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Joseph Gubeladze* (soso@sfsu.edu), Department of Mathematics, San Francisco State University, San Francisco, CA 94132. *Higher K-theory of toric varieties.*

We report on recent progresses in understanding higher K-theory of general toric varieties, accomplished in a series of works of several people. In the second half of the talk we will discuss a conjectural description of higher K-groups of these varieties, representing a far reaching – in a sense the ultimate extension of the known results. In general terms, the theory develops around controlling the failure of homotopy invariance of Quillen’s theory and the conjecture is a multi-graded refinement of the previously known results. The starting point is the positive results for the Grothendieck group of vector bundles on toric varieties, known since the 1980s. (Received July 23, 2014)