From Computational Thinking to Computational Values

Hal Ableson
Professor of Electrical Engineering and Computer Science Massachusetts Institute of Technology

SIGCSE members love the beauty of computational thinking. They know the joy of bringing those ideas to young people. That love for computational thinking entails respect for the computational values that empower people in the digital world. For academics, those values have been central to the flowering of computing as an intellectual endeavor.

Today, those values are increasingly threatened by stresses from both within and outside academia: squabbles over who owns academic work, increasingly stringent and overreaching intellectual property laws, and the replacement of open computing platforms by closed applications and walled-garden application markets.

In this talk I'll describe some things we've done at MIT to support computational values, like open publication of all our course materials, our faculty policy on open publication of academic research, and our recently announced initiative for open online instruction based on non-proprietary software platforms. I'll discuss Creative Commons licensing and Free Software, and the importance of tinkerability for empowering citizens in an information society. And I'll describe App Inventor for Android, a new programming tool motivated by the vision that all of us us can experience mobile computing as creators using tools that we can control and reshape, rather than only as consumers of packaged applications.