Review of: "Bridging Classical and Computational Physics: Integrating Unsolvable Differential Equations into Undergraduate Education"

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Potential competing interests: No potential competing interests to declare.

I absolutely agree with the author; it is absolutely important to integrate unsolvable differential equations into undergraduate education. I found it very helpful for students to be able to collect data, follow the unsolvable differential equations, and use computational techniques to predict what's happening to the system. In fact, I bought a complete set of the author's books on "**Mathematical Modeling and Computational Calculus**". I found it very helpful for introducing students to their early higher education.

I do find this paragraph "[[Unsolvable differential equations are also invisible in physics education literature, so if you search for 'unsolvable differential equation' in all issues of the AJP, Physics Today, Nature Physics, and Physical Review Physics Education Research, you'll get only one hit, my AJP Letter to the Editor <u>A Revolution in Physics was Forecast in 1989, Why Hasn't It Happened?</u> What Will It Take']]" a bit overstated. In Calculus 1 and 2 courses, students have a chance to encounter Newton's method, linear approximations, and Euler's method. Calculus-based Physics 1 and 2 will also expose students to numerical solutions to unsolvable differential equations.

In addition, the math formulas in the article are inconsistent; some are in math mode, and some are in text mode. I wish it was nicely typed and made it easy to follow. In addition, it might be a good idea to add a table of contents. After all, this is not a short paper, and it can be used by instructors from different subjects. With a table of contents, it will help readers find the examples of their interests.

Again, I appreciate the author for writing the paper. I will reference this article when I look for proper examples when introducing computational mathematics to students in different majors.