



# Colloquium del Departamento de Análisis Matemático

**Aleksey Popov**

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**“Every operator has almost-invariant  
subspaces”**

**Jueves 27 de noviembre de 2014**  
a las 13:00 horas en el seminario 222

**Abstract:**

In this talk we will show that any bounded operator on a separable, reflexive, infinite-dimensional Banach space admits a rank one perturbation which has an invariant subspace of infinite dimension and co-dimension. In the non-reflexive spaces, we show that the same is true for operators which have non-eigenvalues in the boundary of their spectrum. In the Hilbert space, our methods produce perturbations that are also small in norm, improving on an old result of Brown and Pearcy. This is a joint work with Adi Teaciuc.

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