

2013 Remote Sensing

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2013 Security+ Defence

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Exhibition Guide

Conference: 23–26 September 2013
Exhibition: 24–25 September 2013

Location
Internationales Congress Center
Dresden, Germany





SPIE Remote Sensing



Charles R. Bostater
 Marine-Environmental Optics Lab &
 Remote Sensing Center,
 Florida Institute of Technology
 (United States)
2013 Symposium Chair



Ulrich Michel
 University of Education Heidelberg,
 Germany
2013 Symposium Co-Chair

SPIE Security+Defence



David H. Titterton
 Defence Science and Technology Lab.,
 United Kingdom
2013 Symposium Chair



Reinhard Ebert
 Fraunhofer IOSB, Institute of
 Optronics, System Technologies
 and Image Exploitation, Germany
2013 Symposium Co-Chair

Cooperating Organisations



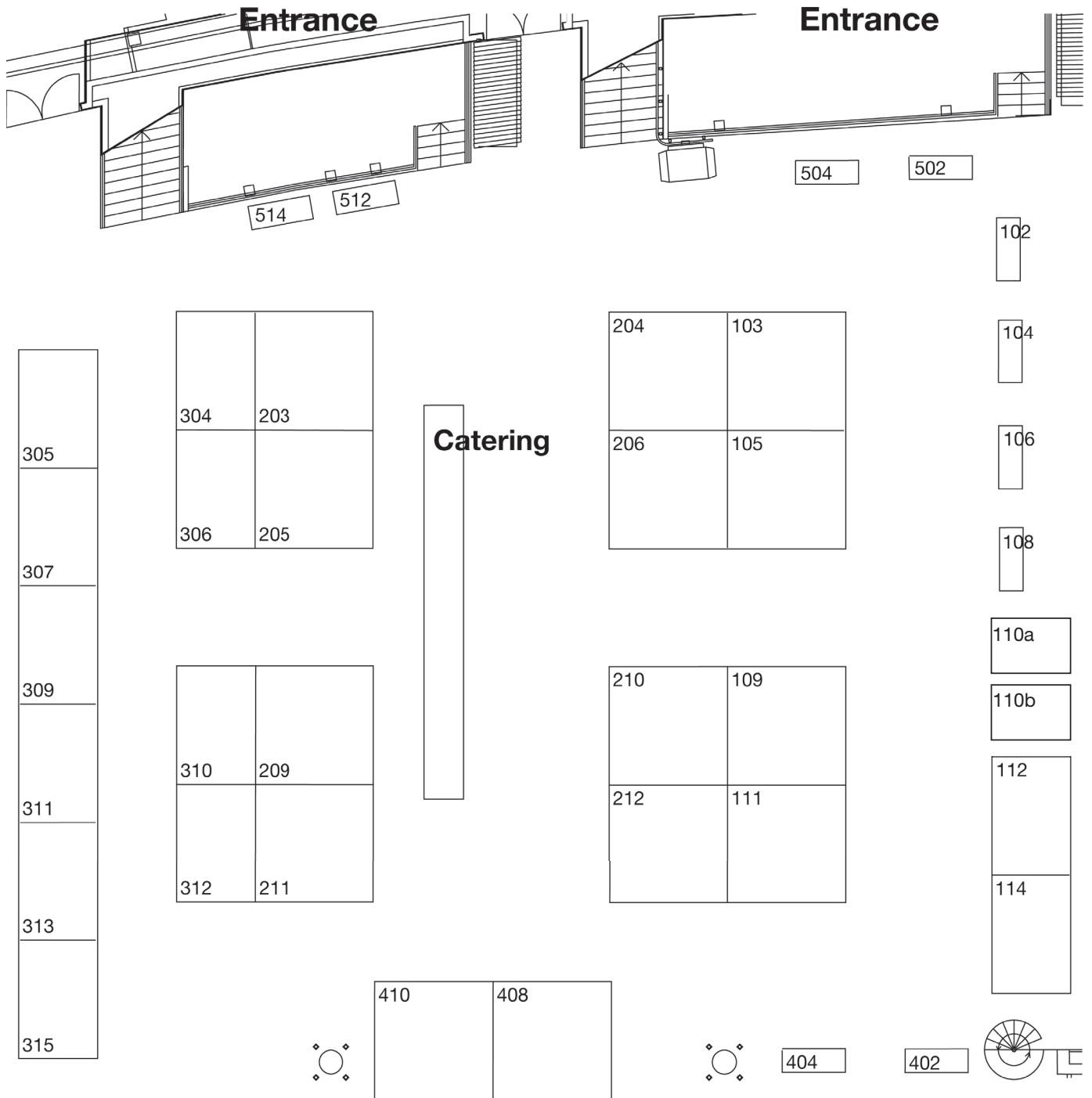
Cooperating Organisations



SPIE would like to express its deepest appreciation to the symposium chairs, conference chairs, Programme committees, and session chairs who have so generously given of their time and advice to make this symposium possible. The symposium, like our other conferences and activities, would not be possible without the dedicated contribution of our participants and members.

This Programme is based on commitments received up to the time of publication and is subject to change without notice.

Exhibition Floorplan



Exhibitor List (Current as of 8/28/2013)

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Exhibitor Listings

3S PHOTONICS S.A.S.

#104

Route De Nozay, Marcoussis, 91460 France
+33 1 6980 5883; fax +33 1 6980 5884
sales@3spgroup.com; <http://www.3spgroup.com/>

Featured Product: Fiber lasers and amplifiers at 1.0µm, 1.5µm and 2.0µm , pump diodes, seeders & fused components

3SP Group is a leading provider of innovative optical products and solutions for laser, sensor, industrial and telecommunication markets. 3SP Group designs and manufactures high power fiber lasers and amplifiers at 1.0µm 1.5µm and 2.0µm, to cover telecom, industrial, scientific, medical and LIDAR applications. 3SP Group also provides a complete range of pump diodes in the 980nm range up to 950mw, seeders at 1030nm and 1064nm, and fused components such as FBGs, multimode combiners and MFA. Contact: BRUNO LEFEVRE, Sales Director Europe, blefevre@3spgroup.com

ABB Analytical Measurement

#204

SPIE Corporate Member
585 blvd Charest Est Ste 300, Québec, QC, G1K 9H4 Canada
+418 877 2944; fax +418 877 2834
<http://www.abb.com/analytical>

