Staying Current in a Generalist Environment

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What is Generalist Environment?

- Heavy teaching loads
- Multiple preparations each term
- Many different courses taught over time
- Typically no grader support
- Not much time for activities that are designed for keeping up in field

And …

Don't forget …

- Committee work
- Advising
- Recruiting

Why is Computer Science Different?

Although a core of the Computer Science discipline remains fairly consistent,

Most of the application domain and technologies around this core change regularly!

Example – Operating Systems

- O.S. synchronization concepts (race conditions, critical sections, monitors, semaphores, etc.) taught today much as they were in 1980s (Silberchatz 6th edition)
- BUT, application context is very different today given ubiquitous, mobile, and multi-tiered systems

So Why Don't We …

Teach these relatively *stable* concepts and assume that the students will get the rest "in the field"?

This sounds like a good idea because:

- It is safe
- It makes us look good in the moment
- Follows the standard line about not being about "technology"

Not a Good Strategy Because

- Students need a **relevant** context for learning *how to learn*
  - ***Languages***
  - ***Environments (Web, Wireless, Embedded)***
  - ***Paradigms (Objects, Aspects)***
  - ***Hardware (PDAs, embedded devices)***
  - ***Operating Systems***

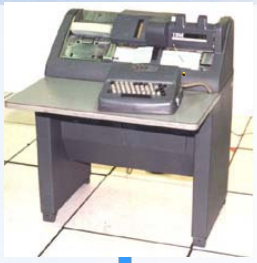
So It's a Unique Problem That

Needs Unique and Deliberate Strategies

Let's talk strategies.

But first, my credentials …

What Do I Know?



1979

2005

Rest and Relaxation?

Not a chance! Believe me. I know this.

2005

???

What's a Woman to Do?

The good news is that we are both computer scientists and women which probably means

Multitasking is our Game

- WE KNOW how to multitask.

AND

- We are pretty good at finding unique and creative solutions for successfully integrating our multiple tasks into a holistic solution

Three Tips to Consider

1. You are the only person responsible for keeping yourself current in the field.
   - Action: Be proactive, have a plan.

Tip #2

2. Any successful plan to stay current must be tightly integrated with your teaching.
   - Action: If you say to yourself "I'll read those journals when I'm caught up with my teaching", DON'T LISTEN to yourself!

Instead …

Instead

- Use the *activity* of teaching to keep up in various computer science disciplines.
- Use the *activity* of doing disciplinary research to revitalize worn out course material.

Instead

- Use the *activity* of doing pedagogical research to learn about:
  - ✓new language paradigms
  - ✓new software development tools
  - ✓new teaching methodologies

In Addition,

Figure out a way to get teaching credit for involvement in undergraduate research.

- opportunity to read and critique current journal articles along with your students
- opportunity to investigate current problems with your students.
- good mechanism for interacting with other faculty on current computer science topics

Tip #3

3. No matter how busy your life becomes, stay connected to the larger computer science community.

   Action: Go to conferences, connect in cyberspace, look for summer academic and/or industrial gigs away from your home base.

So Pat Yourself on the Back

For Taking the Time to Participate in this Workshop.

Thank you.