

Spectral properties of periodic isometries

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A bounded linear operator T is said to be periodic of period $m \in \mathbb{N}$ if $T^m = I$ and $T^k \neq I$ for every positive integer $k < m$. The spectrum of such an operator consists of (not necessarily all) m -th roots of unity. Isometries with finite spectrum have a spectral decomposition. In this talk, the spectral properties of periodic isometries on a certain class of Banach spaces will be discussed, with special emphasis on isometries on some function spaces, including spaces of continuous functions and spaces of analytic functions.

This talk will be based on the results of joint work with several coauthors, specifically: joint work with Fernanda Botelho, joint work with Chih-Neng Liu, Bui Ngoc Muoi and Ngai-Ching Wong, as well as joint work with Catherine Bénéteau, Fernanda Botelho, María Cueto Avellaneda, Jill E Guerra, and Shiho Oi.