

ECE prof's fellowship leads to DOD grant and selection to prestigious research team

The rationale for the ODU Research Foundation to provide seed money via the Summer Faculty Fellowship Program is to help, in most cases, junior faculty get new research and writing projects off the ground in hopes that these projects will ultimately result in publications and attract future funding.

Such was the case, on both counts, for Vijayan K. Asari, associate professor of electrical and computer engineering, a recipient of one of last summer's awards.

Asari, who came to ODU in fall 2000 as a visiting associate professor, received \$6,000 to pursue research in statistical pattern recognition, particularly the development of a new technique for the automatic extraction of object region and boundary from images with complex background environments.

The research, which involves the development of novel algorithms (predetermined sets of computational instructions for solving a specific problem in a limited number of steps), is "specifically useful for real-time recognition of tumors and polyps in gastrointestinal images in an endoscopy procedure," said Asari, who previously was a member of a research team in Singapore that developed a microrobotic colonoscope.

He presented a paper based on his research at the IASTED International Conference on Applied Modelling and Simulation, Nov. 4-6

at MIT, which was well-received and published in the conference proceedings. He even credited the Research Foundation in his paper.

As an outgrowth of the research, Asari also applied for and recently received a \$68,000 grant from the Department of Defense to join a select team of researchers in a project whose ultimate goal is to combat terrorism through facial image detection. The initial call for proposals resulted in 12,500 applications from around the world. Following the review, Asari was one of only nine faculty from seven universities chosen to take part in the collaborative study, which holds the promise of continued funding. The prestigious group also includes researchers from Carnegie Mellon University and Rensselaer Polytechnic Institute.

Asari's unique approach will concentrate on developing a new algorithm which will, in essence, enhance facial images taken by still and video cameras under poor lighting conditions.

"The long-term goal is to develop a face-locating and tracking system which will be able to locate all the detectable human faces in an image under varying background lighting environments, camera positions, pose of the faces, size of the face regions and skin color," he explained.

For more information about Asari's research visit www.odu.edu/vlsi.