



College of Computing and Informatics
UNC CHARLOTTE

ALUMNI NEWS

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>> **New Doctorate in Bioinformatics and Computational Biology**

UNC Charlotte's doctoral program offerings have grown to 19, with the addition of a new degree in Bioinformatics and Computational Biology. Approval of the program came last week from the UNC Board of Governors.



This new graduate degree is based upon the highly successful Bioinformatics track within the existing Information Technology Ph.D. Program. Dennis Livesay, Ph.D., Associate Professor, Department of Bioinformatics and Genomics, will serve as the Graduate Program Director.

The program will have special appeal to students with undergraduate training in computing, life science, or physical science disciplines. Graduates will be well prepared to engage in cutting-edge research and development in academic, healthcare, or biotechnology settings.

"The life sciences, biotechnology, and genomic medicine will define the 21st Century in much the same way that physics, electronics, and computers have defined the 20th Century," said Lawrence Mays, Ph.D., Chairman of the Department of Bioinformatics and Genomics, which is responsible for the new program. "We want to insure that our students lead the way."

Computation is now at the heart of many areas of biological science. Bioinformatics and Computational Biology are disciplines that have emerged in response to the need to use these new complex data sets to help solve difficult, important biological problems.

The new doctorate, housed within the College of Computing and Informatics, is focused on applying new computational techniques and instrumentation to important, but very difficult, problems in biology and biomedicine. This field will be one of the major drivers of the emerging biomedical and biotechnology revolution, and will be a critical element in the economic development of the region and state.

>> **Upcoming Alumni Events**

Happy New Year! We had a great time at our kickoff CCI alumni basketball event last Wednesday. Thanks to those who attended. We have a great lineup of alumni events coming up, and we hope to see you there!

-Marjorie Bray, Director of Development and Alumni Affairs

Saturday, February 5th Alumni Association Event Forty-Niners basketball game vs. George Washington

Pre-game Lunch: 11:30-1:30 p.m.

Game Time: 2:00 p.m.

For more information:

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Friday, March 25th CCI's Distinguished Lecture Series

Prof. Vipin Kumar

Department of Computer Science and Engineering

University of Minnesota

3 - 4 p.m., Woodward 106,

complimentary

>> **Signcryption Will Become an International Standard in 2011**

After nearly a three-year process, the research efforts of UNC Charlotte's College of Computing and Informatics' (CCI) Professor, Yuliang Zheng, Ph.D., will finally be recognized



in 2011 as an international standard by the International Organization of Standardization (ISO). Dr. Zheng, an international leading authority in data security, invented the revolutionary new technology, called signcryption, and continues his research in the College's Department of Software and Information Systems.

Signcryption is a data security technology by which confidentiality is protected and authenticity achieved seamlessly at the same time. When logging in to an on-line bank account, signcryption prevents your username and password from being seen by unauthorized individuals and, at the same time, confirms your identity for the bank. More traditional means of cyber security make this a more time-consuming, two-step process.

"The adoption of signcryption as an international standard is significant in several ways," said Dr. Zheng. "It will now be the standard world-wide for protecting confidentiality and authenticity during transmissions of digital information. This will also allow smaller devices, such as Smartphones and PDAs, as well as emerging technology, such as radio frequency identifiers (RFID) and wireless sensor networks, to perform high-level security functions. And, by performing these two functions simultaneously, we can save resources, be it an individual's time or be it energy as it will take less time to perform the task."

Dr. Zheng also served as a co-editor and contributor of a recently published book, "Practical Signcryption," which is devoted solely to the international research being conducted in the area of signcryption and is available on-line and in bookstores around the world.

>> **CCI in the News**

Yi Deng, Ph.D., Dean, of the College of Computing and Informatics, was recently featured in the Charlotte Observer as "One of Seven to Watch" in 2011.

[Read More](#)

Software and Information Systems Department Chair, Bill Chu, Ph.D., and the Director of the CyberDNA Center Ehab Al-Shaer were guests on WFAE's Charlotte Talks on January 20th. Listen to the program

The Department of Software and Information Systems will be featured in an up-coming edition of the Charlotte Observer's SciTech section.

Make sure to check out CCI's new brochure.

>> **Alumni Talk Back**

As a Computer Science graduate from UNC Charlotte, I've spent the majority of my last 18 years delivering technology solutions as a consultant and partner within regional technology consultancies throughout the southeast. As an entrepreneur-at-heart, I've been able to use Internet, wireless, and service-oriented technologies to build and successfully exit three IT/Management consultancies. In this role, I built a wide variety of innovative solutions, ranging from wireless dispatch and inventory management platforms for global shipping and retail companies to eCommerce and ERP solutions for Fortune 500 institutions.

Currently, as a change executive within Bank of America, I'm accountable for managing process and technology change portfolios. My team is currently focused on delivering the HRO Next Generation program. This future state model will continue to deliver cost and operational efficiencies while we significantly enhance our human resources technologies across all functions.

After being a bit disconnected from the University, I'm very excited to be reconnected through the CCI Alumni activities. As a new addition to the CCI Alumni steering committee, I believe we have a unique opportunity to create a greater sense of community with the University and thereby increase resources to support the College's growth and research opportunities. The value proposition extends to alumni, students, and faculty as we create networking, learning, and mentoring opportunities. I look forward to seeing you all at the next CCI Alumni event!

--Bill Onisick