

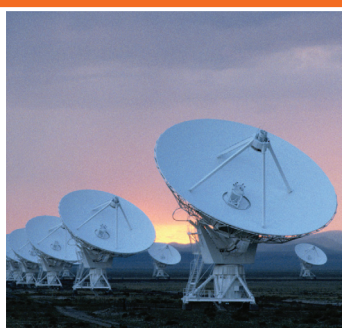


Defence Research and
Development Canada

Recherche et développement
pour la défense Canada

2012

Public Security S&T Summer Symposium



11-14 June 2012



Dr. Anthony Ashley
Director General, DRDC CSS

Welcome

Defence Research and Development Canada – Centre for Security Science (DRDC CSS) and Public Safety Canada are pleased to welcome you to another edition of the Public Security Science and Technology (S&T) Summer Symposium. This year's theme, "Beyond Our Borders," illustrates how S&T efforts reach beyond our own internal borders, bringing together experts and stakeholders across federal, provincial/territorial and municipal boundaries, as well as beyond our national borders to support and leverage the knowledge and expertise of our allies. Over the next few days, you will learn about the breadth of these efforts through project presentations and a poster session on the progress of currently funded projects across various public safety and security S&T domains.

You will have the opportunity to hear from leading Canadian and international experts—through a series of panel discussions—on topics such as Canada-US collaboration, all-hazards modeling and simulation, critical infrastructure (CI) risk assessment, linkages between industry owned CI and cybersecurity, the impact of extreme space weather on CI, and public alerting. We also have the privilege of presenting three esteemed keynote speakers, including Graham Flack, Acting Deputy Minister of Public Safety, Dr. Daniel Gerstein, Deputy Under Secretary for S&T, US Department of Homeland Security, and Chief Clive Weighill of the Saskatoon Police Service. They will provide a unique perspective on the current security landscape, both in Canada and abroad.

I hope the discussions of the next few days will reinforce the pride you feel towards the progress we have made thus far, and leave you inspired for the future ahead. It is an exciting time for the federal S&T and public safety and security communities, particularly since our program funding was recently renewed. Your knowledge and experience will be essential as we harmonize our programs, and move forward with a focus on modernizing our delivery model to keep pace with government priorities and expectations, while forging closer linkages between S&T, policy, operations and intelligence to better meet the needs of end users. As always, we thank you for your commitment to the safety and security of Canadians.

Monday 11 June Pan Cluster Day: The Harmonized Program	
8:00	Registration
8:30	Welcome: About the Harmonized Program Andrew Vallerand, DRDC Centre for Security Science Mark Williamson, DRDC Centre for Security Science
10:45	Coffee
11:00	Breakout Meetings for Science Clusters and Communities of Practice Border & Transportation Security; Critical Infrastructure Protection; eSecurity; Forensics; Psychosocial
13:00	Lunch
	Ask an Expert: Quick Review of Current S&T Topics Richard Garber, DRDC Centre for Security Science
14:00	Breakout Meetings for Science Clusters and Communities of Practice Biological; Biometric; Chemical; Radiological-Nuclear; Explosives; Emergency Management Systems & Interoperability

Tuesday 12 June International Bilat Meeting	
8:00	Welcome: Canada-US Bilat Dr. Marc Fortin, ADM (S&T), Department of National Defence Dr. Anthony Ashley, Director General, DRDC Centre for Security Science
8:30	Working Groups Sessions CBRN Decontamination; Biological I; Transportation Security; Interoperability/First Responders; Cyber Security I
12:00	Lunch
13:00	Working Groups Sessions Radiological-Nuclear; Biological II; Border Security; Cyber Security II

Wednesday 13 June Science Outreach: Beyond Our Borders	
8:00	Registration
8:45	Administrative Remarks Dr. Anthony Ashley, Director General, DRDC Centre for Security Science
9:00	Symposium Opening: Welcome Remarks and Introduction of Keynote Speakers Dr. Marc Fortin, ADM S&T, Department of National Defence Gina Wilson, ADM, Emergency Management and Regional Operations, Public Safety Canada
9:30	Keynote Speakers Graham Flack, Acting Deputy Minister of Public Safety Dr. Daniel Gerstein, Deputy Under Secretary for S&T, US Department of Homeland Security
10:30	Coffee
11:00	Panel: Beyond The Border Pierre Meunier, DRDC Centre for Security Science Andrew Vallerand, DRDC Centre for Security Science Scott Newark, National Security Group Anh Duong, US Department of Homeland Security

