

# MEAN TYPE SUCCESSIVE RADII OF CONVEX BODIES

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(Joint work with Lidia Gordo)

For a convex body  $K$  of the  $n$ -dimensional Euclidean space, we define the successive outer and inner radii, denoted respectively by  $R_i(K)$  and  $r_i(K)$ ,  $i = 1, \dots, n$ , in the following way:  $R_i(K)$  is the smallest radius of a solid cylinder with  $i$ -dimensional spherical cross section containing  $K$ , whereas  $r_i(K)$  is the radius of the greatest  $i$ -dimensional ball contained in  $K$ . These measures generalize the well-known functionals diameter, minimal width, circumradius and inradius of  $K$ , and can be also defined via the circumradius/inradius of suitable projections/sections of the convex body  $K$ .

Our aim in this talk is to present the known results as well as some extensions and recent developments about them. Furthermore, the relation between the different successive radii and other relevant geometric measures, like the volume or the Gaussian measure, will be also pointed out.