

Abstract Submitted
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Teaching computational physics: An embarrassment of riches for teaching computational physics AMY BUG, Swarthmore College, LARRY ENGELHARDT, Francis Marion University — The first decade of the 21st century has provided a wealth of exceptional resources for teaching computational physics, including numerous textbooks, libraries of computer codes (visual as well as numerical), and high-level interfaces for accessing these libraries. We are now faced with the very real challenge of choosing which of these resources to incorporate into the finite number of courses available in a given curriculum. This choice depends on several factors: How much time can be allocated to teaching computational methods and at what stage in the curriculum? What are the goals? (Learning physics better? Being prepared to work in research labs studying large-scale problems?) Are commercial packages an appropriate option for your student population? In recent years one of us (L.E.) has taught three undergraduate computational physics courses per year. The other (A.B.) has taught at various points in the undergraduate spectrum (a seminar for seniors, a computational methods lab for sophomores, a summer research experience for freshmen from underrepresented groups). Thus, while there are no right or wrong answers to these questions, we will present some of the decisions we have made, and will discuss the consequences.

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