Featured Product: MR Series, an FT Spectroradiometers and new MR-I, an FT-IR hyperspectral imaging spectroradiometer

ABB continues to set the standards for FT-IR Spectroradiometry used in atmospheric sounding, military targets IR signature characterization and gas detection. ABB also develops solutions with reliable airborne and spaceborne optical instruments, infrared calibration systems, hyperspectral imagers, and software for ground segments and simulation. ABB counts several projects in Defense & Security and Space success stories, positioning her at the forefront of the Remote Sensing Industry. Contact: Christian Vallieres, usiness Development Manager - Defence & Security, christian.a.vallieres@ca.abb.com

Acal BFi Germany GmbH

#212

Oppelner Str 5, Gröbenzell, 82194 Germany
+49 8142 6520 0; fax +49 8142 6520 190
sales.de@acalbfi.com; <http://www.acalbfi.de>

Featured Product: Hyper-Cam: Hyperspectral MWIR and LWIR Imaging System for Remote Sensing applications

Acal BFi is Europe's leading provider of advanced technology solutions, operating in 11 countries throughout Europe, China and South Korea. We offer products across twelve specialist technology areas, such as photonics, fiber optics, high-frequency components, sensors, power supplies, magnetic components, imaging and wireless M2M modules. Customers use our design-led expertise and expert consultation services to find the best technology solutions for their design, prototype and production needs.

AIM INFRAROT-MODULE GmbH

#114

Theresienstr 2, Heilbronn, 74072 Germany
+49 7131 6212 0; fax +49 7131 6212 929
info@aim-ir.de; <http://www.aim-ir.com>

Featured Product: MCT SWIR modules, MCT 640x512 MWIR for HOT applications, MBE-grown MCT 640x512 MW or LW modules

AIM is a leading supplier of advanced IR-detectors and Stirling cryocoolers. Modules with outstanding E/O performance, stable NUC coefficients and minimum size, weight and power meet the requirements of most challenging military and space applications. AIM provides cooled detectors from VIS-NIR to VLWIR based on MCT- and T2SL-technology. MBE-technology is introduced for 3rd Gen or cost reduction by alternative substrates. Highly efficient coolers are available for HOT and 3rd Gen applications. Contact: Rolf Muenter, Head of Business Development, rolf.muenter@aim-ir.de; Harald Ehrler, Key Account Manager, harald.ehrler@aim-ir.de

atumLASER GmbH

#108

Am Schlangengraben 16, Berlin, 13597 Germany
+1 49 30 33774 0; fax +1 49 30 33774 477
contact@atum-laser.com; www.atum-laser.com

