

THE INVISIBLE PROGRAMMERS

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ABSTRACT

The visibility of personal computers and the Internet hides the fact that most software development is done for embedded systems in industry and commerce and not for standalone packages. Programmers and engineers in these environments are required to have a different set of skills and a different approach to software than are currently taught in most computer science curricula. The talk is a plea for diversity in CS education, as opposed to the uniformity that has taken hold during the past few years. I will demonstrate two approaches for achieving reliable software and show that they are accessible to students even at a relatively introductory level.

SHORT BIO

Mordechai (Moti) Ben-Ari is an associate professor in the Department of Science Teaching of the Weizmann Institute of Science, where he heads a group that develops courses in computer science for high school students and performs pedagogical research. He holds a Ph.D. in mathematics and computer science from the Tel Aviv University. In 2004, he received the ACM/SIGCSE Award for Outstanding Contributions to Computer Science Education. He is the author of numerous textbooks on concurrent computation, programming languages, mathematical logic and the nature of science. His research interests include the use of visualization in teaching computer science, concurrent and distributed computation, and the application of theories of education to computer science education. He has spent two sabbaticals here in Finland—at the University of Joensuu and at the Helsinki University of Technology.