

Abstract

Lean is an interactive theorem prover that turns mathematical arguments into machine-checked proofs. This talk will introduce how mathematics is expressed in Lean, how its library **mathlib** supports large formal developments, and what formal verification adds to ordinary proof. This talk will also include the recent impact of AI and how we collaborate with AI to accomplish amazing projects like the formalization of the disproof of Erdős's unit-distance conjecture by OpenAI.