

ON AN EXTREMAL PROBLEM OF GARCIA AND ROSS

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Abstract. We show the equivalence of two extremal problems on Hardy spaces, thus answering a question posed by Garcia and Ross. The proof uses a slight generalization of complex symmetric operators.

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REFERENCES

- [1] GARCIA, S. R., *Approximate antilinear eigenvalue problems and related inequalities*, Proc. Amer. Math. Soc., **136** (2008), no. 1, 171–179.
- [2] GARCIA, S. R., PUTINAR, M., *Complex symmetric operators and applications*, Trans. Amer. Math. Soc., **358** (2006), 1285–1315.
- [3] GARCIA, S. R., PUTINAR, M., *Complex symmetric operators and applications. II*, Trans. Amer. Math. Soc., **359** (2007), no. 8, 3913–3931.
- [4] GARCIA, S. R., ROSS, W. T., *A nonlinear extremal problem on the Hardy space*, Computational Methods and Function Theory, **9** (2009), no. 2, 485–524.
- [5] GARNETT, J. B., *Bounded analytic functions* Pure and Applied mathematics, vol. 96, Academic Press, Inc., New-York-London, 1981.
- [6] HARTMAN, P., *On completely continuous Hankel matrices*, Proc. Amer. Math. Soc., **9** (1958), 862–866.
- [7] KHAVINSON, S. JA., *Two papers on extremal problems in complex analysis*, Amer. Math. Soc. Transl., **129** (1986), no.2.
- [8] NEHARI, Z., *On bounded bilinear forms*, Ann. of Math., **65** (1957), 153–162.
- [9] PELLER, V. V., *Hankel Operators and Their Applications*, Springer, 2003.