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**CBRN – E-RKC**

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NEWSLETTER

**December 2023**

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|  | Baudoin |  |  |
| **Yves DUBUCQ**  Director of the ICI | **Yvan BAUDOIN**  Manager ICI/ER KC | **Ioannis GALATAS**  Manager ICI/CBRN KC | **Frank VAN TRIMPONT**  Manager ICI/MED KC |

**1. Statement 2023**

The year 2023 was more productive than 2022 ,in term of the visibility of our institution, now hosted by the **Val de Sambre Rescue Zone**  (made up of an operational staff of around 240 professional firefighters, volunteer firefighters and ambulance drivers as well as an administrative staff of 22 people, and managed by the Colonel Marc Gilbert)

In fact, no less than 30 countries were represented by delegates during this year either through their participation in our conferences or for having attended our courses. The focus this year has been set on the new courses given to emergency department staff of our hospitals on the one hand and on increasing our international visibility in the field of crisis management and robotics on the other hand.

The International CBRNE Institute has been extended to a Medical Knowledge Centre (MED-KC) entrusted to the Dr Frank VAN TRIMPONT, Anesthesiologist and Emergency Physicist, Director of the disaster certificate course at the Free University of Brussels, Secretary General of the European Council for Disaster Medicine, Reserve Officer of the Belgian Army. Since 2022, the ICI is hosting the yearly inter-university course for disaster medicine organized by Frank; in 2023, two sessions were organized in April and November with about a total of 150 participants.

1. **ICI activities**

The transfer of ICI to our new location (Sambreville) and the return to normalcy allowed us to materialize our new partnerships (police academy, RPA, firefighters, universities, hospitals both nationally and internationally. In particular, we developed a cooperation agreement with the French CF-NRBC (<https://centrefrancaisnrbc.fr> )

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| SOHET Sébastien |  |
| Sébastien Sohet | Claude Lefebvre |

**Our CBRN-KC will be assisted by**

**Claude Lefebvre** who currently is a member of the Scientific Council of the Institute of Applied Geopolitics Studies (IEGA), a CBRN expert member of the SAFE CLUSTER, and an expert consultant in the field to the European Defense Commission.

**Sébastien Sohet** who is coordinator of the ‘'hospital emergency plans” and administrator of the AFIU (Association Francophone des Infirmiers Urgentistes).

**External contribution:** After the [Study on “EU preparedness and responses to Chemical, Biological, Radiological and Nuclear (CBRN) threats”](https://www.ici-belgium.be/study-on-eu-preparedness-and-responses-to-chemical-biological-radiological-and-nuclear-cbrn-threats/)in whichthe ICI was involved with Ecorys (NL) and other experts for the Subcommittee on Security and Defence of the European Parliament and presented in plenary on May 8, 2022, the ICI is now working for the EU project “OVERC.O.M.E.” with Italian and French partners (see below)

1. **ICI/ER-KC (Explosives/Robotic)**

**28 March 2023** , the annual conference was organised by the AFIU : 34th exceptional edition with demonstrations and big screen transmission at the Kinepolis, Liège, with the participation of a delegate of the DOVO/SEDEE (Demining Service of the Defense), namely Lt Colonel Ir HALLEUX) with his presentation entitled “La menace des engins explosifs improvisés”. This presentation was again introduced on **December 7,** at the CHR of Huy, during the conference devoted tot the “Médecine de guerre: risques chimique, bactériologique, nucléaire” (Dr Marcel Tole, Sébastien Sohet).

**21-23 September 2023**: IMEKO TC17 organized the online/on Site symposium IEEE- ISMCR’2023 in IASI (Romania), under the chairmanship of Professor Ioan DOROFTEI and the co-chairmanship of Professor EM Yvan Baudoin, vice-president of the IMEKO TC17 ([www.ismcr.org](http://www.ismcr.org))

The organization was entrusted to the Department of Mechanical Engineering, Mechatronics, and Robotics at “Gheorghe Asachi” Technical University of Iasi, Romania (TUIASI), and Technical Sciences Academy of Romania - ASTR Under the Patronage of IMEKO – TC17 International Measurement Confederation, Technical Committee 17 – Measurement in Robotics. With the support of: International CBRN Institute CLAWAR Association Romanian Association of Mechanism and Machine Science - ARoTMM Robotics Society of Romania– SRR IEEE Galveston Bay Section (US).