Wednesday 13 June Science Outreach: Beyond Our Borders	
12:00	Lunch
13:00 Session A	Project Presentations Chair: Ian Summerell, DRDC Centre for Security Science <ol style="list-style-type: none"> 1. CRTI 06-0230RD: Rapid Methods for Emergency Radiobioassay CRTI 08-0241TD: Field Techniques for Emergency Radiobioassay Baki Sadi, Health Canada 2. CRTI 06-0146RD: Rapid Identification of Radiologically Exposed Individuals for Medical Casualty Management Ruth Wilkins, Health Canada 3. CRTI 07-0113TD: Direct Alpha Spectrometry for Forensic Samples Rick Kosierb, Canadian Nuclear Safety Commission
13:00 Session B	Project Presentations Chair: Ahmad Khorchid, DRDC Centre for Security Science <ol style="list-style-type: none"> 1. CRTI 07-0135RD: Building Resilience and Rural Health System Capability for Pre-Disaster Planning and Preparedness Robin Cox, Royal Roads University 2. CRTI 08-0180TD: Establish an Integrated National CBRNE Training System for Health, Psychosocial and Communication Responders Laurie Mazurik, Sunnybrook Health Science Centre 3. CRTI 08-0176RD: Enhancing Resilience Among High Risk Populations to Maximize Disaster Preparedness Tracy O'Sullivan, University of Ottawa
13:00 Session C	Panel: Mobilizing Unique Federal S&T in Support of All Hazards Operations: A Pilot on Mobilization of Modeling and Simulation Andrew Vallerand, DRDC Centre for Security Science Anthony Masys, DRDC Centre for Security Science Eugene Yee, DRDC Suffield Richard Hogue, Environment Canada
14:30	Coffee
14:45 Session A	Project Presentations Chair: Ian Summerell, DRDC Centre for Security Science <ol style="list-style-type: none"> 1. CRTI 07-0196TD: Towards an Operational Urban Modeling System for CBRNE Emergency Response and Preparedness Pierre Bourgouin, Environment Canada 2. CRTI 07-0186RD: Optimization of Medical DECORportion for Time of Use and Improved Bio-Effects Hillary Boulay, DRDC Ottawa 3. CRTI 08-0225TD: Radiological-Nuclear Response Criteria Claude Bouchard, Health Canada
14:45 Session B	Panel Discussion: Industrial Resources/CIP/eSecurity Rod Howes, DRDC Centre for Security Science Marc Fabro, Loft Perch Inc.
14:45 Session C	Project Presentations Chair: Marc Roy, DRDC Centre for Security Science <ol style="list-style-type: none"> 1. CRTI 08-0104TA: Non-Invasive Sampling and Analysis of Explosives in Air and Sea Cargo Containers Pierre Pilon, Canada Border Services Agency 2. CRTI 07-0179RD: Explosives Vapours Stand-Off Detector — Multi-Option Differential Detection and Imaging Fourier Spectrometer Jean-Marc Theriault, DRDC Valcartier 3. Consolidated Evaluation of Trace Explosives Detectors Pierre Pilon, Canada Border Services Agency
16:30 -18:30	Poster and Technical Demonstrations

Thursday 14 June
Science Outreach Day: Beyond Our Borders

8:30 Session A	Panel Discussion: Operations Research Support to Emergency Management British Columbia Paul Chouinard, DRDC Centre for Security Science Lynne Genik, DRDC Centre for Security Science Pat Koch, South Coast British Columbia Transportation Authority Police Service
8:30 Session B	Project Presentations Chair: Rodney Howes, DRDC Centre for Security Science 1. PSTP 02-325eSec: Watchdog Sensor Network with Multi-Stage RF Signal Identification and Cooperative Intrusion Detection Helen Tang, DRDC Ottawa 2. PSTP 03-431eSec: SCADA Test Bed with Smart Grid Technologies Felix Kwamena, Natural Resources Canada 3. PSTP 03-423eSec: SCADA Network Security in a Test Bed Environment Nabil Seddigh, Solana Networks
8:30 Pavillion Tent	Project Presentations Chair: Norman Yanofsky, DRDC Centre for Security Science 1. CRTI 07-0132TA: Portable Electronic Microarrays for Agro-bioterrorism: Detection and Typing of High Consequence Agents Oliver Lung, Canadian Food Inspection Agency 2. CRTI 07-0234RD: Mitigating Dissemination of Bioterrorism Agents in Canadian Food Systems Pascal Delaquis, Agriculture and Agri-Food Canada 3. CRTI 08-0122TD: Cold Weather Decontamination for Animal Disease Emergencies Elizabeth Rohonczy, Canadian Food Inspection Agency
10:00	Coffee
10:30 Session A	S&T Presentations Chair: Diana Wilkinson, DRDC Centre for Security Science 1. IMVAMUNE: Lars Wenger, Bavarian Nordic 2. CRTI 08-190RD: Data Fusion Solutions for Monitoring CBRNE Threats Richard Davies, University of Ottawa Heart Institute 3. Microbial Forensics Cindi Corbett, Canadian Food Inspection Agency
10:30 Session B	Project Presentations Chair: Pierre Meunier, DRDC Centre for Security Science 1. PSTP 03-427BIOM: Real-Time Identification System using Mobile Hand-Held Devices Tien Vo, Royal Canadian Mounted Police 2. PSTP 02-300BTS: Sensor Interaction for Small Ship Tracing and Awareness in Harbour Neil Leadbeater, Ultra Electronics Maritime Systems 3. PSTP 03-401BIOM: PROVE IT: Face Recognition in Video PSTP 03-402BTS: PROVE IT: Video Analytics Dmitry Gorodnichy, Canada Border Services Agency
10:30 Pavillion Tent	Project Presentations Chair: Marc Roy, DRDC Centre for Security Science 1. CRTI 06-0204RD: Improvised Explosives Assessment Tool John Anderson, DRDC Suffield 2. CRTI 07-0121RD: Lightweight Composite Armour for IED Protection Stephane Dénommée, National Research Council 3. CRTI 07-0217TA: Explosive and Radiological Transit Security Chris Clarke, Mobile Detect Inc. and Jon Macklin, Cubic Security Systems
12:00	Lunch

