques for animation
- Modeling global deformation using physics
- Physics-based modeling and animation for natural phenomenon
- Fast shape rendering based on interval analysis
- Dynamic manipulating algebraic surfaces
- Wavelet and its applications for graphics and CAD
- Graphical simulation for CAD/CAM
- Integration of feature-based techniques and physics-based models

- Parametric optimization of dynamic models
- Physics-based geometric simplification
- Vision-based techniques for graphics
- Motion Control techniques for animation
- Design Toolkits for physics-based CAGD
- Modeling shapes of arbitrary topology
- From 2D imagery to 3D geometry
- Sculpting CAD-based prototype in virtual environment
- Physics-based methods for surface-surface-intersection
- Handling geometric randomness in physics-based modeling framework
- A systematic study on physics-based geometric

design

- Using differential equations to solve CAD and animation problems
- Extract surface from volumetric data
- Plastic surgery simulation
- Variational modeling for curves, surfaces, and solids
- Evaluation and analysis of shape quality using differential geometry