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The (φ, ψ) Orlicz mixed affine and geominimal surface areas

The affine surface area is one of the central notions in the Brunn-Minkowski theory for convex bodies. Its special properties make the affine surface area very useful in the valuation theory, approximation of convex bodies by polytopes, affine isoperimetric inequalities, etc. The geominimal surface area is closely related to the affine surface area, and can be used to connect various geomtrices such as affine geometry, Minkowski geometry and relative geometry. It natrually leads to the fundamental object: Petty body. In this talk, we will present the (φ, ψ) Orlicz mixed affine and geominimal surface areas, and discuss their related properties, such as homogeneity, affine invariance, affine isoperimetric inequalities and continuity.