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**The Structure of Certain Spaces of Analytic Functions**

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**Abstract.** Let  $\mu$  be a measure of compact support in the complex plane. In 1991 J. E. Thomson described completely the structure of  $H^p(\mu)$ , the closed subspace of  $L^p(\mu)$  spanned by the polynomials, when  $1 \leq p < \infty$ . Here we discuss the extent to which  $R^p(\mu)$ , the closed subspace of  $L^p(\mu)$  spanned by the rational functions having no poles on the support of  $\mu$ , admits a similar description.

**Keywords.** Rational approximation, analytic capacity, direct sum decomposition.

**2000 MSC.** Primary 30E10, 41A10, 41A20; Secondary 30C85, 30H05.

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