COMPLEX ANALYSIS SEMINAR

HOLOMORPHIC *K*-DIFFERENTIALS AND POINCARÉ SERIES MAP

Nadya Askaripour

University of Toledo

ABSTRACT: Let $\sum$ be a hyperbolic Riemann surface, and C is a closed subset of $\sum$. We study the spaces of square integrable and bounded holomorphic k-differentials on $\sum \backslash C$, where $k \geq 2$ is an integer. These spaces are Banach spaces and for special norm we will have Hilbert spaces. Then the Poincaré series which is an important technique to construct k-differentials will be introduced. The main result will provide descriptions of the kernel of the Poincaré series map, which is a surjective, linear map between two spaces of integrable, holomorphic k-differentials. This is a joint work with T. Foth.

Date: Thursday, October 7, 2010
Time: 4pm-5pm
Place: UH 3800

Webpage: `http://math.utoledo.edu/~sonmez/complexseminar.html`