The visibility of personal computers hides the fact that most software development is done for systems in industry and business, and not for standalone software 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 (CS) curricula.

Furthermore, the talk of a hi-tech, internet-driven revolution during the last decade is inaccurate from a historical perspective, and this loss of perspective has led to demands for an artifact-driven CS curriculum. A comparison of the ACM/IEEE CC2001 curriculum with the curriculum of a traditional engineering discipline points to what I believe the future of CS education should be.

The talk will conclude with a survey of my work on teaching concurrent and distributed computation using model checking. I will show how this advanced technique can be presented to undergraduate and even high-school students.

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. He holds a PhD in mathematics and computer science from the Tel Aviv University. In 2004, Ben-Ari 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 introductory computer science and the pedagogy of concurrent and distributed computation.

12:00-13:00 on Tuesday, 27 October, 2009 - Saal Auditorium, Alon Bldg (37/202)