Thursday, September 28, 2023

Vision spectra

www.Vision-Spectra.com

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.

AI Aids Automotive Manufacturing Inspection

Alan Eddy is a machine vision specialist at Tensor ID, a system integrator that develops solutions to difficult manufacturing problems. The company has devised ways to overcome challenges for large automakers using vision to gauge spark plug gaps and piston rings and to determine the quality of finishes on cars. Recently, though, Tensor ID has been called upon to solve a whole new category of problems as automakers confront the demands of mass-producing a new technology.

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Custom Sputter-Coated Filters Are Transforming Machine Vision Applications

For demanding machine vision applications, sputter-coated thin-film interference filters deliver exemplary performance. Filters for wavelengths from the ultraviolet (UV) to the short-wave infrared (SWIR) boost contrast, enabling an imaging system to acquire more information more efficiently and at a lower overall system cost.

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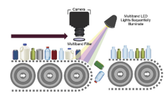

Novel Lighting Designs Tackle Vision Challenges in Logistics

Growth in e-commerce has significantly increased the volume of products and goods that businesses have had to transport, putting pressure on the quality and throughput in logistics and warehousing scenarios. For companies in e-commerce, industrial automation technologies have become more important than ever before, but as processes evolve and expand, machine vision components must be able to keep pace.

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About *Vision Spectra*

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 & Services

FXO Camera Soon Also With 25GigE Interface

SVS-Vistek GmbH

SVS-Vistek now also announces the first 25GigE models of the FXO camera series. With a housing of just 50 x 50 mm, these cameras will be the most compact industrial cameras in the world with 25GigE interface.

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Motorized Lenses for AMR Operation

Theia Technologies

Theia's lenses with motorized zoom and focus in 4-10-, 9-36-, and 12-50-mm focal ranges offer 12 mpx, 300 lp/mm resolution in visible and NIR. They come in P-iris or DC auto-iris versions, in CS and D25 board mount, and C mount for some models. The lenses cover up to 1/1.7-in. and 1/2.3-in. image sensors and smaller.

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High Intensity Flat Diffuse Lights

Advanced illumination (AI)

Advanced illumination is announcing the release of their new FD2 High Intensity Back-lit Flat Diffuse Lights, an improved take on AI's popular FD series. The FD2 Series provides roughly twice the brightness, improved structural rigidity, and better thermal efficiency over their predecessor.

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Triton HDR Camera with Adaptive Tone Mapping

LUCID Vision Labs Inc.

The new Triton HDR camera utilizes the Sony IMX490 (BSI) back-illuminated CMOS sensor, allowing for simultaneous 120 dB HDR imaging and LED flicker mitigation. Featuring LUCID's AltaView adaptive tone mapping engine, the camera delivers real-time tone-mapped image output directly from the camera, producing data-rich 8-bit images with enhanced details in the shadows and highlights.

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Machine Vision

Photonics Media

Machine Vision is a book for anyone designing or selecting machine vision systems, and implementing or considering the use of machine vision for a specific application. This 260-page volume includes 32 articles on system design and selection, camera sensors, image processing, and more.

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CELESTA Light Engine

Lumencor Inc.

CELESTA Light Engine houses seven lasers in a turnkey illuminator for fluorescence confocal spinning disk microscopy and spatially resolved transcriptomics. 1000 mW/color from the end of an optical fiber is powerful, intense, quiet, reproducible and consistent. High-end imaging and OEM instrumentation are well supported. Ask about customization.

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.: More Vision News

AI Software Uses Programmatic Imaging to Train Vision Systems

Princeton University researchers have developed a software system that aims to overcome limits to existing generative AI systems and quickly create image sets to prepare machines for nearly any visual setting. The system, called Infinigen, creates natural-looking objects and environments in three dimensions.

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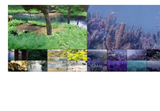

Oak Ridge Researchers Use Air-Leak Detection System to Visualize Building Drafts

Researchers at the Department of Energy's Oak Ridge National Laboratory (ORNL) have created a detection system that allows home energy auditors to see air leaking from a building in real time with the help of a camera. This could provide more accurate readings far more quickly than current diagnostic tools allow.

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Computer Vision Enhanced Sensors Aid Mobility-Challenged Patients

Researchers from Pohang University of Science and Technology (POSTECH) have developed optical sensor technology to aid patients with limited mobility during their rehabilitation. The sensor integrates computer vision technology to help track muscle movements.

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Features

AI and Inspection in Manufacturing, Vision and AI for Inspecting Lithium Ion Batteries, and AI-Powered Cobot Inspection

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.