

Higher-order Petty's projection inequality

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In 1970 Schneider defined and studied the higher order difference body $D^\ell K \subseteq \mathbb{R}^{n\ell}$ of a convex body $K \subseteq \mathbb{R}^n$. Inspired by the connection of the difference body and the projection body through the covariogram function, we define the higher-order projection body and prove the corresponding Petty projection inequality. The result uses a new symmetrization method.

(joint work with D. Langharst, E. Putterman, M. Roysdon and D. Ye)