Featured Product: atumLASER offers cw-pumped and pulsed-pumped Q-switched DPSS Nd:YAG and Nd:YLF laser beam sources.

atumLASER develops and produces diode pumped solid-state laser for industrial and scientific applications. Our laser beam sources are used in different applications and industries: machining, semiconductor, electronics fabrication, scientific as well as defense and remote sensing (LIDAR) Contact: Manuel Toplak, Key Account Manager, manuel.toplak@atum-laser.com

Bruker Optik GmbH

#105

Rudolf-Plank-Str 27, Ettlingen, 76275 Germany
+49 7243 504 2000; fax +49 7243 504 2050
info@brukeroptics.de; <http://www.bruker.com/optics>

Bruker is the leading manufacturer and worldwide supplier of Infrared, Near Infrared and Raman Spectrometers for various industries and applications including Remote Sensing. The HI 90 represents a state of the art high performance Hyperspectral Imaging System in Bruker's broad remote sensing product line, which also consists of the remote sensing spectrometer EM 27, the Scanning Infrared Gas Imaging System SIGIS 2 and the Open Path Spectrometer OPS.

PROMOTIONAL PARTNER

Carl Hanser Verlag GmbH & Co. KG #110A

Kolbergerstr 22, Muenchen, 81679 Germany
+49 89 99830 0; fax +49 89 98480 9
info@hanser.de; <http://www.hanser.de>

CeramOptec GmbH

#112

Siemensstr 44, Bonn, 53121 Germany
+49 228 979 670; fax +49 228 979 6799
info@ceramoptec.de; www.ceramoptec.com

We offer a broad range of fibers and cables for industrial application as well as fiber bundles for spectroscopy, laser application, sensor technology etc. For further information see www.ceramoptec.com

DILAS Diodenlaser GmbH

#504

SPIE Corporate Member
Galileo Galilei-Str 10, Mainz-Hechtsheim, 55129 Germany
+49 6131 9226 0; fax +49 6131 9226 257
sales@dilas.de; <http://www.dilas.com>

Featured Product: diode lasers

Founded in 1994 in Mainz, Germany, with operations in North America and China, DILAS, the diode laser company, designs, develops and manufactures high-power semiconductor laser components, modules and turn-key diode laser systems, including fiber-coupled products, for worldwide distribution. For more information about DILAS, visit our website at www.DILAS.com. Contact: Dr. Jörg Neukum, Director Sales & Marketing, sales@dilas.de



Electro Optics

#110B

Clifton Ct Unit 9, Cambridge, CB1 7BN United Kingdom
+44 1223 275 462; fax +44 1223 211 107
info@europascience.com; http://www.europascience.com/

Featured Product: Electro Optics is available in print and digital formats free to qualifying individuals

Electro Optics is Europe's leading magazine and website for the photonics industry. Its unrivalled pan-European coverage ensures photonics engineers, integrators and innovators are kept informed of the latest trends, opinions and technologies that shape the business of photonics. Independently-written, in-depth features lead our high quality editorial content, supported by a regularly updated website packed with need-to-know information for those in the European photonics industry. Contact: Warren Clark, Publishing Director, warren.clark@europascience.com; Jon Hunt, Advertising Sales Manager, jon.hunt@europascience.com

Fraunhofer-IOF

#512

Albert-Einstein-Str. 7, Jena, 07745 Germany
+49 36 41 807 0; fax +49 36 41 807 600
info@iof.fraunhofer.de; www.iof.fraunhofer.de

Geosense

#205

Leertendijk 8 SE, Den Ham, 7683 Netherlands
+31 546 673 734
goossens@geosense.nl; http://www.geosense.nl/

Featured Product: Remote Sensing, Field spectroscopy, Hyperspectral imaging, Unmanned airborne surveying

GEONSENSE is a reputable remote sensing consultant specialised in Satellite & Airborne remote sensing and field spectroscopy. Ours services include: Processing of optical imagery such as Landsat, Aster, Ikonos, Quickbird, GeoEye and WorldView2; Custom made Colour Composites, Ortho-images, Digital Elevation Models, topographic basemaps etc.; Spectral analysis, Alteration Mapping and Target Generation; Specialists in mining and environmental monitoring; Unmanned airborne surveying Contact: marc goossens, director, goossens@geosense.nl

