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**FAU Awarded \$2.4 Million NSF Grant to Train
New Generation of Data Scientists**
*FAU College of Engineering and Computer Science to Lead the
Graduate Program with an Interdisciplinary FAU Team*

BOCA RATON, Fla. (Sept. X, 2020) – Researchers from [Florida Atlantic University's College of Engineering and Computer Science](#) in collaboration with FAU's [Schmidt College of Medicine](#), [Christine E. Lynn College of Nursing](#), and [Charles E. Schmidt College of Science](#), have received a five-year, \$2.4 million grant from the National Science Foundation to train graduate students in data science technologies and applications. Data science and analytics is an emerging transdisciplinary area encompassing computing, statistics and various application domains that include medicine, nursing, and industry and business applications among others.

Although scientists and engineers are well trained in their own areas of specialty, there is a lack of integrative knowledge needed for new scientific discoveries and industry applications made possible by data science and analytics.

“Big data and data science is a burgeoning field that requires a highly-skilled workforce representing many disciplines who are adept at gathering, interpreting and analyzing massive amounts of data, which lead to powerful new insights,” said [Stella Batalama](#), Ph.D., dean of FAU's College of Engineering and Computer Science. “This significant grant from the National Science Foundation will enable our project team to develop an innovative and integrative curriculum that will provide our graduate students and the companies and institutions they will serve with a leading-edge to take them to the top of their field or industry.”

The FAU research team is led by [Borko Furht](#), Ph.D., principal investigator, a professor in the [Department of Computer and Electrical Engineering and Computer Science](#), and director of the NSF Industry/University Cooperative Research Center for Advanced Knowledge Enablement (CAKE), FAU's College of Engineering and Computer Science.

“Data scientists are not just statisticians or machine learning experts; they also are authorities in the field or business where they are applying those skills,” said Furht. “Effective data scientists need to be able to work in interdisciplinary teams and to use data visualization and communication skills to communicate their findings to individuals not trained in data science. Our program will produce graduates with technical depth and understanding of data science technologies and applications.”

The project team includes [Janet Robishaw](#), Ph.D., senior associate dean for research and chair, [Department of Biomedical Science](#) in FAU's Schmidt College of Medicine, and an expert on genomic analysis; [Ruth Tappen](#), Ed.D., Christine E. Lynn Eminent Scholar and Professor, FAU's Christine E. Lynn College of Nursing, and an expert on nursing management and memory disorders; [Taghi Khoshgoftaar](#), Ph.D., Motorola Professor in the Department of Computer and Electrical Engineering and Computer Science, and an expert on medical applications of big data analytics; [Elan Barenholtz](#), Ph.D., an associate professor of psychology, FAU's Charles E. Schmidt College of Science, and an expert on deep learning and brain behavior; [Xingquan \(Hill\) Zhu](#), Ph.D., a professor in the Department of Computer and Electrical Engineering and Computer Science, and an expert on deep networks and its applications; Oge Marques, Ph.D., an expert on data science and AI in medical applications; [Jinwoo Jang](#), Ph.D., an assistant professor in the [Department of Civil, Environmental and Geomatics Engineering](#), and an expert on data analytics in the Internet of Things (IoT) and transportation, and a fellow of FAU's Institute for Sensing and Embedded Networks Systems Engineering ([I-SENSE](#)); [Hari Kalva](#), Ph.D., associate chair and professor, Department of Computer and Electrical Engineering and Computer Science, and an expert on software optimization; and Camellia Sanford-Dolly, an education and evaluation expert.

Thirty faculty members from five FAU colleges and ten departments will participate in the program. Primary training elements of the curriculum will include the development of normalization courses, the creation of different testbeds for the various application domains, boot-camps, in-depth elective courses, and professional workshops. A total of 45 trainees will be funded by the program: 30 Ph.D. students and 15 master's students. In addition, the researchers expect to include in the cohort 10-12 Ph.D. students and 12-15 master's students each year who will be supported by other grants and related departments.

“While data science technologies and applications have evolved significantly over the last several years, it is clear that current graduate training in data science does not sufficiently prepare students for future challenges as researchers and practitioners in data science and its applications,” said [Daniel C. Flynn](#), Ph.D., FAU's vice president for [research](#). “With this grant from the National Science Foundation, our interdisciplinary team at Florida Atlantic University will leverage their extensive expertise and talents to provide a unique and comprehensive training opportunity for the next generation of data scientists.”

The convergent research themes will focus on three data science and analytics areas: medical and health care applications, industry applications, and data science and artificial intelligence (AI) technologies. Each course will be developed by at least two faculty members from two different disciplines. Integrated research and training and multiple testbeds for different application domains will be developed in FAU's new NSF-funded [Artificial Intelligence and Deep Learning Laboratory](#). Each testbed, which relates to a research project, will include a computer platform, software tools, and a set of learning modules. Research projects will be formulated jointly with industry partners who are members of the NSF CAKE at FAU.

About FAU's College of Engineering and Computer Science:

The FAU College of Engineering and Computer Science is internationally recognized for cutting edge research and education in the areas of computer science and artificial intelligence (AI), computer engineering, electrical engineering, bioengineering, civil, environmental and geomatics engineering, mechanical engineering, and ocean engineering. Research conducted by the faculty and their teams expose students to technology innovations that push the current state-of-the art of the disciplines. The College research efforts are supported by the National Science Foundation (NSF), the National Institutes of Health (NIH), the Department of Defense (DOD), the Department of Transportation (DOT), the Department of Education (DOEd), the State of Florida, and industry. The FAU College of Engineering and Computer Science offers degrees with a modern twist that bear specializations in areas of national priority such as AI, cybersecurity, internet-of-things, transportation and supply chain management, and data science. New degree programs include Masters of Science in AI (first in Florida), Masters of Science in Data Science and Analytics, and the new Professional Masters of Science degree in computer science for working professionals. For more information about the College, please visit eng.fau.edu.

About Florida Atlantic University:

Florida Atlantic University, established in 1961, officially opened its doors in 1964 as the fifth public university in Florida. Today, the University, with an annual economic impact of \$6.3 billion, serves more than 30,000 undergraduate and graduate students at sites throughout its six-county service region in southeast Florida. FAU's world-class teaching and research faculty serves students through 10 colleges: the Dorothy F. Schmidt College of Arts and Letters, the College of Business, the College for Design and Social Inquiry, the College of Education, the College of Engineering and Computer Science, the Graduate College, the Harriet L. Wilkes Honors College, the Charles E. Schmidt College of Medicine, the Christine E. Lynn College of Nursing and the Charles E. Schmidt College of Science. FAU is ranked as a High Research Activity institution by the Carnegie Foundation for the Advancement of Teaching. The University is placing special focus on the rapid development of critical areas that form the basis of its strategic plan: Healthy aging, biotech, coastal and marine issues, neuroscience, regenerative medicine, informatics, lifespan and the environment. These areas provide opportunities for faculty and students to build upon FAU's existing strengths in research and scholarship. For more information, visit fau.edu.