

General Session

4:00 pm to 5:00 pm
Room: Provinces

Homeland Security and Public Safety — The Way Forward

Public Security Science and Technology Process Development at Defence R&D Canada

Andrew Vallerand, Director Public Security Technical Program,
Defence R&D Canada, Canada

Defence Research and Development Canada is developing a process that integrates government, academia, and industry in Canada and the U.S., that will allow the Public Security Technical Program to “be the premier forum for bi-national collaboration in Science and Technology that advances our national Public Safety and Security strategies.” He will address key Public Security Science and Technology issues relevant to Canadian, US, and international security and public safety state-of-the-art and needs, and identify ways forward in these critical areas.



Andrew Vallerand

Andrew L. Vallerand is the Canadian Principal Leader of the NATO Modeling and Simulation Group. As Head of Future Forces Synthetic Environment Section at DRDC Ottawa, Dr Vallerand managed two emerging and well exploited programs of Capability Production & Management Science & Technology (S&T) as well as Modeling & Simulation S&T.

As Director S&T Human Performance-3 in DRDC Corporate, he built the Human Systems Integration Program, and he was the Project Director of the large CA/US Advanced Distributed Mission Training Technology Demonstration project, a simulation project presently exploited by the CF-18 community.

He is Adjunct Professor at Carleton University at the Dept of Systems and Computer Engineering as well as Laval University School of Medicine.

International Charter on Space and Major Disasters

Brenda Jones, Disaster Response Coordinator, and International Charter, Space and Major Disasters Executive Secretariat, *U.S. Geological Survey, USA*

The International Charter on Space and Major Disasters represents a joint effort by global space agencies to put resources at the service of rescue authorities responding to major natural or man-made disasters. The Charter is based on voluntary contributions, by all parties, of Earth observation satellite data. Each member agency has demonstrated its commitment to using space technology to serve humankind when it is most in need of assistance, providing a basis for anticipating and managing potential or actual crisis.

Since November 2000, the Charter has been activated more than 100 times to assist in global emergencies, such as floods, fires, landslides, typhoons, volcanic eruptions, oil spills, tsunamis, hurricanes, earthquakes and civil accidents. With a low response time of 38 to 48 hours and by facilitating high reliability data, the Charter has proven the effectiveness of using space information for emergency management.



Brenda Jones

Brenda Jones began her career at EROS in May 1976, as a Production System Analyst responsible for incorporating new image processing techniques in the Center’s rapidly evolving digital data production system. In subsequent positions Jones took on additional management, product development, and quality assurance responsibilities. Since March 2002, Jones has served as EROS’s Disaster Response Coordinator. In this capacity, she has been instrumental in the design and development of EROS’s web-based Hazards Data

Distribution System as well as being one of EROS’s primary points-of-contact, coordinator, and respondent for providing remotely sensed and other geospatial data sets to the domestic and international emergency response data user community.

ASPRS Honorary Member Award



Dean Merchant will receive an Honorary Member of the American Society for Photogrammetry and Remote Sensing Award, the highest award an ASPRS member can receive. There are only 25 living Honorary Members of the Society at any given time. Initiated in 1937, this life-time award is given in recognition of individuals who have rendered distinguished service to ASPRS and who have attained distinction in advancing the science and use of the geospatial information sciences. It is awarded for professional excellence and for at least 20 years of service to ASPRS. Merchant has been a member of ASPRS since January 1956.

Registration

7:30 am to 11:30 am
Level Four — Westin Ottawa Hotel

Presenters Room

8:00 am to 11:30 am
Room: New Brunswick

Technical Sessions

8:30 am to 9:45 am

Session 26

Panel Discussion — Rapid Response Imaging

Moderator: Mohamed Mostafa, *Applanix Corporation*, Canada

Room: Les Saisons

Sponsored by the ASPRS Primary Data Acquisition Division (PDAD). Organized by Mohamed Mostafa, Applanix Corporation, Canada

This session provides a focus to illustrate the use of photogrammetric multi-sensor system technology in the Rapid Response Applications area. Experts from NOAA, NRL and DND will share their experience and describe the importance of geospatial information in their daily activities through their practical experience in the Rapid Response field.

