998-18-181   **Roberto Martinez Villa** (`mvilla@matmor.unam.mx`) and **Alex Martsinkovsky***
(`alexmart@neu.edu`). *Koszul duality, stabilization, and derived categories.*Preliminary report.

This is joint work in progress with R. Martinez Villa. We examine a finite-dimensional Koszul quiver algebra and its Koszul-dual, which is necessarily of finite global dimension. Graded modules over the former are subjected to the process of stabilization by the syzygy operation, resulting in a triangulated category. Over the Koszul-dual algebra, the quotient category of graded modules modulo torsion is abelian. Our main result shows that the resulting derived category is equivalent, as a triangulated category, to the stabilized category mentioned before. This result was obtained earlier by Martinez Villa and Saorin but the new proposed approach is more transparent. For a commutative example one may take a polynomial algebra. Thus this result can be viewed as a far-reaching generalization and a conceptual explanation of the Bernstein - Gelfand - Gelfand correspondence. (Received February 25, 2004)