

Suket Kumar

Norm inequalities in weighted amalgam

Comment.Math.Univ.Carolin. 59,3 (2018) 317–325.

Abstract: Hardy inequalities for the Hardy-type operators are characterized in the amalgam space which involves Banach function space and sequence space.

Keywords: Hardy's inequality; amalgam space; weight function

AMS Subject Classification: 26D10, 26D15

REFERENCES

- [1] Bennett C., Sharpley R., *Interpolation of Operators*, Pure and Applied Mathematics, 129, Academic Press, Boston, 1988.
- [2] Berezhnoĭ E. I., *Sharp estimates of operators on the cone of ideal spaces*, Trudy Mat. Inst. Steklov. **204** (1993), Issled. po Teor. Differ. Funktsii Mnogikh Peremen. i ee Prilozh. 16, 3–34 (Russian); translation in Proc. Steklov Inst. Math. **204** (1994), no. 3, 1–25.
- [3] Carton-Lebrun C., Heinig H. P., Hofmann S. C., *Integral operators on weighted amalgams*, Studia Math. **109** (1994), no. 2, 133–157.
- [4] Fournier J. J. F., Stewart J., *Amalgams of L^p and ℓ^q* , Bull. Amer. Math. Soc. (N.S.) **13** (1985), no. 1, 1–21.
- [5] Jain P., Kumar S., *Weighted inequalities of Hardy-type on amalgams*, Real Anal. Exchange **34** (2008/2009), no. 2, 483–499.
- [6] Jain P., Kumar S., *Boundedness of Hardy operators on generalized amalgams*, Math. Inequal. Appl. **12** (2009), no. 3, 549–562.
- [7] Kufner A., Persson L.-E., *Weighted Inequalities of Hardy Type*, World Scientific Publishing, River Edge, 2003.
- [8] Lomakina E., Stepanov V., *On the Hardy-type integral operators in Banach function spaces*, Publ. Mat. **42** (1998), no. 1, 165–194.
- [9] Luxemburg W. A. J., *Banach Function Spaces*, Ph.D. Thesis, Delft Institute of Technology, Aseen, 1955.
- [10] Salvador P. O., Torreblanca C. R., *Hardy operators on weighted amalgams*, Proc. Royal Soc. Edinburgh, Section A **140** (2010), no. 1, 175–188.
- [11] Wiener N., *On the representation of functions by trigonometrical integrals*, Math. Z. **24** (1926), no. 1, 575–616.
- [12] Zharov P. A., *On a two-weight inequality. Generalization of Hardy and Poincaré inequalities*, Trudy Mat. Inst. Steklov. **194** (1992), Issled. po Teor. Differ. Funktsii Mnogikh Peremen. i ee Prilozh. 14, 97–110 (Russian); translation in Proc. Steklov Inst. Math. **194** (1993), no. 4, 101–114.