

[Devadoss, Satyan L.](#); [Shah, Rahul](#); [Shao, Xuancheng](#); [Winston, Ezra](#)
Deformations of associahedra and visibility graphs. (English) Zbl 1317.52018
Contrib. Discrete Math. 7, No. 1, 68-81 (2012).

Summary: Given an arbitrary polygon P with holes, we construct a polytopal complex analogous to the associahedron based on its convex diagonalizations of P . This polytopal complex is shown to be contractible, and a geometric realization is provided based on the theory of secondary polytopes. We then reformulate a combinatorial deformation theory and present an open problem based on visibility which is a close cousin to the Carpenter's rule theorem of computational geometry.

MSC:

[52B11](#) n -dimensional polytopes

[57Q10](#) Simple homotopy type, Whitehead torsion, Reidemeister-Franz torsion, etc.

[68R05](#) Combinatorics in computer science

Cited in **1** Review
Cited in **3** Documents

Keywords:

visibility graph; associahedron; secondary polytope

Full Text: [Link](#) [arXiv](#)