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Integral Geometry of Local Functionals

The classical kinematic formulas in Integral Geometry, the Principal Kinematic Formula and the Crofton Formula, have led to various similar results for local functionals like area and curvature measures, Minkowski tensors, flag measures etc. Splitting kinematic integrals into their translative and their rotational part produced new results, which were useful in the study of stationary random sets and in local stereology.

In the talk we survey some aspects of this development.