



TWO FACULTY RECEIVE GOVERNOR'S AWARDS FOR EXCELLENCE IN SCIENTIFIC RESEARCH

Governor Nikki Haley awarded the 2012 Governor's Awards for Excellence in Scientific Research to two University of South Carolina College of Engineering and Computing faculty members, Dr. Michael A. Sutton and Dr. Melissa Moss. They accepted the award at a ceremony in the South Carolina Statehouse on July 18.



Michael A. Sutton, a Carolina Distinguished Professor and faculty member since 1982, was recognized for significant contributions in multiple areas of scientific research. He is most well known for his successful pioneering efforts to develop the computer vision based measurement methods known as Digital Image Correlation. The technology developed using these principles has made a significant impact internationally and is now considered to be the measurement method of choice worldwide in academia, research labs and industry. Sutton ensured that the fundamental research would have a positive economic impact in our state through commercialization of the technology, helping to establish Correlated Solutions, Incorporated in 1996. Today, the Columbia-based company remains our nation's only high-tech corporation focused solely on research, development, manufacturing, and worldwide distribution of digital image correlation systems.

Working with NASA and the U.S. Air Force on issues related to the safety of our country's aging commercial and military aircraft, Sutton used image correlation measurement systems to make unprecedented measurements on aerospace structures. Combining these unique measurements with physics-based principles, Sutton pioneered the development of an engineering fracture criterion that successfully predicts the remaining strength of aircraft structures that have been flying for decades. The criterion is still used by NASA, USAF and commercial aerospace companies such as Boeing to predict when an aircraft has exceeded its lifespan and should no longer be used.

"Collaborating with outstanding colleagues and students in multi-disciplinary areas including computer vision, experimental mechanics and fracture to develop universally acclaimed measurement systems and fracture criteria has been an exhilarating experience that continues even today," said Sutton. "The establishment of a Columbia-based high tech company with ten employees that is based on the technology developed through USC research studies is a clear example of how South Carolina university research can, and oftentimes will, have a long-term positive economic impact on our state and our nation."



Associate Professor **Melissa Moss** was also awarded the Governor's Young Scientist Award for Excellence in Scientific Research. Her bio-medical research applies engineering-based quantitative measurements to study the aggregation of a protein (amyloid- β) associated with the onset and progression of Alzheimer's disease. Moss studies the impact that these protein aggregates have on cell functions that contribute to vascular aspects of Alzheimer's disease.

"Using an interdisciplinary approach of biology and engineering, our laboratory has made significant contributions to advancing the field of research in protein aggregation associated with Alzheimer's disease," said Moss. "These contributions have a particularly important significance within the state of South Carolina, where the prevalence of dementia has been estimated at 14%, significantly higher than other areas of the United States. As many as 90% of these dementia cases are attributed to Alzheimer's disease."



[Click here](#) to view the awards ceremony on YouTube

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