

1067-46-202

**Ioana Ghenciu\*** (ioana.ghenciu@uwrf.edu), River Falls, WI 54022, and **Paul Lewis**.

*Unconditional convergence in the strong operator topology and  $\ell_\infty$ .* Preliminary report.

In this paper we study non-complemented spaces of operators and the embeddability of  $\ell_\infty$  in the spaces of operators  $L(X, Y)$ ,  $K(X, Y)$ , and  $K_{w^*}(X^*, Y)$ . Results of Kalton, Feder, Emmanuele, and Bator and Lewis are generalized. A vector measure result is used to study the complementation of the spaces  $W(X, Y)$  and  $K(X, Y)$  in the space  $L(X, Y)$ , as well as the complementation of  $K(X, Y)$  in  $W(X, Y)$ .

A fundamental result of Drewnowski is used to establish a result for operator valued measures, from which we obtain as corollaries the Vitali-Hahn-Saks-Nikodym theorem, the Nikodym Boundedness theorem, and a Banach space version of the Phillips Lemma. (Received August 02, 2010)