

May 16, 2022

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*On Euler's conjecture for rigidity  
of compact surfaces*

In 1862 in Euleri Opera Postuma in the Section "Geometry" his work under number 97 from 1770-years was published in which he considers a question on the existence of a transformation of two surfaces such that the corresponding points at surfaces would have the same distances between them (now such a transformation is called isometric one). At the end of his article he has supposed that if a figure is bounded and closed from everywhere then it does not admit such a variation unless it is not broken. As an example he gives although a presentation of such variation of semi-sphere, for example, is by his opinion a very difficult problem. We will show that a settlement of problem needs to be formulated more precisely as for conditions concerning classes of regularity of a given surface as well as for admissible deformations and in addition we will present some examples of non-bendable and bendable surfaces.

**SCIENTIFIC SEMINAR  
"DIFFERENTIAL GEOMETRY AND APPLICATIONS"**

**headed by Academician of RAS Anatoly T. Fomenko**

**The seminar takes place online in ZOOM on Mondays  
from 4:45 p.m. to 6:20 p.m. (Moscow time)**

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