

The Turing Computational Model

The panel presentations will discuss the beauty and simplicity of the Turing machine formulation of the previously elusive concept of computability and the intuitively satisfying explanation of the power and limitations of computability. They will also review how the Turing machine model provided simple proofs of deep results in logic, including gödel's incompleteness theorem. The panel will also examine specific results in computer science influenced by the Turing machine model as well as how it shaped the development of computational complexity theory. Quantum computing will be discussed and its relationship to the classic Turing machine model. The panel will also discuss what Alan Turing might say about the Inevitable Fallibility of Software.