Gooch & Housego

#310

SPIE Corporate Member

Dowlsh Ford, Ilminster Somerset, TA19 0PF United Kingdom
+44 1460 256440; fax +44 1460256441
sales@goochandhousego.com; www.goochandhousego.com

G&H designs, engineers and manufactures photonic components and assemblies for harsh environments, based upon key enabling optical technologies: acousto-optics and RF drive electronics, electro-optics, fiber optics, precision optics including optical polishing and coatings. With eight manufacturing sites (six in the US) G&H is proud to offer ITAR compliant products. Contact: Adrian Chance, Marcomms Manager, adchance@goochandhousego.com; Gary Sinclair, gsinclair@goochandhousego.com

Hellma Materials GmbH

#305

Moritz-von-Rohr-Str 1, Jena, 07745 Germany
+49 3641 2877; fax +49 3641 2877 203
info.materials@hellma.com; www.hellma-materials.com

Featured Product: Calcium Fluoride crystals (max. 440 mm dia), Barium Fluoride crystals, Radiation Detection crystals

Hellma Materials produces high quality materials for various optical applications from deep UV to IR. Continuing the Calcium Fluoride business of Schott Lithotec, we supply to diverse markets including Microlithography, Excimer Laser Optics, Analytical Instrumentation, Astronomy, Defense and more. Radiation detection materials from Hellma Materials enable high resolution and high sensitivity detection of nuclear radiation. Contact: Daniel Hahn, Area Sales Manager, daniel.hahn@hellma.com

HGH Systèmes Infrarouges

#312

10 rue Maryse Bastié, Igny, 91430 France
+33 1 69 35 47 70; fax +33 1 69 35 47 80
hgh@hgh.fr; http://www.hgh.fr/index-en.php

Featured Product: New Blackbody reference sources with high speed temperature stabilization time

HGH Infrared Systems has capitalized over 30 years of success in infrared technologies for defence and civil applications. With the mission to offer the best cutting-edge products and services to clients, HGH has consolidated its core businesses on 3 market segments: Wide area surveillance, industrial thermography and Optronic Test Equipment. HGH provides to laboratories, worldwide, any types of blackbodies, high-end collimators, test bench of IRFPA, radiometer, etc...Contact: Catherine Barrat, Sales manager, catherine.barrat@hgh.fr; Gildas Chauvel, Marketing manager, gildas.chauvel@hgh.fr

Hübner GmbH

#210

Heinrich-Hertz-Str. 2, Kassel, 34123 Germany
+49 56 1998 0; fax +49 56 1998 1515
info@hubner-germany.com; http://www.hubner-germany.com

Featured Product: T-SENSE T-COGNITION C-WAVE

The Terahertz Imager T-SENSE visualizes enclosed hazardous substances precisely in letters as well as small parcels safely and effectively. With the Terahertz Spectrometer T-COGNITION hidden drugs or explosives can be identified with reliability and precision. The concept of C-WAVE allows to build sources for tunable continuous-wave emission from 450-650 nm and 900-1300 nm. Contact: Thorsten Sprenger, Head of R&D Public Security, publicsecurity@hubner-germany.com; Daniel Hübsch, Project Manager R&D Public Security, publicsecurity@hubner-germany.com

IRnova AB

#111

Electrum 236, Kista, 164 40 Sweden
+46 8 793 66 23; fax +46 8 750 54 30
info@ir-nova.se; http://www.ir-nova.se

Featured Product: IR detectors

IRnova develop and supply high quality, high performance infrared detectors and related components to infrared module, camera and system manufacturers all over the world. The combination of experienced personnel, long track record with thousands of supplied detectors and well-established manufacturing process with high yield and capacity results in cost-effective production and deliveries of high quality and reliable performance detectors. Contact: Lars Karlsson, VP Sales & Marketing, lars.karlsson@ir-nova.se

Laser Components GmbH

#304

SPIE Corporate Member

Werner-von-Siemens-Str. 15, Olching, 82140 Germany
+49 8142 2864-0; fax +49 8142 2864-11
info@lasercomponents.com; http://www.lasercomponents.com/de/

Featured Product: Opto-electronic components for ranging applications: Pulsed laser diodes, avalanche photodiodes

LASER COMPONENTS is specialized in the development, manufacture, and sale of components and services for the laser and opto-electronics industries. With sales offices in four different countries, the company has served its customers since 1982. In-house production at six locations in Germany, Canada, and the USA began in 1986 and is meanwhile responsible for about half of its turnover. Currently, the family-run business employs more than 150 people worldwide.