Panelists:

Jon Sellers, *NOAA*, USA
Jason Woolard, *NOAA*, USA
Vickie Childers, *Naval Research Lab*, USA
Sgt. Bill Kidman, *Canadian Department of National Defense*, Canada

Session 27

Water Quality

Moderator: Wang Shusen, *Canada Centre for Remote Sensing, Natural Resources Canada*, Canada

Room: Ontario

Ecological Assimilation of EO Products for Ecosystem Assessment Studies

Wang Shusen, *Canada Centre for Remote Sensing, Natural Resources Canada*, Canada

Alexander Trishchenko, Richard Fernandes, Song Guo, Brian Brisco, Xiaomin Sun, and Na Mi

Hyperspectral Data of Water Quality Parameters Spectral Analysis: Area Under Spectral Curve Indicator

Pariwate Varnakovida, *Michigan State University*, USA

Narumon Wiangwang, Jianguo Qi, and Joseph P. Messina

Object Oriented Classification of Digital Airborne Data for Benthic Habitat Mapping

Kass Green, *The Alta Vista Company*, USA

Chad Lopez and B. Stevenson

Operational Monitoring of Water Quality over Lake Winnipeg Using Satellite Remote Sensing Data

Tom Hirose, *Noetix Research Inc.*, Canada

Jianguo Liu, Greg McCullough, Klaus Hockheim, Michael Stainton, Mark Kampfer, and John Bennett

Session 28

Land Use/Land Cover Mapping – 1

Moderator: John Iames, *U.S. Environmental Protection Agency*, USA

Room: Quebec

Land Use Monitoring in the St. Lawrence River Valley — Current State and Recent Evolution

Guy Letourneau, *Environment Canada*, Canada

Great Lakes Basin Land-cover Data: Issues and Opportunities

John Iames, *U.S. Environmental Protection Agency*, USA

Ross Lunetta

Use of Landsat Imagery for Evaluating Land Cover / Land Use Changes for a 30-Year Period for the Lake Erie Watershed

Mark Seidelmann, *The Ohio State University*, USA

Carolyn J. Merry

NLWIS Land Cover Classification

René Chénier, *Agriculture and Agri-Food Canada*, Canada

Thierry Fiset, Matt Maloley, Ryan Ogston, Bahram Daneshfar, Pierre-Yves Gassser, Shahid Khurshid, Yimei Zhang, and Raymond Jahnce

Session 29

Land Cover Mapping — Forestry - 2

Moderator: Chris Hopkinson, *Applied Geomatics Research Group*, Canada

Room: British Columbia

Analysis of Spectral Trajectories for Characterizing Forest Disturbance and Recovery Related to Current and Historic Infestations of Mountain Pine Beetle

Steve Gillanders, *University of British Columbia*, Canada

Michael Wulder, Nicholas Coops, Trisalyn Nelson and Nick Goodwin

Mapping Spatio-Temporal Variations in Mixed Forest Leaf Area Index with Airborne LiDAR

Chris Hopkinson, *Applied Geomatics Research Group*, Canada

Laura Chasmer

Application of Multi-resolution Satellite Imagery to Map Ericaceous Shrub Dominated Woodland in Northeastern Quebec

Olivier van Lier, *University of Sherbrooke*, Canada

Richard Fournier and Robert Bradley

Structural and Age Related Influences on Light Use Efficiency at a Boreal Jack Pine Chronosequence for MODIS Gross Primary Productivity Validation

Laura Chasmer, *Queen's University*, Canada

Harry McCaughey, Paul Treitz, A. Barr, A. Black, and A. Shashkov

Session 30

Technology — Radarsat/SAR

Moderator: Ridha Touzi, *Canada Centre for Remote Sensing, Natural Resources Canada*, Canada

Room: Alberta

Multi-polarized SAR Application to Land Cover Mapping in the Mountainous Three Gorges Area, China

Zhaohua Chen, *University of Western Ontario*, Canada

Jinfei Wang

IntelliSMART: An Operational Tool for Soil Moisture and Surface Roughness Estimation using SAR Data

Sacha Veillette, *GlobVision Inc.*, Canada

N. Nejad, A. Sen, E. Sobhani, C. Serele, M. Sahebi, S. Veillette, A. Garabedian, H. McNairn, F. Charbonneau, and S. Deschamps

Surface Water Mapping with RADARSAT

B. Brisco, *Canada Centre for Remote Sensing*, Canada

N. Short, J. van der Sanden, R. Landry and D. Raymond

Polarimetric Radarsat-2 for Wetland Mapping and Monitoring

Ridha Touzi, *Canada Centre for Remote Sensing, Natural Resources Canada*, Canada

