Front Matter: Volume 8407


Event: SPIE Defense, Security, and Sensing, 2012, Baltimore, Maryland, United States
Contents

SESSION 1 INFORMATION FUSION APPROACHES AND ALGORITHMS I

8407 02 Spectral and spatial algorithm architecture for classification of hyperspectral and LIDAR [8407-01]  
R. S. Rand, T. S. Khun, National Geospatial-Intelligence Agency (United States)

8407 03 Effects of aberrations on image reconstruction of data from hybrid intensity interferometers [8407-02]  
J. Murray-Krezan, P. N. Crabtree, Air Force Research Lab. (United States)

8407 04 Multisource taxonomy-based classification using the transferable belief model [8407-03]  
W. J. Farrell III, A. M. Knapp, Lakota Technical Solutions, Inc. (United States)

8407 05 Computationally efficient Bayesian tracking [8407-04]  
J. Aughenbaugh, B. La Cour, Univ. of Texas at Austin (United States)

SESSION 2 INFORMATION FUSION APPROACHES AND ALGORITHMS II

8407 07 Cross layers decision making and fusion model in layered sensing systems [8407-06]  
A. Khoshnaw, S. Zein-Sabatto, M. Malkani, Tennessee State Univ. (United States)

8407 09 Leveraging provenance to improve data fusion in sensor networks [8407-09]  
G. Dogan, City Univ. of New York (United States); E. Seo, Univ. of Illinois at Urbana-Champaign (United States); T. Brown, City Univ. of New York (United States); T. F. Abdelzaher, Univ. of Illinois at Urbana-Champaign (United States)

8407 0A Analysis of decision fusion algorithms in handling uncertainties for integrated health monitoring systems [8407-10]  
S. Zein-Sabatto, M. Mikhail, M. Bodruzzaman, Tennessee State Univ. (United States); M. DeSimio, Univ. of Dayton Research Institute (United States); M. Derriso, A. Behbahani, Air Force Research Lab. (United States)

SESSION 3 INFORMATION FUSION IN ROBOTICS

8407 0B Multirobot autonomous landmine detection using distributed multisensor information aggregation [8407-11]  
J. Jumadinova, P. Dasgupta, Univ. of Nebraska at Omaha (United States)

8407 0C Architectural design and support for knowledge sharing across heterogeneous MAST systems [8407-12]  
R. C. Arkin, S. Garcia-Vergara, S. G. Lee, Georgia Institute of Technology (United States)
8407 0D Navigation of uncertain terrain by fusion of information from real and synthetic imagery [8407-13]
D. M. Lyons, P. Nirmal, Fordham Univ. (United States); D. P. Benjamin, Pace Univ. (United States)

8407 0E Allothetic and idiothetic sensor fusion in rat-inspired robot localization [8407-14]
A. Weitzenfeld, Univ. of South Florida Polytechnic (United States); J.-M. Fellous, The Univ. of Arizona (United States); A. Barrera, Instituto Tecnológico Autónomo De México (Mexico); G. Tejera, Univ. de la República (Uruguay)

8407 0F Using a virtual world for robot planning [8407-15]
D. P. Benjamin, J. V. Monaco, Y. Lin, C. Funk, Pace Univ. (United States); D. Lyons, Fordham Univ. (United States)

8407 0G Using arm and hand gestures to command robots during stealth operations [8407-16]
A. Stoica, C. Assad, M. Wolf, K. S. You, M. Pavone, T. Huntsberger, Y. Iwashita, Jet Propulsion Lab. (United States)

SESSION 4 INFORMATION FUSION APPROACHES AND ALGORITHMS III (BIOMETRICS-RELATED)

8407 0H Multimodal biometric approach for cancelable face template generation [8407-17]
P. P. Paul, M. Gavrilova, Univ. of Calgary (Canada)

8407 0J Context based gait recognition [8407-19]
S. Bazazian, M. Gavrilova, Univ. of Calgary (Canada)

SESSION 5 IMAGE FUSION

8407 0M Automatic and generic mosaicing of multisensor images: an application to Pleiades HR [8407-22]
F. Bignalet-Cazalet, S. Baillarin, D. Greslou, Ctr. National d’Études Spatiales (France)

8407 0N Adaptive optimal spectral range for dynamically changing scene [8407-23]
E. Pinsky, A. Siman-tov, D. Peles, Rafael Ltd. (Israel)

8407 0O Colour-the-INSight: combining a direct view rifle sight with fused intensified and thermal imagery [8407-24]
M. A. Hogervorst, C. Jansen, A. Toet, P. Bijl, TNO Human Factors (Netherlands); P. Bakker, Thales Nederland B.V. (Netherlands); A. C. Hiddema, PHOTONIS Netherlands B.V. (Netherlands); S. F. van Vliet, Ministry of Defence (Netherlands)
SESSION 6  INFORMATION FUSION APPROACHES AND ALGORITHMS IV (HUMAN-IN-THE-LOOP)