Exhibitor Listings

LOT-QuantumDesign GmbH

#408

Im Tiefen See 58, Darmstadt, 64293 Germany
+49 6151 88060; fax +49 6151 896667
info@lot-qd.de; <http://www.lot-qd.de>

Featured Product: NIR / IR cameras; Hyperspectral cameras; Polarizer

For over 40 years, LOT-QuantumDesign has been one of the leading technical sales and service companies in Europe. Our product range comprises components and unique state-of-the-art systems for material characterization, thin film analysis, imaging, spectroscopy, photonics, bio- and nanotechnology. Our headquarters including a well-equipped application lab are in Darmstadt, Germany. Contact: Stefan Wittmer, Productmanager, wittmer@lot-qd.de

MWTechnologies, Lda

#402

R Eng Frederico Ulrich, 2650, Maia, 4470-605 Portugal
+351 220 168 902
info@mw-technologies.com; <http://www.mw-technologies.com>

Featured Product: Pulsed Fiber Lasers, Optical ASE Sources, Optical Amplifiers, compact Laser Diode Driver

MWTechnologies offers innovative optical sources based on fiber-optic technologies, as well as product design, product development and engineering services aimed at developing and selling cost-effective and reliable products and solutions that fulfill customer needs. Contact: Miguel Melo, info@mw-technologies.com

Nanomotion Ltd

#306

HaYetsira St PO Box 223, Mordot HaCarmel Industrial Park
Yokneam, 20692 Israel
+972 732498000; fax +972 732498099
nano@nanomotion.com; www.nanomotion.com

Featured Product: RS08 Silent Rotary Piezo Shutter, Linear IR Shutter, Filter changers, OIS stages

Nanomotion specializes in small motion modules used for linear and rotary shutters & filter changers that optimize SWaP and operate silently, based on our ultrasonic piezo technology. Small XY optical image stabilization stages are used for laser steering or image stabilization. NanoGimbal is a miniature pan & tilt module that provides gyro stabilized pan and tilt motion for moving sensors or mirrors. Nanomotion provides motor & drive component level solutions and complete solutions

Nufern

#307

SPIE Corporate Member

7 Airport Park Rd, East Granby, CT, 06026-9523 United States
+860 408 5000; fax +860 844 0210
info@nufern.com; <http://www.nufern.com>

Featured Product: High Power Fibers & Fiber Amplifiers

Nufern is a leading U.S. manufacturer of specialty optical fibers, gyro coil winding, fiber lasers and amplifiers serving diverse markets. Current products include over 300 standard fibers and range from sub-assemblies to complete turn-key fiber systems from mW to kW power levels. Nufern's integrated teams also provide rapid, cost-effective OEM fiber laser design, assembly and contract manufacturing. Contact: Andrzej Szkotnicki, Sales & Application Engineer - EU, aszkotnicki@nufern.eu; Peter Pietrzak, Sales & Application Engineer - EU, ppietrzak@nufern.eu

Ocean Optics B.V.

#410

Geograaf 24, Service and Support, Duiven, 6921 EW Netherlands
+31 26 319 0500; fax +31 26 319 0504
info@oceanoptics.eu; <http://www.oceanoptics.eu>

Ocean Optics is the inventor of the world's first miniature spectrometer and a global leader in photonics for research, life sciences, quality assurance, education and OEM applications. Ocean Optics' extensive line of technologies includes spectrometers, chemical sensors, metrology instrumentation, optical fibres and thin films and optics. Recognized as an industry innovator, Ocean Optics has specified and delivered over 150,000 modular miniature spectrometers and systems throughout the world. Contact: Danielle Ravenshorst, Marketing Manager, danielle.ravenshorst@oceanoptics.eu

PROMOTIONAL PARTNER

optics.org

#311

2 Alexandra Gate, Ffordd Pengam, Cardiff, CF24 2SA United Kingdom
+44 117 905 5330; fax +44 117 905 5331
rob.fisher@optics.org; www.optics.org

