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Metric transformations that preserve the geometric characteristics of finite metric spaces.

The filling of a finite metric space is a weighted graph connecting it, such that the minimum weight of the path between the vertices corresponding to the points of the metric space is not less than the distance between them. The minimum filling is the filling of the minimum weight, and the type is the graph itself without the weight function. Ivanov and Tuzhilin proved that transformations of the type $\rho \mapsto \lambda\rho + a$ for $a > \lambda a_\rho$, $\lambda > 0$, where a_ρ is some number depending on the metric ρ preserve the types G of minimal fillings of the metric space whose points correspond to vertices of degree 1 of the graphs G, which is a sufficient condition for the types to be preserved. The talk will consider classes of transformations for which necessary and sufficient conditions are obtained under which the transformations preserve the types of minimal fillings.

SCIENTIFIC SEMINAR
"DIFFERENTIAL GEOMETRY AND APPLICATIONS"

headed by Academician of RAS Anatoly T. Fomenko

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