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Abstracts of Short Communications and Posters

Section:

8. Analysis

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On a maximal function of a semi-spectral measure

Operator valued L^2-bounded analytic functions on the unit disc $\mathbf{D}$ are considered and specific properties, different from the bounded case are obtained. If $\mathcal{E}$ is a Hilbert space and F an $\mathcal{L}(\mathcal{E})$- valued semispectral measure on the unit torus $\mathbf{T}$, by an appropriate factorization theorem, there exists, an outer L^2 - bounded analytic function $\Theta(\lambda)$ attached to F. The attached function $\Theta(\lambda)$ has some "maximal" properties, and in the particular case of the semispectral measure of a contraction T, there exists an explicit connection between the maximal function and its characteristic function Θ_T. An important application of the maximal function is the infinite-variate Wiener filter for prediction, with applications in multitime prediction case.