Will computers prove theorems?

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Sobre o orador: Kevin Buzzard is an algebraic number theorist. He was a PhD student of Richard Taylor in Cambridge UK, graduating in 1995. After post-docs in Cambridge, Princeton and Berkeley he got a lectureship at Imperial College in London in 1998, and is currently a professor of pure mathematics there. He gave a plenary lecture at the 2022 ICM on uses of computers in mathematics.

Sumário

Computers have been much better than humans at *calculations* for many decades now. In particular, in some areas of mathematics, they can work out lots of examples so that humans can test hypotheses. But when it comes to *proving* they are still completely primitive; they can understand our arguments, but there is only very limited evidence that they can come up with original arguments. So can computers help us to prove theorems, or even prove theorems by themselves? I will survey the state of the art. No background in computer science will be assumed.