

Hardy type and more general weighted integral inequalities

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First I present and discuss Hardy's original inequality and some historical remarks concerning this inequality. After that I present some, in my opinion, important questions and developments up to the theory presented in the Opic-Kufner book [1]. I will also present some newer results concerning more general integral inequalities and my own picture of the state of art including some information we have collected and developed in [2]. I will also present some new results and thoughts concerning limiting inequalities of Carleman (Knopp -Carleson) type (see e.g. [3]). A number of open questions will be raised.

References

- [1] B. Opic and A. Kufner, *Hardy-type inequalities*, Pitman Research Notes in Mathematics Series, Scientific & Technical, Harlow, 1990.
- [2] A. Kufner and L.E. Persson, *Integral Inequalities with Weights*, book manuscript, 2000.
- [3] L.E. Persson and V. Stepanov, *Weighted integral inequalities with the geometric mean operator*, Doklady Mathematics **377** (2001).