

Yang, Lu; Zeng, Zhenbing

Constructing a tetrahedron with prescribed heights and widths. (English) [Zbl 1195.51024](#)

Botana, Francisco (ed.) et al., Automated deduction in geometry. 6th international workshop, ADG 2006, Pontevedra, Spain, August 31–September 2, 2006. Revised papers. Berlin: Springer (ISBN 978-3-540-77355-9/pbk). Lecture Notes in Computer Science 4869. Lecture Notes in Artificial Intelligence, 203-211 (2007).

Summary: Employing a method of distance geometry, we present a symbolic solution to the following problem: express the edge-lengths of a tetrahedron in terms of its heights and widths.

For the entire collection see [\[Zbl 1132.68006\]](#).

MSC:

[51M20](#) Polyhedra and polytopes; regular figures, division of spaces

[51K05](#) General theory of distance geometry

[68T15](#) Theorem proving (deduction, resolution, etc.) (MSC2010)

[68U05](#) Computer graphics; computational geometry (digital and algorithmic aspects)

Keywords:

generalized Cayley-Menger algebra; widths of a tetrahedron; geometric constraint solving

Full Text: [DOI](#)