I hope you took some time to read Dennis Frailey contribution “What Math is Relevant for a CS or SE Student? – An Employer’s Perspective” in the previous SEEed column as it provided many useful insights for both software educators and practitioners. In this column Tim Lethbridge provides his reflections on this years Conference on Software Engineering and Training, CSEE&T 2006. Before reading Tim’s contribution, there are two brief points I would to highlight.

First, many of you may have may have seen this years issue of Money Magazine which lists the top 50 best jobs in the U.S. based primarily upon projected job growth and income. I will let you guess which career choice is number one. If you can’t, then do a search on “Money Magazine” “Software Engineer.”

Second, we are all aware of the downturn in the fortunes of technology in the current century. In many countries this has had major impacts on education, especially in computing based disciplines, primarily due to the dot com bust. The perception is that this is both good and bad. Good since there were too many high expectations from computing and because computing educators became complacent with regards to the focus of entry level courses since often their primary goal was to deter, rather than attract students. Currently this view is having a major impact on enrollments in computing based disciplines at many institutions world wide. Fortunately, this has been recognized, the focus of curricula shifting and balance is slowly occurring.

One impetus for reform has been the ACM computing curricula recommendations, of which the Curriculum Guidelines for Undergraduate Degree Programs in Software Engineering (SE 2004) are most relevant for software engineering education. For an excellent review of the status of computing education I encourage you to take a look at the slides for Russell Shackelford’s presentation “Why can’t smart people figure out what to do about computing education?” I have placed a copy on the SEEed web page so you can access it easily (blue.butler.edu/~phenders/SEEed ). Enjoy!!

**Reflections on CSEE&T 2006**

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The 19th Conference on Software Engineering Education and Training (CSEE&T) was held at the Turtle Bay Resort, on the north shore of Oahu, Hawaii, April 19-21, 2006.

Attendance was over 100 people, significantly higher this year than in recent years. In addition to the wonderful location, this can be attributed in part to a stellar set of keynotes and the presence of a three new features: The first was The Academy of Software Engineering Education and Training (ASEE&T); the second was a short papers track; and the third was a special track focusing on the contributions of Barry Boehm.

ASEE&T took place the day preceding the main conference. The idea was to have world-renowned software engineering educators help train new professors in the art of SE education. Speakers included Barry Boehm (USC), Watts Humphrey (CMU-SEI), and Philippe Kruchten (UBC; formerly Rational). Attendees reported that they very much appreciated the event. The organizers plan to hold a similar event at the next CSEE&T, July 2007 in Dublin.

In addition to being the focus of a track and presenting at ASEE&T, Barry Boehm gave the Wednesday keynote talk, entitled: ‘Educating Students in Value-Based Design and Development’. Boehm’s message was that most of the topics we teach are ‘value neutral’ and that we should move towards approaches that focus on the value of a method or technique. He discussed value not only in terms of economic costs, but also considering ethics and other values. For example, he cited a case where a fire department decided to prioritize calls based on property value. However, biased against low-value dwellings in which large numbers of poor people lived. Boehm went on to explain how utility theory, decision theory, dependency theory and control theory operate together in the context of Theory W (the Enterprise success theorem), which says “Your enterprise will succeed if and only if it makes winners of success-critical stakeholders”. Boehm discussed the win-win achievement theorem in which one must first determine “success-critical stakeholders”, find out how each wins to win (what each values), negotiate among the stakeholders to resolve conflicts, and finally control progress with win-win in mind. The message is that this kind of thinking should pervade software engineering and is therefore critical to teach.

David Budgen from the University of Durham in the UK gave the Thursday keynote, entitled: ‘Why should they believe us? Determinism, non-determinism and evidence’. He started his talk with interesting anecdotes about Durham and Durham Cathedral … ultimately leading up to an observation about the importance of evidence: He noted that medieval people were also interested in evidence (they didn’t initially believe that a certain saint’s body had been preserved, until they saw the evidence). Budgen made a convincing case that we need to move towards evidence-based software engineering, and evidence-based SE education. He pointed out that other disciplines have recently embraced evidence-based approaches to research in a big way – the most nota-
ble field is medicine (see the Cochrane Collaboration, www.cochrane.org), but the social sciences are also following a similar path (the Campbell Collaboration). Budgen pointed out that while Computer Science is mostly a deterministic discipline, software engineering is mostly non-deterministic, hence different types of evidence are required. Finally he called for better abstracts on our papers so they can be more accessible.

The final keynote was given by Linda Northrup of MIT her talk was entitled, “Let’s Teach Architecting High Quality Software”. She discussed how a variety of software architectures could be better taught.

Slides from the keynotes can be found at the conference’s program page: http://db-itm.cba.hawaii.edu/cseet2006/

CSEE&T 2006 attendees also were able to attend a wide variety of paper and panel sessions. For recreation, the evening banquet was held at the nearby Polynesian Cultural Center.

Next year’s CSEE&T will be held in Dublin, Ireland, from July 2-6. Very nice university residence accommodations will be available to help keep costs down. The web page with a call for papers should be available soon (do a Google search for CSEEET 2007). To help you prepare papers, a researchers guide can be found at: http://www.site.uottawa.ca/cseet2005/CSEETResearchGuide.pdf