

**Meeting:** 999, Nashville, Tennessee, SS 3A, Special Session on Index Theory and the Topology of Manifolds

999-19-13            **Gennadi Kasparov\*** ([kasparov@math.vanderbilt.edu](mailto:kasparov@math.vanderbilt.edu)), Dept. of Mathematics, Vanderbilt University, 1326 Stevenson Center, Nashville, TN 37240, and **Guoliang Yu** ([gyu@math.vanderbilt.edu](mailto:gyu@math.vanderbilt.edu)). *Uniform embeddings and the Novikov conjecture*. Preliminary report.

I will present a new result (joint work with G. Yu) that discrete groups that admit a uniform embedding in a uniformly convex Banach space satisfy the Novikov conjecture on higher signatures. The proof is based on extending the techniques of the previous work on the Novikov conjecture for groups uniformly embeddable in a Hilbert space. In particular, we construct a Banach algebra associated to a uniformly convex Banach space. The construction is somewhat similar to the previously known construction of a C\*-algebra associated to a Hilbert space. (Received May 31, 2004)