Omid Amini: Â Limit linear series and distribution of Weierstrass points

 I will report on recent progress in constructing a general framework for the study of degenerations of linear series on degenerating families of smooth proper curves over a field of characteristic zero, generalizing the Eisenbud-Harris theory of limit linear series from the eighties to any semistable curve. I will then discuss an application to the problem of understanding the limiting behavior of Weierstrass points on such families. This leads to the following non-Archimedean version of a theorem of Mumford and Neeman: let X be a smooth proper curve over a non-Archimedean field of residue characteristic zero, and L an ample line bundle on X. The Weierstrass points of powers of L are equidistributed according to the Zhang measure on the dual graph of a semistable model.Â

The talk is partially based on joint works with M. Baker and with E. Esteves.