Thursday 14 June Science Outreach Day: Beyond Our Borders	
13:00 Session A	S&T Presentations Chair: Pierre Meunier, DRDC Centre for Security Science 1. Radar Satellites for Intrusion and Integrity Monitoring of Critical Infrastructure Paul Adlakha, C-CORE 2. A Holistic, Cross-Government All Hazards Risk Assessment Simona Verga, DRDC Centre for Security Science
13:00 Session B	Panel Discussion: Critical Infrastructure Richard Garber, DRDC Centre for Security Science 1. Critical Infrastructure Protection and Extreme Space Weather 2. A Novel Approach to Critical Infrastructure Analysis: Ottawa Airport
13:00 Pavilion Tent	Panel Discussion: Emergency Response Connectivity Jack Pagotto, DRDC Centre for Security Science Emergency Response Communication: Emergency Operations ↔ Responders-Emergency Management → Public-Public → Emergency Response/Management
14:00 Plenary	Keynote Speaker Chief Clive Weighill, Saskatoon Police Service

Poster and Technical Demonstrations	
Wednesday 13 June: 16:30 - 18:30	
CRTI 05-0078RD	Development of Live Replicating Viruses as Vaccines and Therapies for Viral Hemorrhagic Fever Viruses
CRTI 05-0123TD	All-Hazards Sample Receiving Storage Capability
CRTI 06-0138RD	Development of Canadian Diagnostic Capability for Rift Valley Fever Virus RVFV
CRTI 06-0146RD	Rapid Identification of Radiologically Exposed Individuals for Medical Casualty Management
CRTI 06-0236TA	Improvised Explosive Device-CBRN Database Explosives Incident Expansion Project
CRTI 06-0301TD	Development of Nasal Spray Formulated Antiviral Drug Against Avian Influenza Virus
CRTI 06-0318TD	Higher Education Cooperative for Hazardous Materials and Equipment Tracking (HECHMET)
CRTI 06-0319TD	Guidelines for Combined Air Demand and Heat Strain Management of First Responders
CRTI 07-0148TD	Decontamination and Mitigation Techniques for Chemical, Biological, and Explosive Agents and the Effect on Forensic Evidence

Poster and Technical Demonstrations

Wednesday 13 June: 16:30 - 18:30

CRTI 07-0217TA	Explosive and Radiological Transit Security
CRTI 07-0219RD	Microbial Forensics Project
CRTI 08-0105RD	The Development of a Canadian CBRNE Recommended Equipment List
CRTI 08-0112TA	Human Monoclonal Antibodies Against Ricin
CRTI 08-0114RD	Simulation Training and Exercise Collaboration (SIMTEC): Enhancing CBRNE Psychosocial Capacity and Capability Management
CRTI 08-0116RD	Forensic Attribution of CBRNE Materials: A Chemical Fingerprint Database
CRTI 08-0131TD	Commercial Explosive Identification Tool
CRTI 08-0142RD	Immersive Haptic Tele-Robotic System for Improvised Explosive Device Disposal
CRTI 08-0181TD	Detection and Identification Assay Validation Program for Biothreat Agents
CRTI 08-0200RD	Flash Render-safe of Improvised Explosive Devices (FRIED)
CRTI 08-0203RD	Science and Technology Solutions to Mitigate Vulnerabilities in Canada's Food Supply
CRTI 08-0222RD	Stand-Off Radiation Detection by Air Radiolysis
CRTI 08-0233TD	An HI-6 Based Intravenous Product for Nerve-Agent Post-Treatment
CRTI 09-0403TA	Portable Electronic Microarrays for Agrobioterrorism
CRTI 09-0428RD	National Security Data Initiative: Enhancing the Canadian Evidence Base for Policy and Operations

