Title: Expanding the Frontiers of Computer Science Education

Abstract:
It is well known that there have been large swings in Computer Science enrollments in the last two decades. Many factors have been cited for these enrollment changes, including changes in the economy in the high-tech sector and the general image of computing. In this talk, we begin by examining some of the factors affecting enrollments in CS, analyzing both historical and current trends. In light of this analysis, we then turn our attention to significant changes made in Stanford's undergraduate CS program, which aim to expand the scope of education in computer science and highlight the diversity of options available in the field. We discuss the results of these changes--a near doubling in undergraduate CS enrollments in just two years--and analyze some of the reasons why. We finally look at CS curriculum development at the international level, discussing the effort to define a new ACM/IEEE-CS Computing Curricula volume on Computer Science by the year 2013, known as CS2013.

Short bio:
Mehran Sahami is an Associate Professor and Associate Chair for Education in the Computer Science department at Stanford University. Prior to joining the Stanford faculty, he was a Senior Research Scientist at Google for several years. His research interests include computer science education, machine learning, and information retrieval on the Web. His work in the Computer Science Education community includes creating and serving as founding chair for the annual Symposium on Educational Advances in Artificial Intelligence (EAAI) as well as serving as co-chair of the ACM/IEEE-CS joint task force on Computing Curricula: Computer Science 2013. He recently spearheaded the redesign of Stanford's undergraduate CS curriculum, which led to a significant increase in the number of students pursuing CS as a major. Additionally, he has published over 40 technical papers and has over 20 patent filings on a variety of topics including web search, recommendation engines in social networks, and email spam filtering that have been deployed in commercial applications. He received his BS, MS, and Ph.D. in Computer Science from Stanford University.