

## ABOUT BERGSTRÖM'S INEQUALITY

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*Abstract.* In this paper, we generalize identity (3), from where we obtain a refinement of inequalities (1) and (2).

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### REFERENCES

- [1] G. HARDY, J. E. LITTLEWOOD AND G. PÓLYA, *Inequalities*, Cambridge, 1934.
- [2] E. F. BECHENCBAACH AND R. BELLMAN, *Inequalities*, Springer, Berlin, Göttingen and Heidelberg, 1961.
- [3] R. BELLMAN, *Notes on Matrix Theory - IV (An Inequality Due to Bergström)*, Amer. Math. Monthly, Vol. **62** (1955), 172–173
- [4] H. BERGSTRÖM, *A triangle inequality for matrices*, Den Elfte Skandinaviske Matematikerkongress, 1949, Trodheim, Johan Grundt Tanums Forlag, Oslo, 1952, 264–267.
- [5] D. MĂRGHIDANU, J. L. DÍAZ-BARRERO AND S. RĂDULESCU, *New refinements of some classical inequalities*, to appear in Math. Ineq. & Appl.
- [6] D. S. MITRINOVIĆ, *Analytic Inequalities*, Springer-Verlag, Berlin, 1970.