This symposium focused on various aspects of research, applications, and trends of robotics, advanced human-robot systems, and applied technologies, e.g. in the fields of robotics, telerobotics, autonomous vehicles, simulator platforms, as well as virtual/augmented reality and 3D modeling and simulation. Like its previous editions, ISMCR 2023 serves as a forum for the exchange of recent research results and novel ideas in robotic technologies and applications; this time with specific reference to smart mobility

Keynote Presentation

***Robotics assistance in risky or conflictual situations: may the European Defence effectively contribute to such aims? (Prof EM Y.Baudoin, Col Adm Mil e.r. J.Marsia)***

The Department of Mechanical Engineering of the Royal Military Academy was coordinating two European Projects, one focusing on Humanitarian Demining (TIRAMISU completed in 2022/2023 by the project AIDED) , and the other one on Search and Rescue Operations, both projects intending to exploit the improved performances of Robotics Systems, Unmanned Aerial Vehicles (UAV) in particular and Unmanned Land-vehicles or UGV. The International CBRN Institute is now involved in European-funded research focusing on cross-border interventions when a disaster could imply such vehicles equipped with specific CBRNE sensors.

The drones are characterized by an increasing development and use in the military sector for combat, combat support, and logistic missions, as well as in the civilian sphere, essentially focusing on Environmental Surveillance and Security missions: The well-known acronym RSTA summarizes those missions: RECONNAISSANCE, SURVEILLANCE, TARGET ACQUISITION. However, combat drones appear in several conflict/war zones…

The presentation has been completed by the director of the Society for European Defense with an evaluation of the current investments in Unmanned Vehicles and the current status of the European Defense.

1. **ICI/CBRN-KC**

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1. A series of courses/training has been organized every month according to the following objectives and their level with a participation of 10 to 15 candidates/session. Claude Lefebvre and Sebastien Sohet assisted the director of the ICI. The last training was organized in November at the new site of ICI. Objective: To enable emergency services personnel to continue their mission in a contaminated environment in the event of a terrorist attack or a major CBRN or industrial accident (nuclear, Seveso plant, etc.)

**Level 1:** e-learning, basic information on CBRN issues

**Level 2:** Information on the basics of the threat, protection, decontamination, and procedures for dressing and undressing in a CBRNE situation

**Level 3:** Advanced: recognize, detect, protect, and decontaminate CBRN victims + medical countermeasures and first aid in a CBRN environment. Practical scenarios

1. As usual, ICI edited its [monthly publication](https://c2brne-diary-newissue.yolasite.com/), “**C2BRNE Diary**”, under the responsibility of the CBRN-KC manager/editor[[1]](#footnote-1) who participated in the, by-invitation-only, joint workshop on “*Terrorist Use of New Technologies: Current Threat and Response*” organized by the S. Rajaratnam School of International Studies (RSiS) and the Enhancing Security Cooperation in and with Asia (ESIWA) project, that was held in Singapore (24-25 Oct). In the three thematic sessions (drones; 3-D printed weapons and CBRN) certain related issues were discussed but it was evident that subject matter experts were not following to the point the progress made in their respective fields. There was no reference, for example to, mini and ultra-mine drones, or insect-like mini drones that can enter buildings via ventilation hoses or windows and navigate the premises, or the infamous *Slaughterbots* that are just one step away from materialization, or the autonomous killer drone Kargu-2 operating (?) in Libya (2020). When comes to 3-D printing there was a reference to the confiscation of simplified FGC-9 MMII and RPG. Could these models help the defense industry construct simpler and lighter weapons? What about other weapons like the good old M18A1 Claymore land mine that is the preferred mine for side road IEDs or plastic 3-D printed knives with the hardness of metallic or ceramic equivalent? Of interest was the fact that 3-D printed weapons were good enough only for one shot and then exploded! This is strange since 3-D printing spare parts are available for warplanes and air carriers. Hard to believe. Nevertheless, experts should have a vivid imagination think out of the box in their fields of expertise, and consider the sky as a limit.
2. **European Project OVERCOME**



