

Critique of Dr. Mary Jean Harrold's Presentation

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The title of the talk that Dr. Mary Jean Harrold, the professor from Georgia Institute of Technology, gave this Thursday was *Localizing and Explaining Non-deadlock Concurrency Bugs*. It was no doubt among the best presentations I have attended. Dr. Harrold's recent research work that she presented was of significance and of great difficulty, but she managed to convey it to the audience in a very understandable way. Even though I am not familiar with Software Engineering research, I was able to follow her easily through the whole presentation and had a good understanding of what she was talking about.

Dr. Harrold firstly introduced current situations in her research area and explained the goal of this research. I am very appreciated that Dr. Harrold used a lot of visual assists in this section. What I like most were the two pie charts that describing the difficulty in debugging and fixing by showing how much time was spent in these activities and relatively how many fixes are incorrect. The colors used in these two charts are user-friendly, neither too bright nor too dim. Also, the charts were displayed with proper contrast and in a large enough size. Even if the talk was given in a larger classroom or lecture center, under different light conditions, the slides will also be clear enough.

This is not the only place that Dr. Harrold showed her excellence in using slides. Dr. Harrold did not forget to use a slide to provide an overview of structure of the rest of her talk at the end of background introduction section. She also made a page header available in every slide to help the audience locate the material that currently being discussed. This really helped to make the structure of the talk very clear.

Next section of Dr. Harrold's talk was a brief introduction about concurrency bugs. This part was not given in a very technical way, but it was very critical. It provided minimal background the audience would need to understand her work, as well as an example of atomicity violation that would be used throughout the whole presentation. Dr. Harrold then spent majority of time in describing the principles and features of her proud product Griffin, a system that can help pinpoint concurrency bugs in source code and make suggestions about bug types. The significance and novelty of Griffin was in solving following three common issues in other existing technologies: 1) they only have raw memory access, but Griffin knows their positions in the memory access tree, 2) Griffin handles multiple bugs while other technologies not, and 3) existing technologies don't identify memory access that are responsive for the same bug to remove false positives. This introduction of the features of Griffin and related empirical studies is very comprehensive. The technical details were well demonstrated by describing examples using figures and tables and by answering questions with patience.

The only flaw that I found was that some slides were given too much text content but too less time to talk. If some material was not very important and thus deserved to spend only a few seconds on, why that slide provided so much information that people couldn't receive in time?

To summarize, I do think Dr. Mary Jean Harrold's presentation was a great success. She was elegant and professional, both in giving talk and using slides. Her detailed talk about the new technology Griffin was interesting and easy-to-follow. This presentation was close to perfect in delivering what

the speaker would like to share with the audience.