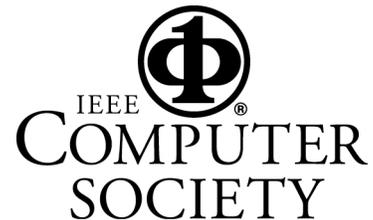


PRINCETON ACM / IEEE-CS CHAPTERS
APRIL 2016 JOINT MEETING



The New ABCs of Research: Achieving Breakthrough Collaborations

How should we organize research programs in computer science and technology? Research helps us produce innovative new products (the next iPhone), and research also delivers “foundational theories” (new algorithms and supporting technologies).

Solving the immense problems of the 21st century will require ambitious research teams that are skilled at producing practical solutions and foundational theories simultaneously – that is the ABC Principle: Applied & Basic Combined. Then these research teams can deliver high-impact outcomes by applying the SED Principle: Blend Science, Engineering and Design Thinking, which encourages use of the methods from all three disciplines. These guiding principles (ABC & SED) are meant to replace Vannevar Bush’s flawed linear model from 1945 that has misled researchers for 70+ years. These new guiding principles will enable students, faculty, business leaders, and government policy makers to accelerate discovery and innovation. The examples in the talk will emphasize how these guiding principles can be applied to reinvigorate computing research.

Ben Shneiderman (<http://www.cs.umd.edu/~ben>) is a Distinguished University Professor in the Department of Computer Science at the University of Maryland. He is also the Founding Director (1983-2000) of the Human-Computer Interaction Laboratory (<http://www.cs.umd.edu/hcil/>), and a Member of the University of Maryland Institute for Advanced Computer Studies (UMIACS). He is a Fellow of the AAAS, ACM, IEEE, and NAI, and a Member of the National Academy of Engineering, in recognition of his pioneering contributions to human-computer interaction and information visualization. His contributions include the direct manipulation concept, clickable highlighted web-links, touchscreen keyboards, dynamic query sliders for Spotfire, development of treemaps, novel network visualizations for NodeXL, and temporal event sequence analysis for electronic health records.

Ben is the co-author with Catherine Plaisant of *Designing the User Interface: Strategies for Effective Human-Computer Interaction* (6th ed., 2016). His book *Leonardo’s Laptop* (MIT Press) won the IEEE book award for Distinguished Literary Contribution. Shneiderman’s latest book is *The New ABCs of Research: Achieving Breakthrough Collaborations* (Oxford, February 2016).

Date:	Thursday, April 21, 2016, 8:00 pm. (Refreshments and networking at 7:30 pm.)
Place:	Large Auditorium, Room CS 104 Computer Science Building, Princeton University
Information:	Dennis Mancl (908) 285-1066
On-line info:	http://PrincetonACM.acm.org

All Princeton ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner is held at 6:00 p.m. at Ruby Tuesday’s Restaurant on Route 1. Please send email to princetonacm@gmail.com in advance if you plan to attend the dinner.