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Distribution functions of sections and projections of convex bodies

Typically, when we are given the section (or projection) function of a convex body, it means that in each direction we know the size of the central section (or projection) perpendicular to this direction. Suppose now that we can only get the information about the sizes of sections (or projections), and not about the corresponding directions. In this talk we will discuss to what extent the distribution function of the areas of central sections (or projections) of a convex body can be used to derive some information about the body, its volume, etc. (Joint work with V. Yaskin and A. Zvavitch)