

# Title: Teaching and Learning Computer Science

**Abstract:** What does recent research in the learning sciences have to offer computer science researchers and course designers? How can we use learning environments to improve computer science education? This talk will analyze recent innovations in the use of lab-based courses, collaborative learning, and programming case studies. I will integrate the research of the Technology-Enhanced Learning in Science (TELS) center with my experiences in design of computer science courses to identify some fruitful directions for the field.

**Marcia C. Linn** is professor of development and cognition specializing in education in mathematics, science, and technology in the Graduate School of Education at the University of California, Berkeley. She is a member of the National Academy of Education and a Fellow of the American Association for the Advancement of Science, the American Psychological Association, and the Association for Psychological Science. She has served as Chair of the AAAS Education Section and as President of the International Society of the Learning Sciences. She directs the NSF-funded Technology-enhanced Learning in Science (TELS) center. Board service includes the American Association for the Advancement of Science board, the Graduate Record Examination Board of the Educational Testing Service, the McDonnell Foundation Cognitive Studies in Education Practice board, and the Education and Human Resources Directorate at the National Science Foundation.

Linn earned her Ph. D. at Stanford University where she worked with Lee Cronbach. She spent a year in Geneva working with Jean Piaget, a year in Israel as a Fulbright Professor, and a year in London at University College. She has twice been a fellow at the Center for Advanced Study in Behavioral Sciences.

Linn's books include *Designing Pascal Solutions* (1992), *Computers, Teachers, Peers* (2000), *Internet Environments for Science Education* (2004), *Designing Coherent Science Education* (2008), and *WISE Science* (2009). She chairs the Technology, Education—Connections (TEC) series for Teachers College Press.

Awards include the National Association for Research in Science Teaching Award for Lifelong Distinguished Contributions to Science Education, the American Educational Research Association: Willystine Goodsell Award, and the Council of Scientific Society Presidents first award for Excellence in Educational Research.

See <http://telscenter.org/> for more information.