1012-14-190   **Alexander Givental*** (`givental@math.berkeley.edu`), Department of Mathematics, Berkeley, CA 94720. *ADE singularities and integrable hierarchies.*

We will explain how vertex operators and Hirota quadratic equations describing integrable hierarchies associated with affine Lie algebras of ADE type emerge from Picard-Lefschetz periods of the corresponding ADE singularities, how certain tau-functions of these hierarchies are constructed from tau-functions of the KdV hierarchy, and how these constructions are motivated by Gromov-Witten theory and mirror symmetry. This is our joint work with Todor Milanov. (Received September 20, 2005)