

## **Timothy Budd**

*Title: Random Hyperbolic Surfaces*

Going back at least to the works of Witten and Kontsevich, it is known that (symplectic or Weil-Petersson) volumes of moduli spaces of Riemann surfaces share many features with the enumeration of maps. It is therefore natural to expect that the theory of random hyperbolic metrics sampled according to the Weil-Petersson measure on, say, punctured spheres is closely related to the theory of random planar maps. I will highlight some similarities and show that tree bijections, which are ubiquitous in the study of random planar maps, have analogues for hyperbolic surfaces. As an application, jointly with Nicolas Curien, we show that these random hyperbolic surfaces with properly rescaled metric admit a scaling limit towards the Brownian sphere when the number of punctures increases.