1139-30-432   **Marie A. Snipes*** (`snipesm@kenyon.edu`). *Harmonic measure distribution functions for a class of multiply-connected symmetrical slit domains.*

The harmonic measure distribution function $h : (0, \infty) \to \mathbb{R}$ of a domain Ω in the complex plane with basepoint $z_0 \in \Omega$ relates the behavior of a Brownian particle in Ω starting at z_0 to the geometry of the domain. For simply connected domains, the harmonic measure distribution function can often be explicitly computed by making use of conformal mapping techniques.

In this talk we give an explicit construction of the harmonic measure distribution functions for multiply connected "slit domains" that consist of the complex plane with a finite number of colinear slits deleted. The method of construction is based on the theory of the Schottky-Klein prime function, as recently developed by Crowdy and collaborators including Marshall and Green. This is joint work with Darren Crowdy, Chris Green, and Lesley Ward. (Received February 18, 2018)