COMPLEX ANALYSIS SEMINAR

THE RIEMANN MAPPING THEOREM: SOME RESULTS

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ABSTRACT:

The proof for the existence of a holomorphic, conformal, bijective map from any open, simply connected, proper subset of the complex plane will be discussed briefly. Then, I will discuss two results: Let the mapping T be defined by $T(z) = \frac{R(z-z_0)}{R^2-\overline{z_0}z}$. Then for $|z_0| < R$, T maps the open disk $D(z_0, R)$ bijectively to the open unit disk centered at the origin such that $T(z_0) = 0$. Also, I will show that given $\{f_n\}$, a sequence of uniformly bounded holomorphic functions, with the domain being the open unit disk centered at the origin, then a subsequence of $\{f_n\}$ converges uniformly on compact subsets to an analytic function on the open disk $D(0, 1)$.

Date: Thursday, March 21, 2013

Time: 4pm-5pm

Place: UH 4100A

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