Optics.org is the longest-running online resource targeted toward OEMs and system integrators in the core growth markets for photonics applications, and is your gateway to thousands of potential new customers looking to buy your products and services. From LEDs to industrial lasers and from sensing to microscopy, optics.org covers all the latest company, product and business news as well as in-depth articles on product application and market analysis. Contact: Robert Fisher, Head of Sales and Marketing, rob.fisher@optics.org

Opto Engineering

#309

Via Cremona 29/2, Mantova, 46100 Italy
+39 0376 263 525; fax +39 0376 262 432
info@opto-engineering.com; www.opto-engineering.com

Opto-E

#309

Laser & Infrared Optics Division Opto Engineering,
Via Cremona 29/2, Mantova, 46100 Italy
+39 0376 263 525; fax +39 0376 262 432
info@opto-engineering.com; www.opto-e.com

Opto-E is the Infra-red and Laser optics division of Opto-Engineering s.r.l. Opto-E designs, manufactures and markets precision IR and Laser optical systems for a wide variety of applications, spanning from commercial to industrial, medical and military applications. Opto-E products include near-visible SWIR and MWIR, LWIR thermal imaging lens assemblies in addition to F-theta lenses for laser marking/scanning. Moreover Opto-E provides customized lenses for infra-red cameras, thermograph applications and custom laser optics, specifically designed to fit your application. We pride ourselves on providing innovative, quality and reliable optical assemblies in addition to precision custom solutions that meet our customers' specific challenging needs. Thanks to our 10-years experience in providing custom solutions for machine vision applications, we combine optics, mechanics and electronics to solve our customers' most challenging integration problems. Passion for new optics development stands behind all our products, from the simplest optical component to the most complex integrated optical assembly. Our goal is to help you solve your vision problem, whether the optical solution is required for a commercial application, a laboratory environment or the most challenging defense applications.

OptroMech Ltd.

#404

POB 10439, Petach-Tikva, 49003 Israel
+972 503 502808; fax +972 2 5814457
ziv.goren@optromech.com; <http://www.optromech.com>

OptroMech specializes in providing premium, state of the art, mechanical design and consultant services for the electro-optics industry. We excel in design of precision mechanisms for a large variety of products and industries, with exceptional expertise in optronics and opto-mechanics. We have worked with Elbit Systems, Temmek Optics, RP Optical, IrZoom, and many others that recognized the advantages of working with a professional, responsive design team to meet the most demanding challenges. Contact: Ziv Goren, CEO, ziv.goren@optromech.com

Photron (Europe) Ltd.

#209

Bottom Rd, The Barn, West Wycombe Bucks,
HP14 4BS United Kingdom
+44 1494 481011; fax +44 1494 487011
info@photron.com; http://www.photron.com

Featured Product: Photron, the leading name worldwide in high speed imaging:

Used in internationally renowned research facilities more than 30 countries worldwide, Photron FASTCAM high speed cameras are trusted to provide high quality results in the most challenging applications and environments. Photron continues to utilise the latest technological innovations to further advance product performance in order to meet the most demanding requirements from users around the world. Specialist high-speed imaging applications knowledge. Photron's specialist applications engineers have a wealth of knowledge and experience in demanding imaging requirements and are able to advise both new and experienced users on High-speed imaging solutions and imaging techniques to achieve the optimum results. Cameras which are recommended for Ballistic/Security High-Speed Applications: FASTCAM SA-X2; Range Version FASTCAM SA5, SA1.1 & SA4; HIGH G - FASTCAM MH-4 : 4 cameras heads. Contact: Phil Holloway, Sales and Applications Engineer, pholloway@photron.com

Pixelteq, Inc.

#315

Geograaf 24, Duiven, 6921 Netherlands
+31 263831707; fax +31 263190505
info@pixelteq.com; http://www.pixelteq.com/

QUANTEL

#211

2 bis avenue du Pacifique, BP 23, Les Ulis Cedex, 91941 France
33 1 6929 1700; fax 33 1 6929 1729
quantel@quantel.fr; http://www.quantel-laser.com

A key international player in the solid-state laser industry since 1970, Quantel offers a wide range of products that meet the requirements of both industrial, scientific and military applications: Pulsed solid-state lasers (Nd:YAG and Nd:Glass); Fiber lasers; High power laser diodes. Quantel can also design and manufacture custom lasers to meet specific customer application requirements Contact: Olivier Rabot, Program & Diodes Director, olivier.rabot@quantel-diodes.com

