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*Alexandrov-Fenchel type inequalities for hypersurfaces in the sphere*

The Alexandrov-Fenchel inequalities in the Euclidean space are inequalities involving quermassintegrals of different orders and are classical topics in convex and differential geometry. Brendle-Guan-Li proposed a conjecture on the corresponding inequalities for quermassintegrals in the sphere. In this talk, we introduce some new progress on this Conjecture.