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**JEFFREY ROSENTHAL**, University of Toronto  
*From Coins to Polls to Monte Carlo*

This talk will discuss randomness and probability in relation to such questions as: If you flip 100 coins, how close will the number of heads be to 50? How many dying patients must be saved to demonstrate that a new medical drug is effective? Why do strange coincidences seem to occur so often? If a poll samples 1,000 people, how accurate are the results? How did statistics help to expose the Ontario Lottery Retailer Scandal? If two babies die in the same family without apparent cause, should the parents be convicted of murder? Why do casinos always make money, even though gamblers sometimes win and sometimes lose? And how is all of this related to Monte Carlo Algorithms, an extremely popular and effective method for scientific computing? No mathematical background is required to attend.