

ON INTEGRAL GEOMETRIC INEQUALITIES

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It is well-known that among all domains of fixed surface area in the Euclidean space R^n the ball encloses the maximum volume. The classical isoperimetric inequality asserts that the circle encloses the maximum area among all closed planar curves of fixed perimeter. There are also other type analytic and integral (isoperimetric) inequalities, such as, the Wulff isoperimetric inequality, the Gage isoperimetric inequality, the Ros isoperimetric inequality, the Sobolev inequality, the Alexandrove-Fenchel inequality and other geometric inequalities.

We are going to survey and discuss some recent discovers and works. The Minkowski mixed symmetric isohomothetic inequality, the mixed symmetric isoperimetric inequality and some Bonnesen-type mixed symmetric isohomothetic inequalities will be introduced. We also like to investigate the Wulff flow from the aspect of integral geometry.

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