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A continuous model for quasinilpotent operators

Eva A. Gallardo-Gutiérrez[1], **Jonathan R. Partington**[2], **Daniel J. Rodríguez (Speaker)**[3]

A classical result due to Foias and Pearcy establishes a discrete model for every quasinilpotent operator acting on a separable, infinite dimensional complex Hilbert space $\mathcal{H}$. More precisely, given a quasinilpotent operator T on $\mathcal{H}$, there exists a compact quasinilpotent operator K in $\mathcal{H}$ such that T is similar to *a part* of $K \oplus K \oplus \cdots \oplus K \oplus \ldots$ acting on the direct sum of countably many copies of $\mathcal{H}$.

We show that a continuous model for any quasinilpotent operator can be provided. The consequences of such model will be discussed in the context of C_0-semigroups of quasinilpotent operators.

Referencias

[1] B. Sz-Nagy, C. Foias: *Harmonic Analysis of Operators on Hilbert Space*. North-Holland Publ., 1970.

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[1]Departamento de Análisis Matemático,
Universidad Complutense de Madrid e ICMAT
Plaza de Ciencias 3, 28040, Madrid (SPAIN)
eva.gallardo@mat.ucm.es

[2]School of Mathematics,
University of Leeds,
Leeds LS2 9JT, U.K.
J.R.Partington@leeds.ac.uk

[3]Departamento de Matemáticas,
Universidad de Zaragoza
Plaza San Francisco s/n, 50009, Zaragoza (SPAIN)
drluis@unizar.es