The Baire classes of a Banach Space

Abstract
The Baire classes of a Banach space are defined in a manner parallel to the Baire classes of functions on a compact space $K$. We give background for several open questions regarding the Baire classes on $K$ and the Baire classes of a general Banach space. We discuss the question of whether all Baire classes on $[0, 1]$ are isomorphic, and give some partial results. We also discuss the question of whether the first Baire class of a $C^*$-algebra is a Grothendieck space.

This discussion is based on the recent book Banach Spaces of Continuous Functions as Dual Spaces, CMS Books in Mathematics, Springer–Verlag, co-authored by myself, H. Garth Dales, Anthony To-Ming Lau, and Dona Strauss.

All are cordially invited