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Christian Rosendal*, University of Illinois at Chicago, Dept. of Math., Stat., and Comp. Sci.,
851 S. Morgan Street, m/c 249, Chicago, IL 60607-7045. *Descriptive set theory and the
classification of separable Banach spaces.*

The classification problem for separable Banach spaces is notoriously difficult, so much that for a long time no one really seriously have believed that actual progress could be made on it. This belief is underscored by the tremendous developments in the geometric theory of Banach spaces in the '90s with the construction, especially by Gowers and Maurey, of a multitude of badly behaved spaces that showed that the variety of Banach spaces was even bigger than expected. On the other hand, Ramsey theoretical techniques introduced by Gowers indicate that, rather than hoping for an outright classification, one could attempt to classify spaces by finding recognisable subspaces present in all spaces (in logic terminology this is the "basis problem").

We shall present two separate pieces of work, one by Ferenczi, Louveau and Rosendal and the other by Ferenczi and Rosendal that prove the correctness of the first belief, respectively makes progress on the second type of classification. (Received September 10, 2008)