Cheng, Jin-San; Gao, Xiao-Shan; Li, Jia
Ambient isotopic meshing for implicit algebraic surfaces with singularities (plenary talk).
(English) [Zbl 1260.68410]

Summary: A complete method is proposed to compute an ambient isotopic meshing for an implicit algebraic surface with singularities. By ambient isotopic, we mean a meshing with correct topology and any given precision. We use symbolic computation to guarantee the correctness and use numerical computation whenever possible to enhance the efficiency. Nontrivial examples are given to show the effectiveness of the algorithm.

For the entire collection see [Zbl 1175.68009].

MSC:
68U05 Computer graphics; computational geometry (digital and algorithmic aspects)
65D18 Numerical aspects of computer graphics, image analysis, and computational geometry
68W30 Symbolic computation and algebraic computation

Software:
ISOLATE; Lgp

Full Text: DOI

References:

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