G. Androulakis, K. Beanland and F. Sanacory* (sanacory@math.sc.edu), Department of Mathematics, University of South Carolina, Columbia, SC 29201, and S. J. Dilworth. Embedding $\ell_\infty$ into the Space of all Operators on Certain Banach Spaces. Preliminary report.

We give sufficient conditions on a Banach space $X$ which ensure that $\ell_\infty$ embeds in $\mathcal{L}(X)$, the space of all operators on $X$. We say that a basic sequence $(e_n)$ is quasisubsymmetric if it dominates all of its subsequences, and for every sequence $(I_n)$ of intervals of positive integers with $\max(I_n) < \min(I_{n+1})$ there exists a sequence $(m_n)$ with $m_n \in I_n$ such that $(e_{m_n})$ dominates $(e_{k_n})$ for all $(k_n)$ satisfying $k_n \in I_n$. One of our main results is that if a Banach space $X$ has a seminormalized quasisubsymmetric basis then $\ell_\infty$ embeds in $\mathcal{L}(X)$. (Received October 01, 2004)