Thursday, June 27, 2019

Vision spectra

Quarterly newsletter from Photonics Media featuring the latest advancements in and applications for vision systems – from sensors to software. Manage your Photonics Media membership at Photonics.com/subscribe.

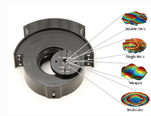
Great Expectations for Vision-Guided Robotics

As the manufacturing world considers the potential for Industry 4.0, machine vision for industrial robotic guidance continues to be a critical enabling technology for realizing the diverse needs of flexible automation and smart manufacturing, especially now when the technologies and tools for VGR are coming into their full potential.

Read Article

Optical Advancements Enable High-Precision 3D Imaging

As robotics and automation change the face of manufacturing, demands on industrial inspection have increased. Advancements in engineered point spread function (E-PSF) technology are now allowing manufacturers to incorporate high-resolution 3D imaging for improved object and feature inspection. These E-PSFs can be realized in the form of optical phase plates that can be incorporated into existing imaging systems.



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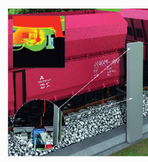
Laser Triangulation Tackles Imaging Tasks Big and Small

Spurred by technological advancements, 3D vision has in recent years moved into the mainstream of automation. The benefits of 3D are increasingly in demand and, as a consequence, the number of vendors offering it has grown dramatically, while the performance capabilities of automation systems have increased tenfold over the last decade.



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Vision Spectra - Summer 2019

Vision Spectra is a global resource geared for the vision community, with real-world case studies of vision in action, comprehensive feature articles, and columns from experts in the field examining the trends that enable Industry 4.0.

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Featured Products

High Performance Filters for Machine Vision

Chroma Technology Corp.

ContrastMax filters from Chroma feature sputtered interference coatings engineered for automated vision applications like machine vision and robotic guidance. These optical filters offer superior levels of contrast and blocking of unwanted light, while also performing well at wide viewing angles.

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Helios ToF Camera Featuring Sony DepthSense

LUCID Vision Labs Inc.

Unlock the potential of Time of Flight in a variety of industrial applications including robotic navigation, 3D inspection, and logistics automation! Helios is a compact Time of Flight (ToF) camera with superior depth precision featuring Sony's DepthSense technology.

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When One Eye Isn't Enough

AOS Technologies AG

In some applications, one camera is not enough — for example when an issue needs to be observed from different angles, or if there is a need for a color and a NIR camera (near-infrared) recording the same object. The PROMON SCOPE G3 TWIN System is a new tool — perfectly suited for production line optimization and troubleshooting...

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43-Megapixel Imaging Photometer

Radiant Vision Systems, Test & Measurement

The ProMetric® Y43 Imaging Photometer offers 43-megapixel CCD resolution to enable advanced measurement capability for display and consumer electronics manufacturers. The high spatial resolution of the Y43 detects pixel and subpixel luminance and color variations across display bright states (gray levels),...

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Gantries for 3D Print & Photonics Applications

PI (Physik Instrumente) LP, Motion Control, Air Bearings, Piezo Mechanics

Gantries typically provide motion in 2 or 3 linear degrees of freedom (X-Y and X-Y-Z) and are often used for pick and place applications, 3D printing, laser machining, and welding applications. PI Gantry systems are available in different size, load, and precision classifications including mechanical bearings, hybrid systems,..

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IMX273 Integrated in Entire uEye Camera Portfolio

IDS Imaging Development Systems GmbH

The 1.6 MP global shutter CMOS sensor provides enormous sensitivity, low noise levels, and a high dynamic range. The integration into the uEye LE camera family from IDS allows numerous new USB 3.1 Gen 1 cameras. Due to low space requirements, they are particularly well suited for equipment manufacturing and space-critical applications.

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More Vision News

Deep Neural Network Guides Drone to Smooth Landing

Researchers at the California Institute of Technology have collaborated on a system that uses a deep neural network to help autonomous drones "learn" how to land more safely and quickly, while consuming less power.

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Machine Learning and Computer Vision Lead to Smarter, More Precise Crop Management

Researchers at the Earlham Institute (EI), working with G's Growers in Ely, England, have developed a machine learning platform that works with computer vision and ultra-large-scale images taken from the air to help categorize lettuce crops in fields.

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AI-Driven Imaging System Protects Photo and Video Authenticity End-to-End

To thwart sophisticated methods of altering photos and video, researchers at the New York University Tandon School of Engineering have developed an experimental technique to authenticate images throughout the entire pipeline, from acquisition to delivery, using artificial intelligence.

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Webinars

Keys to Success with Vision-Guided Robotics

Tue, Jul 16, 2019 1:00 PM - 2:00 PM EDT

Industry leader David Dechow will present practical methods to successfully integrate conventional vision-guided robotic (VGR) applications into machine vision systems. He will discuss some cutting-edge VGR applications, the challenges they present, and the potential advantages they offer. He will provide examples of the products that are being used successfully in VGR, including robots, cameras, and software and will conclude with a discussion of machine vision technologies that could be key to expanding the future use of VGR. This webinar is sponsored by Photoneo; Teledyne DALSA; and Integro Technologies Corp.

Register Now

Coming in the Next Issue...

Features

Machine Vision in Auto Manufacturing, Image Quality, and more.

Photonics Media is currently seeking technical feature articles on a variety of topics for publication in our magazine *Vision Spectra*. Please submit an informal 100-word abstract to visionspectra@photonics.com, or use our online submission form www.photonics.com/submitfeature.aspx.