Seminar/Talk

Waists of balls in different spaces

Arseniy Akopyan
IST Austria

Host: Jan Maas

Gromov and Memarian (2003--2011) have established the waist inequality asserting that for any continuous map f from the sphere S^n to R^n-k there exists a fiber f^-1(y) such that every its t-neighborhood has measure at least the measure of the t-neighborhood of an equatorial subsphere S^k of S^n.Going to the limit we may say that the (n-k)-volume of the fiberf^-1(y) is at least that of the standard sphere S^k. We extend this limit statement to the exact bounds for balls in spaces of constant curvature, tori, parallelepipeds, projective spaces and other metric spaces.By the volume of preimages for a non-regular map f we mean its lower Minkowski content, some new properties of which will be also presented in the talk.(based on the joint work with Roman Karasev and Alfredo Hubard)

Thursday, February 8, 2018 04:00pm - 06:00pm
Big Seminar room Ground floor / Office Bldg West (I21.EG.101)

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