Title:  *Some Applications of Kuelb's Theorem to Banach spaces*

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Abstract: In this talk we apply a theorem of Kuelbs' on continuously and densely embedding separable Banach spaces in Hilbert spaces to obtain a sufficient (and perhaps in some cases also necessary?) condition for a closed, proper subspace of a separable Banach space to be complemented. To motivate our approach, we first show that $c_0$ is dense in $\ell_\infty$ with respect to the topology of a Hilbert space, H, containing $\ell_\infty$. We note that this suggests a connection to a well-known result, due to R. S. Phillips (1940), that $c_0$ is not complemented in $\ell_\infty$.