

Geometry Seminar
Tuesday, Dec 07, 2010
Room 201 WWH at 6:00 P.M.

From the sandwich to the waist

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I will talk about a Ham Sandwich/Borsuk Ulam type theorem. Let K be a convex body, for any prime power $n = p^k$ it is possible to partition K into n convex pieces with equal areas and equal perimeter.

This confirms a conjecture of Nandakumar and Ramana Rao (for all prime powers). The proof uses some basic ideas from optimal transport and from equivariant topology. It turns out that this is closely related to one of the main ingredients of the proof by Gromov of the Waist of the Sphere inequality.

This is joint work with Boris Aronov.

For more information please visit the seminar website at:
http://www.math.nyu.edu/seminars/geometry_seminar.html.