

### 8th International Advanced Robotics Program IARP-RISE'2017 on

# Risky Interventions and Environmental SurveillancE 2017 Topics: Mine Actions and Counter Terroristic Technology

### 18-19 May 2017

## Les Bons Villers (CHARLEROI) Belgium









Several key documents define the strategy of the European Union against terrorist activities. The European Counter-Terrorism Strategy (2005) and the EU Internal Security Strategy in Action (2010) are among the most important and they have been complemented by the EU Programme for Critical Infrastructure Protection (2006). They all organise a coordinated response to the terrorist threat around four keywords: Prevent, Protect, Pursue and Respond. These four pillars will be considered in the specific context of the provision of assistance through technology generically and, robotic systems. Per their specific objectives, four partners decided to get their expertise through this eight-international workshop.

Robotics solutions properly sized with suitable modularized mechanized structures and well adapted to local conditions of unstructured, sometimes unknown fields can greatly improve the safety and the security of personnel as well as work efficiency, productivity and flexibility. Solving this problem presents challenges in robotic mechanics and mobility, sensors and sensor fusion, autonomous or semi-autonomous navigation and machine intelligence.

Solving this problem also requires a detailed study of the risky events (among which are included the terroristic threats, among others the use of UAV/USV) and the In-Intervention-Practitioners needs.

The workshop will review and discuss the available risky intervention/environmental surveillance technologies along with their limitations and discusses the efforts to automate some tasks related to management/ reconnaissance / detection / decontamination / neutralization process wherever possible through automated procedures. Specific topics include, but are not limited to:

- Global Security Threats
- Inspection of disaster's areas (Forensics, among others)
- CBRN-E threats,

- Mine Actions, C-IED, C-UV-borne ED
- Map building and reconstruction
- Networked crisis management tools
- Remote controlled, semi-autonomous, autonomous Robotics Systems (UGV, UAV-RPAS, USV)
- Networked Sensors Systems

### **Time Schedule**

Contributions focus on theories, principles and developments which have been explicitly developed for ( terrestrial, aerial, underwater ) robots , and carried sensor systems for environmental surveillance, risky interventions (safety, rescue, humanitarian de-mining ,CBRNE threats, a.o.) General considerations on Security issues/threats , implying the use of modern technology, are foreseen too

#### 18 May

Session 1. Chair: Professor BAUDOIN					
0900 - 0910 Hr	Welcome**	Mr. Emmanuel WART Ms. Nastasja Wartel Mr. Yves DUBUCQ	Mayor Les Bons Villers Advisor on Security Director ICI		
0910 – 0930 Hr	Session Introduction	Mr. François DUMONT	Director Disarmement et Non- Proliferation Ministry of Foreign Affairs		
0930 – 1000 Hr	CBRN-E/C-IED Threats	Bde Gen e.r. John GALATAS	Managers of the ICI/CBRN Knowledge Centre ICI/CBRNKC		
1000 – 1030 Hr	C-IED in Mine Action (HMA and IEDD)	Mr Andrew GRANTHAM	GICHD Advisor Risk Management Division		
1030 - 1100 Hr	Explosive Terrorism Threat-Prevention	Prof Y.BAUDOIN p.o. Allan GRIMMER	ICI-EKC Manager Head of INTERPOL Counter Terrorism Branch INTERPOL CBRNE Coordinator		
1100 - 1130 Hr	COFFEE BREAK				
1130 – 1200 Hr	Global Security Threats	Col e.r. Jean MARSIA	President International European Society for Defense		
1200 – 1230 Hr	Horizon-Safe Shore Project Objectives Detection of illegal Drones Operations	Dr Ir Geert DE CUBBER	Senior Researcher at the Royal Military Academy Belgium		
1230 Hr	Bl	REAK- EXHIBITIONS - WALKIN	G LUNCH		
Session 2 Chair : Professor A. MASLOWSKI					
1330 – 1400 Hr	Post-TIRAMISU available technology The APT as certified example	Dr Ir Matteo ZOPPI	University of Genoa-DIME		
1400 – 1430 Hr	Autonomous Unmanned Aerial Vehicle Perching and Manipulation on a Street Lamppost	Mr. CHANG LIU, Leyton Paget, Peter Turner, Mehmet Ali Erbil, Stephen Prior	Aeronautics, Astronautics and Computational Engineering Group Faculty of Engineering and the Environment Engineering Centre of Excellence University of Southampton (UK)		
1430 – 1515 Hr	Certified Counter- Terrorism Practitioner	Mr. YANIV	CEO CCTP Singapore		
1515 – 1600 Hr	Tactical Combat Casualty Care (TCCC)	Mr. Kiland Vuandaba	SMAT		
1600 Hr	BREAK – EXHIBITIONS – WORK-MEETINGS*				

### 19 May

Session 3 Chair: Prof Y. BAUDOIN					
0900 – 0930 Hr	Welcome - registration				
0930 – 1000 Hr	Risk Education	A. MASLOWSKI	IMM (Poland)		
1000 – 1030 Hr	Main ERW& Security	Mr SUFIAN AL SOUSE	Director International Organization for Consultancy Training and Rehabilitation		
1030 - 1100 Hr	Light-emitting Polymer Films and Instrumentation for Explosives Detection	Ross GILLANDER	University of St Andrews (UK)		
1130 – 1130 Hr	A review of sensors for analysis of behaviors and detection of dangerous elements	Dr Ir H.MONTES Prof. Manuel ARMADA Dr Ir R FERNANDEZ	CSIC Agencia Estatal Consejo Superior de Investigaciones Científicas(Spain)		
1130 Hr	Conclusion	Prof Y. Baudoin	ICI/EKC		
1200 Hr	BREAK- EXHIBITIONS - WALKING LUNCH				

<sup>\*</sup>Some preliminary work-meetings may start before/after the coffee break

<sup>18</sup> May 14.00H Steering Committee EKC with GICHD

<sup>18</sup> May 14.00H Consortium EXODUS (Horizon SEC 10 FCT 2017)

<sup>19</sup> May 10.30H Consortium EXCES (Horizon SEC 21 GM 2017)(TBC)

<sup>\*\*</sup>the students in Mastership CBRNE of the University VERGATA (Roma) will attend the Workshop