## Puzzles, Paradoxes and Infinity

Magic tricks, the infinite, puzzles, and paradoxes. Chance, coincidence, dimension, and juggling. Music, games, the arts, and cryptography. Such are among the many facets illuminated by mathematics and its powers of deduction. This course is directed at students who may have limited exposure to mathematics, but remain curious and open to explore how reasoning about patterns, structure and quantity can help us see through card tricks and puzzles, and how the laws of math affect the world around us and our own trajectories in the every day. Due to the large variety of material that can be covered, choice of topics will in part be determined by the interests of the course participants.