

Oberseminar Geometrie

Department of Mathematics

University of Fribourg

Seminar room, Math II (Lonza)

Wednesday May 2, 2018, 10:20-12:00



IVAN IZMESTIEV (Fribourg)

Flexible Kokotsakis polyhedra

A Kokotsakis polyhedron is made of nine faces: a central quadrilateral surrounded by four quadrilaterals and four triangles so that at every interior vertex four faces meet. A generic Kokotsakis polyhedron is rigid, but there are several classes of flexible polyhedra. One of them is the famous Miura-ori used to fold solar panels in a Japanese spacecraft in 1996.

In this talk I will describe an approach to the classification of all flexible Kokotsakis polyhedra. It uses a parametrization of the configuration space of a four-bar linkage by means of trigonometric or elliptic functions.