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Spectrum and Numerical Range of a Compact Set

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Abstract: In this paper, we define the multivalued entire series in a Banach algebra $\mathcal{A}$ as well as the exponential, the spectrum and the numerical range of a compact set of $\mathcal{A}$. We provide properties for these two sets which are also verified in the univalued case.

Key words: Banach algebra, Hausdorff distance, spectrum and numerical range.

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