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Jahr: 1980

PURL: https://resolver.sub.uni-goettingen.de/purl?31311157X_0105|log57

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We close the paper by two simple corollaries of Theorem 1.

Corollary 1. Let $0 \leq r < 1$. Then $C(B_{n,\infty}, r, n) = \min \{1, (1 + r)^n - 1\}$.

Proof. Note that $w_{in} = \alpha_i$ for $i = 1, \dots, n$ and apply Theorem 1.

Corollary 2. Let $0 < s \leq 1$. If $A \in L(B_{n,\infty})$, $|A|_\infty \leq 1$ and $|A^n|_\infty = s$, then $|A|_\sigma \geq (1 + s)^{1/n} - 1$.

Proof. If $|A|_\sigma = r < (1 + s)^{1/n} - 1$, then

$$|A^n|_\infty \leq C(B_{n,\infty}, r, n) \leq (1 + r)^n - 1 < s.$$

This study was suggested by V. Pták, to whom I wish to express here my thanks.

References

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