**As part of its many activities (conferences, symposiums, workshops, courses, etc.) ICI constantly tries to stay at the forefront of the materials made available to trainees and visitors. This could not be a reality without the support of our sponsors Cristanini, Blücher, Ouvry…) whom we thank for their permanent support of our activities.**

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| The firm **CRISTANINI** Spa, provided us with its new inflatable decontamination tent | The firm **OUVRY** provides us with protective equipment (PPE)  By the way, OUVRY organised at ICI a special information day (BELGIUM Day) on April 25 | The firm **BLÜCHER** provides us with the SARATOGA PPE |

1. **ICI/MED -KC**

**Frank Van Trimpont** is an anesthesiologist and emergency physician, interested not only in emergency medicine but also very much in disaster medicine. Interested in a pedagogic way by being the Academic supervisor of the Certificate of the Management of Disaster Situations that he created over 10 years ago or in a practical way through various humanitarian missions in the Philippines, Palestine, the Congo, Sumatra,…

He had the chance to be the assistant general secretary of the French Society of Disaster Medicine before being one of the founding members of the European Council of Disaster Medicine and the actual President.

Disaster medicine is an exciting discipline and insufficiently explored as a field of research

**The Interuniversity Certificate in Multidisciplinary Management of Exceptional Situations** was held this year (November) at the premises of ICI Belgium, a partner of this certificate. It consisted of two times three days of courses that addressed the legal bases of the organization of relief, the presentation of the different disciplines, the first minutes of disaster management as well as the organization of relief from the construction site to hospital admission through the management of the advanced medical post. The different types of risks are then considered, rail accidents, airplane accidents, food poisoning, organization of preventive devices, nuclear, chemical, bacteriological risk, etc.

The whole of this training brought together candidates from all disciplines.

This program is co-managed by the Universities ULB (Brussels), ULG (Liège), UCL(Louvain-la-Neuve) and RMA.

**2. Planning 2024 due to the unexpected threats (Ukrainian status, among others) dates of events and new ones may be adapted – read www.ici-belgium.be**

**From January to December 2024, CBRN Training**

Niv 2 : 22/01 – 19/02 – 22/04 – 27/05 – 23/09 – 14/10/2024

Niv 3 : 18-19-20 March – 10-11-12 June – 25-26-27 November 2024

New courses TE3C (TECC+HEAT): Tactical Emergency Casualty Care in Chemical environment

25-29 March, 17-21 June, 18-22 Nov 2023

**2023-2025**:. The CBRN and MED-KCs will be in charge of several challenges, among others the exploitation of the answers received from the 16 European Countries participating in the CBRN Survey during the first 6 months of the project OVERCOME.

**2023:** Two DRS (Disaster Resilience Society)Proposalswere introduced end of November 2023, “Strategic Mitigation and Advanced Response Technology for BioToxins” coordinated by the Ministry of National Defence of **Greece**, and “Building Resilience through Improved Cooperation and Development of CBRN Training and Testing capabilities” coordinated by Ianus Consulting Ltd of **Cyprus**.

**26-29 August 2024**: I XXVI MEKO World Congress in Hamburg with the participation of the TC17. We also envisage to organize the 12th International Workshop RISE (Risky Interventions and Environmental Surveillance) in May or June 2024.

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1. Brigadier General (ret.) Ioannis [John] Galatas, MD, MSc(Terr), MC(Army) |MD Consultant in [Allergy](http://www.alloergo.yolasite.com) & Clinical Immunology | Medical/Hospital/Ops CBRNE Planner**/**Instructor | Senior Asymmetric Threats Analyst. Can be reached at [igalatas@yahoo.com](mailto:igalatas@yahoo.com) [↑](#footnote-ref-1)