

# COMPLEX ANALYSIS SEMINAR

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## LOCAL CONFORMAL MAPS OF UNIT DISK ONTO ITSELF OR THE PLANE ONTO ITSELF THAT ARE NOT OBVIOUS

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**ABSTRACT:** The question we ask is the following: Does there exist a locally conformal map of the unit disk onto itself which is not an automorphism? Over the years many people asked me this question and I thought about it off and on without success. Apparently even in Germany this question is asked but slightly differently. They also ask, “Does there exist a locally conformal map of  $\mathbb{C}$  onto itself which is not an automorphism?” The last was answered in the affirmative by Rainer Brücke in the Journal of Complex Variables and Elliptic Equations. In this talk I will explain their approach and provide a proof for the case of the unit disk.

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**Date:** Friday, April 20, 2012 (Special Time)

**Time:** 4pm-5pm

**Place:** UH 4010 (Special Place)

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**Webpage:** <http://math.utoledo.edu/~sonmez/complexseminar.html>