A. Deschamps, R. Gauthier, and R. Rother

Exhibit Hall

9:30 am to 11:30 am
Confederation Ballroom

Poster Session

9:30 am to 11:30 am
Confederation Ballroom

Beverage Break in Exhibit Hall

9:45 am to 10:00 am
Confederation Ballroom

Technical Sessions

10:00 am to 11:15 am

Session 31

Data Development – 2

Moderator: David Aldred, *University of Western Ontario*, Canada

Room: Les Saisons

Extraction of Digital Elevation Model from Stereo Satellite Data

Asim Daud Rana, *Punjab University*, India
Hamma Gilani and Urooj Saeed

Object-oriented Image Classification for Urban Building Boundary Extraction from IKONOS Imagery

David Aldred, *University of Western Ontario*, Canada

Jinfei Wang

RapidOrthoTM — The Next Generation Ortho-rectification for Rapid Response

Mohamed Mostafa, *Applanix Corporation*, Canada

Alan Ip, Joe Kosofsky, and Joe Hutton

The Promise and the Reality of Automation in Linear Feature Extraction

Raad A. Saleh, *Harrisburg University of Science and Technology*, USA

Session 32

Homeland Security and Public Safety V — Partnerships

Moderator: Todd Macuda, *Institute for Aerospace Research, National Research Council*, Canada

Room: Ontario

An International Geospatial Data Partnership that Addresses State, Provincial, and Local HLS, Public Safety, and Law Enforcement Requirements

Michael Lee, *Federal Geographic Data Committee's Homeland Security Working Group (FGDC HSWG)*, USA

Building the Bi-national Foundation for a U.S.-Mexico Border GIS Database

TBD

High Resolution Imagery Projects in Ontario — Partnerships that Work

Mike Robertson, *Ministry of Natural Resources*, Canada

The Secure Border Initiative (SBI) and SBI-net Current Infrastructure and Program Areas, Part II — SBI Structure, Relationships and Background

Alan Runyan-Beebe, *Monitron LLC*, USA

Session 33

Land Use/Land Cover Mapping – 2

Moderator: Richard Mussakowski, *Ontario Ministry of Natural Resources*, Canada

Room: Quebec

Urban Environmental Monitoring from Satellite Data

Qiyun Tan, *University of Western Ontario*, Canada

Jinfei Wang

Urban Mapping Based on Landsat Image Structural Feature Extraction and Spatial Reasoning

Bert Guindon, *Canada Centre for Remote Sensing, Natural Resources Canada*, Canada

Change Detection Approach to Updating Land Cover and the Development of a Monitoring Capability

Richard Mussakowski, *Ontario Ministry of Natural Resources*, Canada

Multiple Spatial Resolution Change Detection for Large-area Mapping

Alysha Pape, *University of Saskatchewan*, Canada

Steven Franklin

Session 34

Land Cover Mapping — Agriculture

Moderator: Anne Smith, *Agriculture and Agri-Food Canada*, Canada

Room: British Columbia

Evaluation of Resourcesat-1 AWiFS Data for Producing an Agricultural Crop Inventory for Canada

Catherine Champagne, *Agriculture and Agri-Food Canada*, Canada

Heather McNairn, Jiali Shang, and David M. Johnson

Establishing a Baseline of Recent Grassland Variability Along the Saskatchewan–Montana Border

Joseph Piwowar, *University of Regina*, Canada
Jessica Henderson

Using Earth Observation to Monitor No-till Practices over Agricultural Crops in Eastern Ontario and Prince Edward Island

Anna Pacheco, *Agriculture and Agri-Food Canada*, Canada

Heather McNairn, Delmar Holmstrom, and Eric Gauthier

Determination of Rangeland Biomass using Landsat from 1997 to 2003

Ofer Beeri, *John D. Odegard School of Aerospace Sciences*, USA

Rebecca Phillips and Albert B. Frank

Session 35

Lidar Technology

Moderator: Devin Kelley, *HJW GeoSpatial, Inc.*, USA

Room: Alberta

A Comparison of Lidar Terrain Data with Autocorrelated DSM Extracted from Digitally Acquired High Overlap Photography

Devin Kelley, *HJW GeoSpatial, Inc.*, USA

Thomas Loecherbach

Identification of Partial Canopies using First and Last Return Lidar Data

Rafael Loos, *University of Victoria*, Canada

Fabio Visintini and Olaf Niemann

Integrating Technologies on Airborne Lidar Platforms to Maximize ROI

Albert Iavarone, *Optech Incorporated*, Canada

Airborne Lidar Accuracy: From Instrument Specifications to Accuracy Standard

R. Valerie Ussyshkin, *Optech Incorporated*, Canada

Brent Smith