USCB receives portion of $20 million research award: largest National Science Foundation award of its kind in SC history

Bluffton, SC – The University of South Carolina Beaufort is one of ten South Carolina schools receiving a portion of a $20 million dollar grant being awarded today by the National Science Foundation. With this funding, USCB will play a critical goal in the statewide consortium's tissue biofabrication project. According to scientists involved in the work, research in this field could eventually lead to human organ production.

Through this project, USCB will greatly enhance its research infrastructure and expand state-of-the art research opportunities in Computational Science (including Computational Biology), putting forward a far greater range of experience in data-analysis, modeling, computing, simulation and prototyping. *Consequently, this project will not only provide skilled, technologically competent researchers and employees in tissue engineering or biofabrication, but also will increase the number and the diversity of scientists and technicians trained for careers in new technologically oriented industries in South Carolina.*

What will USCB do with its portion of the award?

This NSF grant money will allow USCB to:
- Hire two faculty members to whose research will focus on Computational Science
- Fund paid student researcher positions
- Acquire state-of-the-art computer equipment

Additionally, the project will help USCB develop and offer modern curricula for a baccalaureate degree program in Computational Science, *allowing USCB to become the only institution in the state and one of only a few institutions in the nation, offering Computational Science to undergraduate students.*

University leadership responds to the award…

In receiving this award, USCB Chancellor Dr. Jane T. Upshaw comments, "The University of South Carolina Beaufort is very proud to be part of this extraordinary research effort. Our Computational Science undergraduate degree program will place USCB students on the cutting edge of sciences and mathematics for the future. Our students, our faculty, our region and the state will be the beneficiary."

What is Computational Science and why is it important?

In layman's terms, Computational Science is where computer science meets the rest of the world. It is the utilization of computers to model and solve problems in a wide variety of fields.

According to the President's Information Technology Advisory Committee (2005) (online, http://www.nitrd.gov/pitac/reports/), Computational Science is "a multi-disciplinary field that uses advanced computing capabilities to understand and solve complex problems (in all science and engineering fields)". Computational Science uniquely fuses three distinct elements: algorithms, modeling and simulation, Computer and Information Science, and computing infrastructure. It has been described as "one of the pillars of scientific discovery", on a par with Scientific Theory and Experimentation. Therefore an ability to use theories and tools provided by Computational Science is an absolute necessity for the future workforce.

Who will lead work on the project at USCB?

The lead scientist directing the work of USCB's component of the project is Dr. Yiming Ji. Dr. Ji joined USCB in 2006, teaching Computer Science courses. His area of research expertise is wireless networks.

An accomplished educator, Dr. Ji has written extensively about Computer Science for the *Journal of Wireless Communications and Mobile Computing*, *International Journal of Mobile Communications, Journal of Systems Cybernetics and Informatics*, as well as more than 25 conference publications, one book and one patent. His work has been acknowledged by support from the Vodafone-U.S. Foundation Fellowship, the Auburn Alumni Council Fellowship and the Yamacraw Research Assistance Scholarship.

He has served as a committee member for the International Conference on Wireless Networks; a technical committee member for the International Conference on Wireless Communications, Networking and Mobile Computing; and as a publication reviewer for the *Mobile Computing and Communications Review*.

Dr. Ji earned a Ph.D. in Computer Science from Auburn University and an M.S. and B.S. in Aerodynamics from Nanjing University of Aero/Astronautics. He also has a M.S. in Computer Science from Southern Polytechnic State University.

ABOUT USCB:
The University of South Carolina Beaufort (USCB) is a senior institution of the University of South Carolina system serving the southeast coast of Georgia and South Carolina. The university's two campuses, located on the waterfront in historic Beaufort, S.C. and at the gateway to Hilton Head Island in Bluffton, S.C., serve a diverse student body of more than 1,500. USCB offers students an exceptional place to learn and live in an environment focused on growth, preservation and opportunity. For more information about the University of South Carolina Beaufort, please visit www.uscb.edu online or call the university's Office of Public Information at 843-208-8030.

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