

**A solution to some problems of Conway and Guy on
monostable polyhedra**

Zsolt Lángi

Budapest University of Technology and Economics

zlangi@math.bme.hu

A convex polyhedron is called monostable if it can rest in stable position only on one of its faces. In this talk we investigate three questions of Conway, regarding monostable polyhedra, from the open problem book of Croft, Falconer and Guy (Unsolved Problems in Geometry, Springer, New York, 1991), which first appeared in the literature in a 1969 paper. In this talk we answer two of these problems. The main tool of our proof is a general theorem describing approximations of smooth convex bodies by convex polyhedra in terms of their static equilibrium points.