

1106-52-424

**Arseniy V. Akopyan** and **Alexey Glazyrin\*** (alexey.glazyrin@utb.edu). *On the total perimeter of disjoint convex bodies.*

In 2012, Filip Morić and one of the authors posed a conjecture that for any convex planar body  $S$  and for any  $k$  disjoint convex bodies  $S_i$  inside  $S$ , the sum of perimeters of these convex bodies must satisfy  $\sum p(S_i) \leq p(S) + 2(k-1)d(S)$  (here by  $p()$  and  $d()$  we mean perimeters and diameters of corresponding bodies). In 2013, this conjecture was proved by Rom Pinchasi.

Using the initial averaging idea of Pinchasi, we suggest a new approach to the conjecture via generalized distances and generalized perimeters defined with respect to convex bodies, in particular, bodies of constant width. (Received August 27, 2014)