Schiffer, T.; Aurenhammer, F.; Demuth, M.
Computing convex quadrangulations. (English) [Zbl 1236.68282]

Summary: We use projected Delaunay tetrahedra and a maximum independent set approach to compute large subsets of convex quadrangulations on a given set of points in the plane. The new method improves over the popular pairing method based on triangulating the point set.

MSC:

68U05 Computer graphics; computational geometry (digital and algorithmic aspects)
52B55 Computational aspects related to convexity

Keywords:
irregular quadrilateral mesh; convex quadrangles; shape quality; Delaunay tetrahedra; maximum independent set

Software:
Qhull; Q-Morph

Full Text: DOI

References:
[9] Erickson, J., Dense point sets have sparse Delaunay triangulations or “... but not too nasty”, Discrete comput. geom., 33, 83-115, (2005) - Zbl 1077.68108
1985, pp. 97-106.


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