



## Christopher Columbus Fellowship Foundation

**EMBARGOED UNTIL  
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### **COSMIC RAY MUON TOMOGRAPHY RESEARCH IN NUCLEAR THREAT DETECTION EARNS HOMELAND SECURITY AWARD**

**October 11, 2011 - Washington, D.C.** – "Cosmic ray muon tomography research has netted Michael Sossong, Ph.D., Director of Nuclear Technology Research at Decision Sciences International Corporation, this year's **\$25,000 *Homeland Security Award***," said Dr. Maria Lombardo, the new Presidential appointed Chair of the Christopher Columbus Fellowship Foundation.

Through a public-private partnership, the Foundation and AgustaWestland North America (AWNA), one of the world's largest helicopter manufacturers, sponsored the Ninth Annual ***Homeland Security Award***, which recognizes pioneering research being conducted around the country in all areas of homeland security.

Dr. Sossong has revolutionized passive nuclear threat detection using cosmic ray muon tomography (MT). Previously, Principal Investigator for muon tomography at Los Alamos National Laboratory (LANL), Dr. Sossong was instrumental in the creation of full-physics simulation models for MT development, the application of tomographic algorithms to MT data, and the design and construction of Decision Sciences' prototype. He joined Decision Sciences as Director of Nuclear Technology Research in April 2008, leading the development of the company's Multi-Mode Passive Detection System (MMPDS), a commercial multi-mode passive detector system, as well as other proprietary scanners and methods. Under his leadership, the MMPDS has evolved from its laboratory origins into a robust, deployable commercial system that passively and effectively identifies nuclear and radiological threats in cargo within seconds, without impeding commerce flow or compromising the safety of cargo, passengers or inspection personnel.

"True innovation is never easy. It requires battles against long-held beliefs, the strength to push forward during times of uncertainty, and the fortitude to champion an unpopular idea. Innovative ideas are often abandoned because of these challenges," said Sossong. "I am honored to be a recipient of the Homeland Security Award and appreciate the recognition it provides for the hard-fought progress we've made on a truly innovative, game-changing technology that will make us all safer."

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The *Homeland Security Award* Finalists were:

- **CBI Polymers, Inc., Division of Skai Ventures**, Honolulu, Hawaii, Mark Mugiishi, MD, FACS, Medical Director. **DeconGel®** is a polymeric hydrogel which is the state-of-the-art technology for the effective containment and decontamination of radiological, nuclear and chemical spills and threats. Its universal application in the area of CBRN remediation has directly enhanced our nation's homeland security. Developed and commercialized by CBI Polymers, Inc., it has also been instrumental in dealing with cleanup issues following natural disasters such as the Fukushima, Japan tsunami and the Hungarian alkali sludge crisis. CBI Polymers, Inc. is a division of Skai Ventures, a venture accelerator focused on transforming ingenious ideas into disruptive technologies and economically viable companies with global impact. Our motto is **Invent. Disrupt. Inspire.**

- **James M. Ryan, Ph.D.**, Professor of Physics and Space Science, University of New Hampshire, Durham, New Hampshire. Professor Ryan is applying imaging and spectroscopic techniques developed for astrophysical research to the problem of detecting and identifying nuclear bomb material. The difficulties of gamma and neutron radiation measurements in space (weak emissions, background clutter and developing small, efficient and rugged instruments) are also found in the homeland security arena. His instrument design for imaging neutron source(s), e.g., plutonium, draws upon his 35 years of experience in this field. The success of several such instruments was the basis for research support from the Defense Threat Reduction Agency (DTRA) of the DoD. The DTRA instruments are applicable in a variety of situations that span from space to homeland security concerns to nuclear power plant monitoring.

The Award ceremony will take place on Tuesday, October 11, 2011, from 5:00-7:00 p.m. in the U.S. Capitol Mansfield Room (S-207), in Washington, D.C.

*The Christopher Columbus Fellowship Foundation is an independent Federal government agency established by Congress in 1992 to “encourage and support research, study and labor designed to produce new discoveries in all fields of endeavor for the benefit of mankind.” Governed by a Presidential appointed Board of Trustees, the Foundation has established **Frontiers of Discovery—Work in Progress and Discover the Future** programs that recognize “cutting edge” innovations, innovative ideas of America’s youth, and honors teachers. These programs include the **Homeland Security Award, Life Sciences Awards, Agriscience Awards** and the **Christopher Columbus Awards**. Website: [www.columbusfdn.org](http://www.columbusfdn.org).*

***AgustaWestland North America (AWNA)** AgustaWestland North America, a subsidiary of AgustaWestland, a Finmeccanica company, operates as a U.S. company under a special security agreement responsible for the company's U.S. government programs. AgustaWestland is a global leader in military and commercial vertical-lift. With more than 100 years of experience in the aerospace industry, AgustaWestland provides an unrivaled range of rotorcraft and vertical-lift products and services for every military, government and commercial application. Headquartered in Reston, Va., AgustaWestland North America supplies innovative vertical-lift technology that supports the Department of Homeland Security, armed forces and other U.S. government customers. The company’s Philadelphia manufacturing facility designs and produces some of the most technologically advanced helicopters operating across the United States. Each helicopter is built to fit the unique needs of the customer including military and paramilitary roles, emergency medical services, fire fighting, disaster relief and law enforcement. AgustaWestland’s heritage includes supporting the U.S. Coast Guard’s highly-experienced helicopter drug interdiction program for more than seven years; the Department of Homeland Security’s Customs and Border Protection critical airborne surveillance missions; and U.S. Army aviation assets during the Gulf War. Law enforcement organizations have also turned to AgustaWestland for their aircraft needs including the Los Angeles Fire Department, the New York City Police Department and the Pennsylvania State Police.*