APPLIED MATHEMATICS COLLOQUIUM

"Numerical Computations in Random Matrix Theory"

Sheehan Olver
(University of Sydney)

Abstract: Random matrix theory has undergone significant theoretical progress in the last two decades, including proofs on universal behaviour of eigenvalues as the matrix dimension becomes large, and a deep connection between algebraic manipulations of random matrices and free probability theory. Underlying many of the analytical advances are tools from complex analysis. By developing numerical versions of these tools, it is now possible to calculate random matrix statistics to high accuracy and sample from a broader class of unitary ensembles, leading to new conjectures on the behaviour of random matrices.

Monday November 24, 2014
4:30 PM
Room E17-122

Applied Math Colloquium: http://www-math.mit.edu/amc/fall14/
Math Department: http://www-math.mit.edu

Massachusetts Institute of Technology
Department of Mathematics
Cambridge, MA 02139

Massachusetts Institute of Technology