

DEPARTMENTAL COLLOQUIUM

Smooth surjections from non-separable Banach spaces

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FRIDAY, NOVEMBER 19, 2010 AT 3:30 PM IN HUME 331

Abstract: *Let $f : E \rightarrow F$ be an onto mapping between two real or complex Banach spaces, with f being differentiable (in some sense). We describe work with J. Jaramillo (Madrid) on when there is a smaller Banach space $G \subset E$ such that the restriction of f to G remains surjective. Essentially, there are four separate cases, depending on whether $\dim F = 1$ or $\dim F \geq 2$ and on whether we are dealing with real or complex scalars.*