

# Generalizations of Bullen type inequalities

(Poster)

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(joint work with J. Pečarić)

Abstract.

Bullen inequalities

$$0 \leq \frac{1}{b-a} \int_a^b f(t) dt - f\left(\frac{a+b}{2}\right) \leq \frac{f(a)+f(b)}{2} - \frac{1}{b-a} \int_a^b f(t) dt$$

hold for a convex function  $f$  defined on  $[a, b] \subset \mathbf{R}$ . We prove weighted and non-weighted generalizations of Bullen type inequalities for  $(2n)$ -convex functions ( $n \in \mathbf{N}$ ) using some generalizations of the weighted Montgomery identity.

MSC2010: 26D15, 26D20, 26D99.

Keywords: Bullen type inequalities, Montgomery identity.