Contents

Part A Electro-Optical Remote Sensing

OVERVIEW

7835 02 Laser radar: from early history to new trends [7835A-11]
V. Molebny, National Taras Shevchenko Univ. of Kyiv (Ukraine); G. Kamerman, FastMetrix, Inc. (United States); O. Steinvall, Swedish Defence Research Agency (Sweden)

LASER RADAR SYSTEMS I

7835 03 Rapid topographic and bathymetric reconnaissance using airborne LiDAR (Invited Paper) [7835A-01]
A. Axelsson, Airborne Hydrography AB (Sweden)

7835 04 Range accuracy of a gated-viewing system compared to a 3D flash LADAR under different turbulence conditions [7835A-02]
B. Göhler, P. Lutzmann, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung (Germany)

7835 05 High range resolution laser scanner with full waveform recording [7835A-03]
D. Letalick, H. Larsson, G. Tolt, L. Allard, E. Wollner, F. Berglund, Swedish Defence Research Agency (Sweden)

7835 07 Stand-off detection of vapor phase explosives by resonance enhanced Raman spectroscopy [7835A-05]
A. Ehlerding, I. Johansson, S. Wallin, H. Östmark, Swedish Defense Research Agency (Sweden)

7835 08 A portable system for measuring the absolute geographic location of distant objects [7835A-06]
L. Kuščcer, J. Diaci, Univ. of Ljubljana (Slovenia)

LASER RADAR MODELLING

7835 09 Modeling of an active burst illumination imaging system: comparison between experimental and modelled 3D scene (Invited Paper) [7835A-07]
N. Riviere, G. Anna, L. Hespel, B. Tanguy, M.-T. Velluet, Y.-M. Frédéric, ONERA (France)

7835 0A Physical modelling of point-cloud (3D) and full-wave-form (4D) laser imaging [7835A-08]
G. Anna, L. Hespel, N. Riviere, D. Hamoir, B. Tanguy, ONERA (France)
Modeling of 1.5 μm range gated imaging for small surface vessel identification [7835A-09]
R. L. Espinola, Army Night Vision & Electronic Sensors Directorate (United States); O. Steinvall, M. Elmquist, K. Karlsson, Swedish Defence Research Agency (Sweden)

LASER RADAR SYSTEMS II

ACTIM: an EDA initiated study on spectral active imaging [7835A-12]
O. Steinvall, I. Renhorn, J. Ahlberg, H. Larsson, D. Letalick, Swedish Defence Research Agency (Sweden); E. Repasi, P. Lutzmann, G. Anstett, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung (Germany); D. Hamoir, L. Hespel, Y. Boucher, ONERA (France)

Optical air temperature and density measurement system for aircraft using elastic and Raman backscattering of laser light [7835A-13]
M. Fraczek, EADS Innovation Works (Germany); A. Behrendt, Univ. Hohenheim (Germany); N. Schmitt, EADS Innovation Works (Germany)

PASSIVE ELECTRO-OPTICAL SYSTEMS

LOTIS facility initial operational capabilities: flexible user interfaces [7835A-14]
S. B. Hutchison, R. M. Bell, Jr., S. A. Borota, G. J. Cuzner, A. T. Cochrane, Lockheed Martin Space Systems Co. (United States)

Fast multispectral radiometric method and instruments for analysis of blast [7835A-15]
T. Y. Sabati, A. D. Devir, A. B. Lessin, M. Engel, Y. Bushlin, IARD Sensing Solutions Ltd. (Israel)

Sea modeling and rendering [7835A-28]
T. Cathala, J. Latger, OKTAL Synthetic Environment (France)

Spectral and spatial measurements of atmospheric aerosol clouds with a hyperspectral sensor [7835A-17]
E. Agassi, E. Hirsch, A. Ronen, IIBR - Israel Institute for Biological Research (Israel)

SIGNAL PROCESSING

FIT3D toolbox: multiple view geometry and 3D reconstruction for Matlab [7835A-18]
I. Esteban, Univ. van Amsterdam (Netherlands) and TNO Defence, Security and Safety (Netherlands); J. Dijk, TNO Defence, Security and Safety (Netherlands); F. Groen, Univ. van Amsterdam (Netherlands)

Exploiting context for assisted aerial image interpretation [7835A-19]
A. Bauer, O. Herschelmann, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung (Germany)

Dealing with uncertain feature assessments in interactive object recognition [7835A-20]
A. Bauer, V. Jürgens, S. Angele, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung (Germany)
PHOTONIC COMPONENTS AND ARCHITECTURES IN DEFENCE SYSTEMS

Amplitude holographic LPCC filters for 4-f correlator: variants of binary realization [7835A-21]
N. N. Evtikhiev, E. Yu. Zlokazov, S. N. Starikov, R. S. Starikov, D. V. Shaulsky, Moscow Engineering Physics Institute (Russian Federation)

Extraction of the objects observed on a non-uniform background during sensor motion [7835A-22]
B. Alpatov, P. Babayan, Ryazan State Radio Engineering Univ. (Russian Federation)

Revival of circular variable filters [7835A-23]
D. Cabib, M. Lavi, CI Systems Ltd. (Israel); H. Orr, Nelson Consulting Partnership (United Kingdom)

A technique for flicker reduction in a volumetric three-dimensional display with a static image space [7835A-24]
B. Koudsi, The Univ. of Oklahoma, Tulsa (United States); H. H. Refai, 3DIcon Corp. (United States); J. J. Sluss, Jr., The Univ. of Oklahoma, Tulsa (United States)

Progress of laser diode arrays operating under harsh conditions [7835A-25]
A. Kohl, T. Fillardet, H. Moisan, E. Brousse, Quantel Laser Diodes (France)

The manufacturing and testing of Cs2Te UV image intensifier [7835A-27]
R. Fu, B. Chang, Y. Qian, Y. Qiu, Nanjing Univ. of Science and Technology (China)

Part B Military Applications in Hyperspectral Imaging and High Spatial Resolution Sensing

MILITARY APPLICATIONS IN HYPERSONAL IMAGING AND HIGH SPATIAL RESOLUTION SENSING

Detection of disturbed earth using hyperspectral LWIR imaging data [7835B-31]
W. Hubbard, G. Bishop, BAE Systems (United Kingdom); J.-P. Gagnon, P. Lagueux, Telops Inc. (Canada); S. Hannuna, N. Campbell, Bristol Univ. (United Kingdom)

An acousto-optic based hyperspectral imaging camera for security and defence applications [7835B-32]
J. Ward, M. Farries, Gooch & Housego Ltd. (United Kingdom); C. Pannell, Gooch & Housego LLC (United States); E. Wachman, ChromoDynamics Inc. (United States)

Adaptive band selection snapshot multispectral imaging in the VIS/NIR domain [7835B-34]
J. Minet, J. Taboury, Lab. Charles Fabry, Institute d’Optique, CNRS, Univ. Paris-Sud (France); M. Péralat, N. Roux, J. Lonnoy, Sagem, Groupe Safran (France); Y. Ferrec, ONERA (France)

Correction and use of inflight hyperspectral data [7835B-35]
A. Killey, BAE Systems (United Kingdom)
Co-aligning aerial hyperspectral push-broom strips for change detection [7835B-36]
E. Ringaby, Linköping Univ. (Sweden); J. Ahlberg, N. Wadströmer, Swedish Defence Research Agency (Sweden); P.-E. Forssén, Linköping Univ. (Sweden)

Author Index