8407 0Q  Advances in data representation for hard/soft information fusion [8407-26]
J. C. Rimland, D. Coughlin, D. L. Hall, J. L. Graham, Pennsylvania State Univ. (United States)

8407 0R  Human cognitive and perceptual factors in JDL level 4 hard/soft data fusion [8407-27]
J. C. Rimland, D. L. Hall, J. L. Graham, Pennsylvania State Univ. (United States)

8407 0S  Use of sonification in the detection of anomalous events [8407-28]
M. Ballora, Pennsylvania State Univ. (United States); R. J. Cole, H. Kruesi, H. Greene, Raytheon Corp. (United States); G. Monahan, D. L. Hall, Pennsylvania State Univ. (United States)

8407 0T  Homeland situation awareness through mining and fusing heterogeneous information from intelligence databases and field sensors [8407-29]
G. Digioia, Univ. degli Studi di Roma Tre (Italy) and Engineering Ingegneria Informatica SpA (Italy); S. Panzieri, Univ. degli Studi di Roma Tre (Italy)

8407 0U  Multisource causal data mining [8407-30]
R. Woodley, M. Gosnell, K. Shallenberger, 21st Century Systems, Inc. (United States)

SESSION 7  INFORMATION FUSION SYSTEMS AND EVALUATION MEASURES

8407 0W  Agent-based analysis of trustworthiness in wireless sensor networks [8407-32]
R. Fernandes, B. Li, K. Vadakkeveedu, A. Verma, P. Gustafson, Knowledge Based Systems, Inc. (United States); J. Hwang, Air Force Research Lab. (United States)

8407 0X  Practical considerations in Bayesian fusion of point sensors [8407-33]
K. Johnson, Naval Research Lab. (United States); C. Minor, Nova Research, Inc. (United States)

POSTER SESSION

8407 0Y  Adaptive IR and VIS image fusion [8407-35]
B. Stoklasa, J. Rehacek, Z. Hradil, Palacky Univ. (Czech Republic)

Author Index
Conference Committee

Symposium Chair

Kevin P. Meiners, Office of the Secretary of Defense (United States)

Symposium Cochair

Kenneth R. Israel, Lockheed Martin Corporation (United States)

Conference Chair

Jerome J. Braun, MIT Lincoln Laboratory (United States)

Program Committee

Sheela V. Belur, The Van Dyke Technology Group, Inc. (United States)
D. Paul Benjamin, Pace University (United States)
Belur V. Dasarathy, Information Fusion Technologies (United States)
Michael Heizmann, Fraunhofer-Institut für Optronik, Systemtechnik und Bildauswertung (Germany)
Charles F. Hester, U.S. Army Research, Development and Engineering Command (United States)
Mieczyslaw M. Kokar, Northeastern University (United States)
Damian M. Lyons, Fordham University (United States)
Mirela Popa, General Dynamics Armament and Technical Products (United States)
Firooz A. Sadjadi, Lockheed Martin Maritime Systems & Sensors (United States)
Pierre Valin, Defence Research and Development Canada, Valcartier (Canada)
Pramod Kumar Varshney, Syracuse University (United States)
Shanchieh Jay Yang, Rochester Institute of Technology (United States)

Session Chairs

1 Information Fusion Approaches and Algorithms I
Jerome J. Braun, MIT Lincoln Laboratory (United States)
Damian M. Lyons, Fordham University (United States)

2 Information Fusion Approaches and Algorithms II
Mirela Popa, Chemring Detection Systems, Inc. (United States)
Charles F. Hester, U.S. Army Research, Development and Engineering Command (United States)
3 Information Fusion in Robotics  
**Damian M. Lyons,** Fordham University (United States)  
**D. Paul Benjamin,** Pace University (United States)

4 Information Fusion Approaches and Algorithms III (Biometrics-related)  
**D. Paul Benjamin,** Pace University (United States)  
**Jerome J. Braun,** MIT Lincoln Laboratory (United States)

5 Image Fusion  
**Charles F. Hester,** U.S. Army Research, Development and Engineering Command (United States)  
**Pierre Valin,** Defence Research and Development Canada, Valcartier (Canada)

6 Information Fusion Approaches and Algorithms IV (Human-in-the-loop)  
**Pierre Valin,** Defence Research and Development Canada, Valcartier (Canada)  
**Mirela Popa,** Chemring Detection Systems, Inc. (United States)

7 Information Fusion Systems and Evaluation Measures  
**Damian M. Lyons,** Fordham University (United States)  
**Charles F. Hester,** U.S. Army Research, Development and Engineering Command (United States)