IST AUSTRIA
Institute of Science and Technology

Mathematics and CS Seminar

# GeomTop Seminar: Ham-Sandwich cuts and center transversals in subspaces


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**Host: Uli Wagner**



The Ham-Sandwich theorem is a well-known result in geometry. It states that any $d$ mass distributions in $\mathbb{R}^d$ can be simultaneously bisected by a hyperplane. The result is tight, that is, there are examples of $d+1$ mass distributions that cannot be simultaneously bisected by a single hyperplane. In this talk we will study the following question: given a continuous assignment of mass distributions to certain subsets of $\mathbb{R}^d$, is there a subset on which we can bisect more masses than what is guaranteed by the Ham-Sandwich theorem?
We will study two different types of subsets, motivated by conjectures by Luis Barba (which we will answer) and Stefan Langerman (which we solve only in a relaxed setting), respectively. Some of the results we also extend to center transversals, a generalization of Ham-Sandwich cuts.


## Wednesday, May 15, 2019 01:00pm - 02:15pm

IST Austria Campus Mondi Seminar Room 3, Central Building

This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: https://ist.ac.at/en/campus/how-to-get-here/ The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.