

Re: Amateur takes on Wiles's work

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akolowski@hotmail.com (Andrzej Kolowski) writes:

- > *I like this idea of a "null test". Here is how I understand it.*
- > *You take the conclusion of a given proof. You state its negation.*
- > *You then go through the proof line by line to see if anything*
- > *contradicts the negation.*
- >
- > *If there is *no* step that contradicts the negation, then the*
- > *proof must be wrong.*
- >
- > *If there *is* a step that contradicts the negation, then it*
- > *is still possible that the proof is wrong. You just have*
- > *slight and nonconclusive evidence that it isn't.*

You overestimate the utility of the null test.

Let P be the conclusion of a given proof, so that we will assume NOT P and look for contradictions.

What does "contradict" mean here?

(1) NOT P contradicts Q iff Q is either P or NOT NOT P.

Not very useful, NOT P probably only contradicts the conclusion P.

(2) NOT P contradicts Q iff $T, \text{NOT } P, Q \vdash R \ \& \ \text{NOT } R$ for some R, where T is the theory in which we work.

Not very useful. Since $T \vdash P$, clearly $T, \text{NOT } P, Q \vdash P \ \& \ \text{NOT } P$ for every formula Q in the proof.

(3) NOT P contradicts Q iff $\text{NOT } P, Q \vdash R \ \& \ \text{NOT } R$ for some R.

Similar to (1). Not very useful.

So how is this test useful?

sci.math: Re: Amateur takes on Wiles's work

[Snip remainder, in which it becomes probable that Andrzej was having James on and I've wasted my time writing this. Dagnabit.]

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"I'm talking about mathematics--hard, brutal, extreme ... pushing your mind beyond the limits to understand what no one else can because they're afraid to risk it all, to lose their freaking worthless minds in the push to know." --James Harris, for the Nike Derivator