## 1096-30-2352 Brett Hafferkamp\* (brett.hafferkamp@ttu.edu). Expected Values of the Conformal Radius. Preliminary report.

This presentation examines problems on how randomness affects values involving the conformal radius. First, I look at two points contained in disjoint domains. When the points are distributed randomly in a known way, I seek to find an upper bound for the expected value of the product of the conformal radii without knowledge of the domains themselves. Some situations that will be presented are when the points are distributed **a**) uniformly in the unit disk; **b**) with the real parts and imaginary parts being independently and normally distributed. Second, I look at situations where the domain is known, the location of a point within the domain is not known, but it is distributed randomly in a known way. I seek to find exactly the expected value of the conformal radius. Of all domains with a fixed area I believe the disk maximizes this expected value. To that end, I develop a result on how this expected value changes under conformal maps and use the result on parameterized families of domains to provide evidence that supports this conjecture. (Received September 17, 2013)