THE CSI MATH CLUB PRESENTS:

PRINCIPLES OF GENERATIVE DIFFUSION MODELS

DR. ROBERT FERRANDO

THURSDAY, SEPTEMBER 18 AT 2:30PM
ROOM 1S-219

Abstract: Recent developments in generative diffusion models have contributed to a wide variety of application areas, from image generation to drug discovery and numerical weather prediction. In this talk, we will provide a self-contained introduction to the mathematical principles of diffusion models, driven by what we will refer to as the forward and backward stochastic processes. We will also look at some examples of image generation and examine the dynamical phase transitions evident in the backward process. Students of all levels of mathematical background and interest are encouraged to attend! **Pizza and snacks will be provided!**