

3D Explosion Drives Need for Education; Image Processing Lectures Series Exceeds 100,000 Downloads

Universal Robotics, Nashville, TN — As the demand for 3D computer vision expertise expands, education about digital image processing and related topics remains critically important, driving a popular lecture series to over 100,000 downloads.

Nashville, TN ([PRWEB](#)) November 08, 2012 -- Image Processing Methods Presented by Signal Processing Expert

The [online lecture series](#), taught by humanoid robotics veteran Dr. Richard Alan Peters as part of his course at the Vanderbilt University School of Engineering, introduces common image processing methods as well as practical exercises. Dr. Peters was part of the NASA Robonaut Development team where he developed algorithms for learning from sensory/motor control interactions for the original NASA Robonaut. He is an associate professor in the Department of Electrical Engineering and Computer Science at Vanderbilt University.

Dr. Peters is also the Chief Technology Officer of Universal Robotics™. Universal Robotics was founded in 2001 and is based on the technical results of this seven-year NASA and Vanderbilt University joint development effort. The flagship breakthrough, called Neocortex™, is [a new form of artificial intelligence](#) that uses state-of-the art 3D image processing from real-time sensor information to learn.

Practical Exercises, Easy to Follow

In addition to image processing concepts, the lecture series offers practical exercises to help engineers understand how to apply computer vision theory. For example, if edge detection is desired for finding and tracking objects in an image, students select and implement the appropriate image morphology procedures to achieve that goal. The courses also focus on how to write software to implement the math behind the procedure. “In the past, a course like this often focused on writing and debugging computer programs,” said Dr. Peters. “These lectures stress how mathematics and software work together as a more useful approach.”

The online courses, frequently updated, are a great resource for retraining or simply keeping up with technology. The format includes fun and colorful visuals.

“Our engineering students are able to comprehend new techniques from Dr. Peters’ image processing lectures,” said Alan Bentley, Assistant Vice Chancellor, Center for Technology Transfer and Commercialization, Vanderbilt University.

Image Processing and the Growing Trend of 3D Vision Guidance

As more companies discover the benefits of [3-dimensional visual analysis](#) for guiding machines and robots, both students and engineers need to increase their knowledge of the latest technology. New algorithms and sensor technology are advancing what is state-of-the-art quickly, increasing the breadth of solutions available for clients.

“Real-time, reactive 3D vision solves difficult inspection and logistics challenges, which is a specialty of Universal Robotics,” said Dr. Peters. Depending on the job requirements, the company can combine the real-time 3D sensing with intelligence of Neocortex to provide greater quality control and efficiency than customers realized was possible.

Download the image processing lecture series at no charge at www.universalrobotics.com/image-processing. 3D white papers and additional resources are also available.

Universal Robotics, [a software engineering company](#), improves quality and efficiency through multi-dimensional sensing and processing, motion control, and artificial intelligence. The company offers an unparalleled software platform for intelligent flexible automation, providing a wide range of solutions for materials handling, logistics and industrial markets. Universal's products group by elements of sensory-motor interaction: Intelligence (Neocortex™), Sensing (Spatial Vision™), and Motor Control (Autonomy). Products integrate into complete applications or function independently, and are hardware agnostic. For example, Spatial Vision without motor control provides real-time 3D inspection, Neocortex yields data or process insight, and Autonomy can be used as an automated robot programmer.

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Online Web 2.0 Version

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