Ideals in $L(L_p)$

Abstract: I’ll discuss the Banach algebra structure of the spaces of bounded linear operators on $l_p$ and $L_p := L_p(0, 1)$. The main new results are

1. The only non trivial closed ideal in $L(L_p)$, $1 \leq p < \infty$, that has a left approximate identity is the ideal of compact operators (joint with N. C. Phillips and G. Schechtman).

2. There are infinitely many; in fact, a continuum; of closed ideals in $L(L_1)$ (joint with G. Pisier and G. Schechtman).

The second result answers a question from the 1978 book of A. Pietsch, *Operator Ideals*.

4:00 p.m.
245 Altgeld Hall
Thursday, April 5, 2018

math.illinois.edu