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**Edward Odell\*** ([odell@math.utexas.edu](mailto:odell@math.utexas.edu)), The University of Texas at Austin, Department of Mathematics, 1 University Station C1200, Austin, TX 78712-0257. *Ordinal indices in Banach spaces*. Preliminary report.

We will survey a variety of ordinal indices and their applications to Banach space theory. Let  $X$  be a separable infinite dimensional Banach space. In typical use a property  $(P)$  is considered along with an index  $I_p(X)$  such that  $I_p(X) < w_1$  iff  $X$  fails  $(P)$ . Also  $I_p(X)$  is an isomorphic invariant.  $I_p(X)$  can be used to show indirectly that  $X$  has  $(P)$  by showing  $I_p(X) > \alpha$  for all  $\alpha < w_1$ . A second use is to exhibit uncountably many nonisomorphic members of a given class of spaces. Thirdly to show that a given class does not contain a universal member for another given class. (Received September 09, 2005)