Colloquium

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Claremont McKenna College

Friday, October 15, 2010 at 3pm in Bell Hall 143

Norms That Are Not: Projections With Respect to Numerical Radii

Let $T \in B(X)$ where $B(X)$ is a Banach algebra of all continuous linear operators on a Banach space X. Operator norm:

$$\|T\| = \sup |\langle Tx, y \rangle|$$
$$(x, y) \in B(X) \times B(X^*)$$

while numerical radius:

$$\nu(T) = \sup |\langle Tx, y \rangle|$$
$$(x, y) \in B(X) \times B(X^*)$$
$$\langle x, y \rangle = 1$$

The interplay between $\|T\|$ and $\nu(T)$ has been subject of much research since Bauer's definition of numerical range in 1960's. After pointing out some major results in this area, I will discuss how extension of operators, in particular minimality of projections can be measured with respect to numerical radius.

For further information, please contact Dr. Emil Schwab, eschwab@utep.edu
Refreshments will be served in front of the colloquium room,
15 minutes before the start of the colloquium.