

MNR Prize 2022

Citation

The Mahony-Neumann-Room Prize 2022 is awarded to:

Satish K. Pandey and Vern I. Paulsen, A spectral characterization of AN operators, *J. Aust. Math. Soc.* **102** (2017), no. 3, 369–391.

Citation

This paper establishes an elegant spectral characterization theorem for absolutely norming (AN) operators on complex Hilbert spaces of arbitrary dimensions – those that attain their norm on every closed subspace. Although the class of these operators is not closed under addition, the paper characterizes the intersection of these operators with the positive operators as forming a proper cone in the real Banach space of hermitian operators.

Moreover, it provides a counterexample to a previous attempt at characterization in the literature. The methods have been modified and adapted by other authors; for instance, to characterize absolutely minimum attaining operators, and are of interest to the study of the properties of Toeplitz operators.

It is considered that the paper is well written and well structured, with its complicated arguments clearly presented and elucidated by excellent use of examples.