Poster and Technical Demonstrations	
Wednesday 13 June: 16:30 - 18:30	
CRTI 09-0438TA	Approval of CBRN Personal Protective Equipment
CRTI 09-0445TA	Actinide and Fission Fragment Measurements in Forensic Materials and Biological Samples by Accelerator Mass Spectrometry
CRTI 09-0453TD	Final Development and Production of a Clinically Approved Broad-Spectrum Anti-Viral Treatment
CRTI 09-0462RD	Next Generation Sequencing, Direct Detection and Genotyping of Fungi, Bacteria and Nematodes in the Agri-Food System
CRTI 09-0481TD	An Optical Imaging Device for a Rapid Assessment of Tissue Viability and Wound Healing
CRTI 09-0509TD	First Responder Immersive Training Simulation Environment (FRITSE)
CRTI 09-0511RD	Next Generation Stand-Off Radiation Detection Using Nanosensors
CRTI 09-0531TD	Improvised Explosives Assessment Tool Enhancement and Deployment
CRTI 09-0566TA	Upgrades to the Directional Gamma Ray/Sensitive Directional Gamma Ray Probes
CRTI 09-0606TA	Compact OSL-Based Area Monitor
CRTI 3780-2011-30XA-13	Rapid City Planner for Explosive Threats
CRTI RN026AP	Validation of Atmospheric Dispersion Models and Comparison of Food-Chain Models for Accidental Radionuclide Releases
PSTP 03-0412CIP	Efficacy of Muon Detection for Solar Flare Early Warning
PSTP 03-421BTS	Border Security Measures for Low-Flying Aircraft
PSTP 03-428EMSI	SOPs for Emergency Operations Centres

Keynote Speakers



Graham Flack

Acting Deputy Minister of Public Safety

Graham Flack has been Acting Deputy Minister of Public Safety since 29 April 2012. He was appointed Associate Deputy Minister in July 2010. He began his career with the Government of Canada in 1995 in the Privy council Office. In 2005 he joined Natural Resources Canada as Associate Assistant Deputy Minister of Energy Policy. In 2006, he joined the Department of Finance as Assistant Deputy Minister, International Trade and Finance. He has degrees in political science and economics from Dalhousie University and Oxford University.



Dr. Daniel M. Gerstein

Deputy Under Secretary for Science & Technology,
US Department of Homeland Security

Dr. Daniel M. Gerstein has served as the Deputy Under Secretary for Science & Technology in the US Department of Homeland Security since August 2011. He is also an Adjunct Professor at American University in Washington, DC in the School of International Service (SIS), where he teaches graduate-level courses on biological warfare and the evolution of military thought.



Clive Weighill

Chief, Saskatoon Police Service

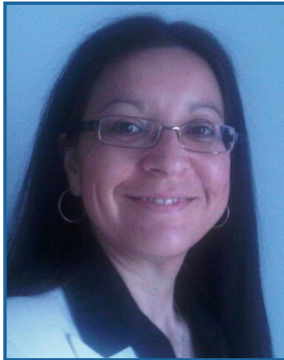
Clive Weighill is Chief of the Saskatoon Police Service. Formerly Chairman of the Canadian Police Research Centre Advisory Board, he is a member of the DRDC Centre for Security Science Advisory Board. Prior to joining the Saskatoon Police Service, Chief Weighill spent 31 years with the Regina Police Service and worked in patrol, communications, crime prevention, commercial crime, property crime, drugs, vice, planning and research, and senior administration.



Dr. Marc Fortin

Assistant Deputy Minister (S&T), Department of National Defence, and
Chief Executive Officer, Defence R&D Canada

Dr. Marc Fortin is Assistant Deputy Minister (ADM), Science and Technology for the Department of National Defence (DND) and the Chief Executive Officer (CEO) of Defence Research & Development Canada (DRDC). In his capacity as ADM (S&T), Dr. Fortin oversees DND's S&T investments and provides leadership in national issues in defence and security S&T. In his capacity as CEO, he provides national leadership in defence and security science, and provides scientific advice and solutions to the Canadian Forces, and DND and its domestic safety and security partners.



Gina Wilson

Assistant Deputy Minister, Emergency Management and Regional Operations,
Public Safety Canada

Gina Wilson is Assistant Deputy Minister of Emergency Management and Regional Operations at Public Safety Canada, where she is leading a national emergency management system designing frameworks and exercising capabilities to respond to emergencies. Ms. Wilson's organization is working to develop strategies to reduce and mitigate disasters in Canada.

