

Geometry and Topology Seminars

University of Auckland
Department of Mathematics

Thursday 9 January 2020

Room 302-G20

Abstracts

Speaker: Edward Witten (**2-3pm**)

Title: Random Matrices and Volumes of Supermoduli Space

Abstract: Recent work by P. Saad, D. Stanford, and S. Shenker gave a new perspective on the relationship between the volumes of moduli spaces of Riemann surfaces and a certain random matrix ensemble. In this talk, I will describe work with Stanford in which we similarly constructed a random matrix ensemble that is expected to compute the volumes of moduli spaces of super Riemann surfaces. The resulting formulas for these volumes can be proved by generalizing Maryam Mirzakhani's work on the volumes of moduli spaces.

Speaker: Michael Freedman (**3:30-4:30pm**)

Title: The house that Bing built, now in higher dimensions

Abstract: This talk is a playful tour of inter-related topics in differential geometry (Gromov's "almost negative metrics") and geometric topology (non-separating PL immersions of S^{n-1} in \mathbb{R}^n), based on recent joint work with Tam Nguyen-Phan. No previous background is required; the discussion will be entirely elementary.
