1046-81-8   **Mikhail Khovanov*** (`khovanov@math.columbia.edu`), Department of Mathematics, Columbia University, New York, NY 10027. *Categorification of quantum groups and link invariants.*

We will outline new structural developments on the intersection of low-dimensional topology, representation theory and homological algebra that lead to categorification of various link invariants and categorification of quantum groups. (Received September 17, 2008)