It's not just Cookies and Tea

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ABSTRACT

Three of the major research themes over my career have been concurrency, integration and provenance. In this talk, I will explain why these themes are not only important in database research, but how they have played a role in my personal success. I will also discuss how we as a community can use some of these ideas to encourage diversity in our field.

1 BIOGRAPHY

Susan B. Davidson received the B.A. degree in Mathematics from Cornell University, Ithaca, NY, in 1978, and the M.A. and Ph.D. degrees in Electrical Engineering and Computer Science from Princeton University, Princeton NJ, in 1980 and 1982. She is currently the Weiss Professor of Computer and Information Science (CIS) at the University of Pennsylvania, where she has been since 1982. Susan was the founding co-director of the Penn Center for Bioinformatics from 1997-2003, the founding co-director of the Greater Philadelphia Bioinformatics Alliance, and served as Deputy Dean of the School of Engineering and Applied Science (SEAS) from 2005-2007 and Chair of CIS from 2008-2013. She also served as the (first female) Chair of the board of the Computing Research Association (CRA) from 2015-19, and is currently the Faculty co-Director of the Masters of Data Science program at Penn Engineering.

During her tenure as Deputy Dean of SEAS, Susan founded the Advancing Women in Engineering (AWE) program, whose goal is to recruit, retain and promote women in Engineering. AWE has been extremely successful, with outreach programs to middle and high school students, high school teachers and guidance counselors, a pre-orientation program for women admitted to SEAS, social groups ("cookies and tea") for undergraduate and graduate women, and a mentoring plan for faculty.

As the daughter of an applied mathematician (Geoffrey S.S. Ludford) and plant biologist (Pamela M. Ludford, née Sutcliffe), both former professors at Cornell University, Susan has by nature been drawn to research problems at the intersection of these two fields. In particular, early in Susan's career, collaborations with G. Christian Overton, a visionary in the then nascent field of bioinformatics, over problems related to data management within the Human Genome Project, led to a rich vein of research by the Database Group at Penn around data integration, XML and data provenance. More recently, Susan's research interests have focused on several novel applications of provenance within Data Science, including the citation of data and software products, and incremental maintenance of machine learning models.

Susan is an ACM Fellow, a Corresponding Fellow of the Royal Society of Edinburgh (2015), received the Lenore Rowe Williams Award (2002), and was a Fulbright Scholar and recipient of a Hitachi Chair (2004). She received the IEEE Technical Committee of Data Engineering Impact Award (2017), and the Trustees' Council of Penn Women/Provost Award (2015) for her work on AWE.