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Dual cyclic Brunn-Minkowski inequalities. (English) Zbl 1331.52016
Bull. Belg. Math. Soc. - Simon Stevin 22, No. 3, 391-401 (2015).

An application of Minkowski and Hölder inequalities to functions on the sphere \mathbb{S}^{n-1} led the author to a new interpolation type inequality between norms L_r, L_s, L_t for $r, s, t \in \mathbb{R}$. This was furthermore used to derive new Brunn-Minkowski type inequalities for dual quermassintegrals of star bodies in \mathbb{R}^n considered successively with the Minkowski addition, and radial Blaschke addition, and harmonic Blaschke addition. The author's new Brunn-Minkowski inequalities generalize known dual Brunn-Minkowski inequalities for the radial additions listed above, two of them dating back to Lutwak's paper on dual mixed volumes from 1975 where many Brunn-Minkowski duality questions originate.

Reviewer: [Alina Stancu \(Montréal\)](#)

MSC:

[52A40](#) Inequalities and extremum problems involving convexity in convex geometry Cited in **3** Documents
[52A30](#) Variants of convex sets (star-shaped, (m, n) -convex, etc.)

Keywords:

[dual Brunn-Minkowski inequality](#); [harmonic Blaschke addition](#); [radial Blaschke addition](#); [radial Minkowski addition](#)

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