Title: The rough journey of Brownian motion: from pollen particles, to Avogadro number, to stock markets.

Abstract: The history of Brownian motion dates back nearly 250 years when it was observed that coal and pollen particles in a liquid move in a jittery, seemingly random way. Since its discovery, Brownian motion has found remarkable applications in the sciences, such as helping us count the number of molecules in a room and modelling stock prices. In this lecture, we will explore some of these applications, highlighting several striking and counter-intuitive properties of this motion, and where its study has recently taken us.