News & Notes

Spring 2012 ◆ Issue Forty-nine

CompSci @ Carolina

Dear Friends,

The spring semester is quickly drawing to a close here in Chapel Hill, and it has been a busy one. This semester we held our first annual department awards luncheon, where we recognized faculty and staff who have received recent honors. We also presented the first Computer Science Staff Excellence Award which went to and was named for Catherine Perry. The award was created to recognize computer science staff who display excellence in their job, and carries with it a $1,000 award and recognition on a plaque that hangs in the Sitterson lobby. Catherine retired at the end of February after more than 36 years of state service, 35 of which were in our department. You can see pictures from the awards luncheon and Catherine's retirement celebration on pages 6 and 7.

Some of the faculty recognized at this year's luncheon were recently named IEEE Fellows. Congratulations to Jim Anderson, Ming Lin, Dinesh Manocha, Marc Pollefeys and John Poulton. Ming was also named a 2012 ACM Fellow.

We were host to two conferences this academic year - LANMAN 2011 in October and MMSys 2012 in February - bringing a large number of visitors from all over the world to the department. We will be hosting two more conferences in 2012. The Symposium on Computational Geometry will be held in Chapel Hill in June of this year, and the Real-Time Linux Workshop this coming October. Maybe we'll get to see some of you as a result!

Anselmo Lastra

FROM PROTEIN FOLDING TO EFFICIENT ALGORITHMS

Professor Jack Snoeyink and his students are applying their knowledge of computational geometry to help solve real world problems. Computational geometry is a branch of computer science that studies geometric algorithms and their applications. It may sound abstract, but computational geometry forms a fundamental basis for many other areas of computing, including graphics, robotics, gaming, and computer-aided design.

Some of the Computational Geometry Group's research is based on collaborations with scientists in other fields, such as biology and biochemistry. The central dogma of biology is that the sequences of DNA in genes code for the sequence of amino acids in proteins, which in turn fold into three dimensional structures that perform many of the functions of living organisms – from transporting and converting oxygen and energy in the blood and in muscle fibers, to the structure of hair and cell membranes. Molecules are in constant motion, so there isn't a single "structure," but, instead, probabilities of finding electrons in certain places or of finding certain lengths and angles for bonds between atoms.

In his work on the structure of protein molecules, Snoeyink's graduate student advisee Matthew O'Meara studies geometric properties of inter-atomic bonds as observed from native molecular structures, and

continued on page 2

In this issue

1 From Protein Folding to Efficient Algorithms

3 Undergrads Contribute to Networking Research

4 Alumnus to Speak at UNC Doctoral Hooding Ceremony

4 Brandenburg Receives Distinguished Dissertation Award

5 Department News

6 Pictures from Awards Luncheon and Catherine Perry Retirement

8 Alumni News

10 Family Matters

11 Recent Publications