Raptor Photonics

#103

Millbrook Larne, Willowbank Business Park, Co Antrim N Ireland,
BT40 2SF United Kingdom
+44 2828 270141; fax +44 2828 275685
info@raptorphotonics.com; www.raptorphotonics.com

Raptor Photonics offers a full line of high performance, rugged ultra-low light cameras, which are optimized for day/night surveillance, homeland security, industrial and scientific applications. Raptor specializes in complete cameras and core engine solutions using CCD, EMCCD, SCMOS and SWIR sensors. The extreme low light capability of Raptor's cameras makes them ideal in a variety of applications, including Border & Coastal Surveillance, Airport & Port Surveillance and Airborne/Land EO systems.

RP Optical Lab.

#106

5 Shimshon St, Bldg B, Petach Tikva, 49517 Israel
+972 3 505 7436; fax +972 9 199 878
info@rp-optical-lab.com; http://www.rp-optical-lab.com

Featured Product: A new and innovative line of SWIR, MWIR and LWIR lenses for different applications.

RP Optical Lab is a leading company in the field of developing and producing Electro-Optical modules. RP specializes in the field of thermal imaging. RP is involved in the defense, homeland security, commercial and medical markets. The company has in-house innovative design and engineering, resulting in the fastest time to market available. At RP one will find the ultimate combination between a company with top of the line products and flexible and dedicated business partners. Contact: Vadim Edelman, Projects & Marketing Manager, vadim@rp-optical-lab.com

SCHOTT AG

#203

SPIE Corporate Member
Hattenbergstrasse 10, Mainz, 55122 Germany
+49 6131 66 0; fax +49 6131 66 2000
info@schott.com; http://www.schott.com/

SCHOTT with its approximately 16,000 employees in 35 countries has been supplying high-tech materials, components and systems for defense and security applications for more than 125 years. Proven products and solutions in the areas of window systems, optical material and components, hermetic glass-to-metal seals as well as fiber optics and LED increase the safety and efficiency of military forces all over the world. By land. By air. By sea. By SCHOTT. Contact: Gernot Weber, Sales Manager, gernot.weber@schott.com; Stefan Haase, Manager Protection, stefan.haase@schott.com

SOFRADIR

#109

BP 21, Veurey-Voroize, 381113 France
+33 4 76 28 77 00; fax +33 4 76 53 85 97
www.sofradir.com

Sofradir is the number one developer and manufacturer of a key class of infrared (IR) detectors for military, space and industrial applications. It specializes in cooled IR detectors based on a sophisticated high performance technology, MCT to which InSb, InGaAs and QWIP technologies are now added. Its vast product portfolio of scanning and staring arrays covers the entire infrared spectrum, from near infrared to very far infrared. Contact: Marc Larive, Marketing Manager, Marc.larive@sofradir.com

Soliton Laser-und Messtechnik GmbH #514

Talhofstr 32, Gilching, 82205 Germany
+49 8105 7792 0; fax +49 8105 7792 77
info@soliton-gmbh.de; http://www.soliton-gmbh.de

Spectrogon AB

#102

SPIE Corporate Member
Tillverkarvägen 1, Täby, 187 12 Sweden
+46 8 638 28 00; fax +46 8 638 28 08
sales.se@spectrogon.com; http://www.spectrogon.com

SphereOptics GmbH

#206

Bergstr 36, Uhdlingen, 88690 Germany
+49 7556 9299 666; fax +49 7556 5108
info@sphereoptics.de; http://www.sphereoptics.de

SPIE Digital Library

#502

1000 20th St., Bellingham, WA 98225 USA
+360 685 5600; fax +360 647 1445
The SPIE Digital Library currently includes 400,000 breakthrough conference proceedings, peer-reviewed journal articles, and eBook chapters, with more content being added every day. Topics include astronomy, biophotonics, communications, defense, imaging, energy, lasers, lithography, metrology, nanotechnology, sensing, and more. The SPIE Digital Library is the most extensive optics and photonics research database available. Learn more at www.SPIEDigitalLibrary.org

LANYARD SPONSOR**TRIOPTICS GmbH**

#313

SPIE Corporate Member
Hafenstr 35-39, Wedel, 22880 Germany
+49 4103 18006 0; fax +49 4103 180062 0
info@trioptics.com; www.trioptics.com

Astronomy

Hellma Materials GmbH
SCHOTT AG

Basic Research, Science

3S PHOTONICS S.A.S.
atumLASER GmbH
Bruker Optik GmbH
HGH Systèmes Infrarouges
Laser Components GmbH
LOT-QuantumDesign GmbH
Nufern

Biomedical, Medical Imaging, Health Care

DILAS Diodenlaser GmbH
Hübner GmbH
MWTechnologies, Lda
Nanomotion Ltd.

