

UCF Dept. of Computer Science and the College of Engineering and Computer Science

Fall 2017 Distinguished Lecture

I Know Where You're Hiding!

(Experience Doing Software Fault Prediction in an Industrial Environment)

December 7th, 2017

Time 10:30am-11:30am – HEC 101

When validating a software system, it would obviously be very valuable to know in advance which files in the next release of a large software system are most likely to contain the largest numbers of faults. To accomplish this, we developed negative binomial regression models and used them to predict the expected number of faults in each file of the next release of large industrial software systems. The predictions are based on code characteristics and fault and modification history data. This talk will discuss what we have learned from applying the model to several large industrial systems, each with multiple years of field exposure. I will also discuss our success in making accurate predictions and some of the issues that had to be considered.

Elaine Weyuker

University Distinguished Professor, College of Engineering and Computer Science, University of Central Florida



Elaine Weyuker is a University Distinguished Professor, College of Engineering and Computer Science, University of Central Florida. Before joining UCF, Elaine was a Fellow and Distinguished Member of the Technical Staff at AT&T Labs and Bell Labs, a Professor of Computer Science at the Courant Institute of Mathematical Sciences of New York University, a Lecturer at the City University of New York, a Systems Engineer at IBM, and a programmer at Texaco, as well as having served as a consultant for several large international companies.

Her research expertise includes techniques and tools to improve the quality of software systems through systematic validation activities, including the development of testing, assessment and software fault prediction models. Prior to that, Elaine did research in Theory of Computation and is the co-author of a book "Computability, Complexity, and Languages". She has authored more than 175 technical papers in these fields.

Elaine is a member of the US National Academy of Engineering, an IEEE Fellow, and an ACM Fellow and has received IEEE's Harlan Mills Award for outstanding software engineering research, and the ACM/SIGSOFT Outstanding Research Award.

She was the recipient of the 2011 US President's Volunteer Service Award, the 2010 ACM President's Award, the ACM SIGSOFT Retrospective Impact Paper Award in 2009, the 2008 Anita Borg Institute Technical Leadership Award, Rutgers University 50th Anniversary Outstanding Alumni Award, and the AT&T Chairman's Diversity Award as well as having been named a Woman of Achievement by the YWCA.

She was the chair of the ACM Women's Council (ACM-W) from 2004 - 2012 and continues her active participation in ACM-W. She has also been a member of the Executive Committee of the Coalition to Diversify Computing, has served on many National Academy panels, was a board member of the Computing Research Association, a member of the ACM Council, a member of the ACM/SIGSOFT Executive Board, as well as being an editor of several technical journals.

Hosted by: Dr. Gary Leavens



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