Abstract

Throughout history, scientific progress has been defined by the tools we build to extend our perception. Today, artificial intelligence stands as our newest instrument -not merely as a computational engine, but as a revolutionary lens for deciphering the nature of reality. This talk will cover the philosophy and approach of Google DeepMind's AI for Science program. In particular, I will discuss our approach to selecting "root node" problems covering the different disciplines of science from biology, materials and energy, maths and computing. I will conclude by reflecting on the transition toward open-ended, agentic AI systems that actively generate novel hypotheses, and their implications for the future of scientific inquiry.