The Klain approach to zonal valuations

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We show an analogue of the Klain–Schneider theorem for valuations that are invariant under rotations around a fixed axis, called zonal. Using this, we establish a new integral representation of zonal valuations involving mixed area measures with a disk. In our argument, we introduce an easy way to translate between this and representations involving (more general) mixed area measures, yielding in particular a shorter proof of a recent characterization by Knoerr.

This is joint work with L. Brauner and O. Ortega-Moreno.