

Meeting: 1002, Pittsburgh, Pennsylvania, SS 10A, Special Session on Trends in Operator Theory and Banach Spaces

1002-46-121 **Patrick Dowling*** (dowlinpn@muohio.edu), Department of Mathematics and Statistics, Miami University, Oxford, OH 45056. *Convexity properties of ψ -direct sums of Banach spaces.*

Given two Banach spaces X and Y , and a convex function ψ on $[0, 1]$ with $\psi(0) = \psi(1) = 1$ and $\max\{1-t, t\} \leq \psi(t) \leq 1$, for all $0 \leq t \leq 1$, one can in a natural way define the ψ -direct sum of X and Y , $X \oplus_\psi Y$. We will consider the convexity properties of $X \oplus_\psi Y$. (Received September 10, 2004)