Cameras and Imaging systems

AIM INFRAROT-MODULE GmbH
Geosense
Hellma Materials GmbH
HGH Systèmes Infrarouges
Hübner GmbH
LOT-QuantumDesign GmbH
Nanomotion Ltd.
RP Optical Lab.

Chemical and Biological Analysis

Bruker Optik GmbH
Hübner GmbH
Nufern

Communications & Networking

3S PHOTONICS S.A.S.
MWTechnologies, Lda
Nufern

Computing, Data Processing Hardware

Hübner GmbH

Consulting Services

RP Optical Lab.

Defense, Security, Law Enforcement

3S PHOTONICS S.A.S.
AIM INFRAROT-MODULE GmbH
atumLASER GmbH
Bruker Optik GmbH
DILAS Diodenlaser GmbH
Gooch & Housego
Hellma Materials GmbH
HGH Systèmes Infrarouges
Hübner GmbH
Laser Components GmbH
MWTechnologies, Lda
Nanomotion Ltd.
Nufern
QUANTEL
RP Optical Lab.

Detectors, Sensors

AIM INFRAROT-MODULE GmbH
Hellma Materials GmbH
Hübner GmbH
Laser Components GmbH
Nanomotion Ltd.
Nufern

Displays: Consumer, Information, Entertainment

DILAS Diodenlaser GmbH

Distributor, Reseller, Integrator

Geosense

Earth Sciences, Environmental Monitoring, Climate

Bruker Optik GmbH
Geosense

Education and Training

MWTechnologies, Lda

Electronic Components

SCHOTT AG

Fiber Optics and Accessories

3S PHOTONICS S.A.S.
DILAS Diodenlaser GmbH
Gooch & Housego
Laser Components GmbH
MWTechnologies, Lda
Nufern
SCHOTT AG

Industrial Sensing and Measurement

Bruker Optik GmbH
Hübner GmbH
Laser Components GmbH
Nanomotion Ltd.

Laser Components and Accessories

3S PHOTONICS S.A.S.
Gooch & Housego
Hübner GmbH
Laser Components GmbH
MWTechnologies, Lda

Laser Industry

3S PHOTONICS S.A.S.
atumLASER GmbH
DILAS Diodenlaser GmbH
Hübner GmbH
Laser Components GmbH
MWTechnologies, Lda
Nufern
QUANTEL

Lasers and Systems

3S PHOTONICS S.A.S.
atumLASER GmbH
DILAS Diodenlaser GmbH
Gooch & Housego
MWTechnologies, Lda
Nufern
QUANTEL

LED, OLED, non-laser Light Sources

Hübner GmbH

Lighting and Illumination

SCHOTT AG

Lithographic Equipment

Hellma Materials GmbH
Nanomotion Ltd.

Machine Vision, Factory Automation

Nanomotion Ltd.

Materials Processing, Lasers in Manufacturing

3S PHOTONICS S.A.S.
atumLASER GmbH
DILAS Diodenlaser GmbH
Laser Components GmbH

Materials, Abrasives, Chemicals

Hellma Materials GmbH

Optical Coatings, Thin Films

Laser Components GmbH

Optical Communication, Networking Devices

3S PHOTONICS S.A.S.

Optical Components - Filters, Mirrors, Other

Gooch & Housego
Hellma Materials GmbH
SCHOTT AG

Optical Components - Lenses

Laser Components GmbH
SCHOTT AG

Optical Design and Engineering

RP Optical Lab.

Optics Manufacturing

HGH Systèmes Infrarouges

Positioning Equipment, Motion Control and Accessories

Nanomotion Ltd.

Publishers, Associations, Clusters, Societies

Electro Optics
optics.org

Spectroscopy Devices and Equipment

atumLASER GmbH
Bruker Optik GmbH
Geosense

Test and Measurement, Metrology

Gooch & Housego
HGH Systèmes Infrarouges

Vacuum, Cooling, Gas Handling Equipment

AIM INFRAROT-MODULE GmbH