

SOME NEW INEQUALITIES SIMILAR TO HARDY–HILBERT’S INEQUALITY

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Abstract. In this paper we have studied some new inequalities similar to Hardy-Hilbert’s inequality. As applications, we have considered the associated integral inequalities.

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REFERENCES

- [1] YANG BICHENG, AND GAO MINGZHE, *On a best value of Hardy-Hilbert’s Inequality*, Adv. Math. **26**, No. 2(1997), 159–164.
- [2] YANG BICHENG, AND L. DEBNATH, *On new strengthened Hardy-Hilbert’s Inequality*, Int. J. Math. Math. Sci. **21**, No. 1(1998), 403–408.
- [3] YANG BICHENG, *On an extension of Hardy-Hilbert’s Inequality*, Chin. Annal. Math. **23A** (2002), 247–254.
- [4] YANG BICHENG, *On a New Inequality Similar to Hardy-Hilbert’s Inequality*, Math. Inequ. Appl. **6**, No. 1(2003), 37–34.
- [5] G. DAS, AND S. NANDA, *Absolute almost convergence*, Indian J. Maths, **34** (1992), 99–110.
- [6] G. H. HARDY, J. E. LITTLEWOOD AND G. POLYA, *Inequalities*, Cambridge University Press, Cambridge, MA, (1952).
- [7] I. J. MADDOX, *Elements of Functional Analysis*, Cambridge University Press, (1970).
- [8] GAO MINGZHE, AND YANG BICHENG, *On the extended Hilbert’s Inequality*, Proc. Amer. Math. Soc. **126**, 3(1998), 751–759.
- [9] S. SIMONS, *The sequence spaces $l(p_\gamma)$ and $m(p_\nu)$* , Proc. London Math. Soc. **13** (1965), 422–436.
- [10] S. K. SUNANDA, C. NAHAK AND S. NANDA, *Some new generalizations of Hardy’s integral inequality*, Int. J. Math. and Math. Sci. Vol. 2006, Article ID 19013, 1–15.