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Department of Mathematics, Statistics and Computer Science St. Olaf College, Northfield, MN 55057 March 7, 2008 Volume 36, No.16

This Week's Colloquium

Title:	Type-based Program Analysis
Speaker:	Will Benton
Date:	Tuesday March 11 th
Time:	1:30pm
Location:	SC 182

Bio: William Benton is a PhD candidate at the University of Wisconsin--Madison. His research focuses program analysis, on concurrency, and declarative programming. Will studied music, philosophy, and computer science at St. Olaf, where he earned a BA in 2000; he currently lives in Madison with his wife Andrea (also '00) and their son. http://pages.cs.wisc.edu/~willb/

Abstract: Type systems directly improve the usability of real-world programming languages in an unusual way: by making it impossible to write certain kinds of programs. Type systems have also had an indirect impact on programming languages and software by providing the theoretical basis for many significant and exciting research results.

This talk introduces type systems and presents an argument for why types are interesting. Type-based program analyses encode properties of programs into type systems. The basic ideas behind type-based analysis and some classic applications will be covered. Will also plans to present his current work on typebased analyses for object-oriented programs.

Opportunity for OLE graduates: Masters in Teaching in Alaska

-Brought to you by ole alumnus Matthew Hunter '05

My senior year (as a math and physics major at St. Olaf) I decided to try teaching and applied for the Master of Arts in Teaching program through the University of Alaska Southeast, at the Sitka Campus. I began my Ed. classes in June 2005, after just a month off from Olaf, and I received my M.A.T. in June 2006 with my Alaska teaching certification endorsed in Math and Physics grades 7-12.

I am now in my second year teaching math at Mt. Edgecumbe High School (<u>www.mehs.us</u>) in Sitka! Mt. Edgecumbe is a public boarding school (entirely State of Alaska funded) of about 400 students, 90% Alaska Native. Students come to Sitka from over 100 villages in all parts of the state and many speak their native languages at home. It is neat to see students discuss their geometry problems in Yupik and then turn to me and say "are we right?"

Here is a link to the UAS M.A.T. (secondary) program based in Juneau and Sitka:

http://www.uas.alaska.edu/education/beginning /secondary/index.html It is a 12 month program with summers in Sitka or Juneau and full one-year in-school internship. Students can be placed in Bush communities during the school year if they desire. The program is NCATE accredited and the degree will qualify you to teach in any of the 50 states and DC. Out of state students pay residential tuition their second semester. I strongly recommend the program to any graduating Ole who is considering teaching, especially if he/she has not taken education classes.

Sincerely, Matthew Hunter Math and Physics Major, Class of 2005 <u>mchunter1@gmail.com</u>

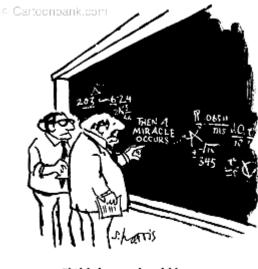
Joke of the week

A math student is pestered by a classmate who wants to copy his homework assignment. The student hesitates, not only because he thinks it's wrong, but also because he doesn't want to be sanctioned for aiding and abetting.

His classmate calms him down: "Nobody will be able to trace my homework to you: I'll be changing the names of all the constants and variables: a to b, x to y, and so on."

Not quite convinced, but eager to be left alone, the student hands his completed assignment to the classmate for copying. After the deadline, the student asks: "Did you *really* change the names of *all* the variables?" "Sure!" the classmate replies. "When you called a function f, I called it g; when you called a variable x, I renamed it to y; and when you were writing about the log of x+1, I called it the timber of x+1..."

... Thank goodness for the honor code :)



"I think you should be more explicit here in step two."

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