

3–5. November 2025. Hotel Radisson Blu Split, Croatia

SPS ARW Split 2025

International Workshop on Advanced
Technologies and Mobile Laboratories
for Countering Chemical Threats



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#SCHEDULE

Monday, November 3 rd 2025	Tuesday, November 4 th 2025	Wednesday, November 5 th 2025
08:30 09:00 Registration (30 min) WELCOME CEREMONY (30 min) Chair: V. Mandić Opening info (10 min) V. Mandić, M. Erceg Chairmen + Dean + Distinguished Guest – Workshop opening) Welcome lecture (20 min) Eyüp Turmus Welcome lecture 09:30 Session PLENARY 1 (30 min) Chair: N. Lightfoot PL1 (25+5 min) Nigel Lightfoot The Role of the Mobile Forensics Laboratory in Chemical Attack Site Forensic Operations 10:00 <i>Coffee break 1 (30 min)</i> 10:30 Session CHEMICAL THREATS 1 (115 min) Chair: P. Hotchkiss KL1 (20+5 min) Nigel Lightfoot The importance of networking for mobile chemical laboratories 10:55 IL1 (15+3 min) Benjamin Trump Overcoming Friction in Biotechnology Deployment: Pathways to Interoperability for Advanced CBRN Countermeasures 11:13 IL2 (15+3 min) Vasilisa Panait Strengthening national resilience by using a chemical mobile laboratory in the response to chemical threats 11:31 IL3 (15+3 min) Anders Östlin Experiences of Swedish chemical deployable laboratory 11:49 IL4 (15+3 min) TBA TBA Complementarity between the mobile laboratory and his INRAP 12:07 IL5 (15+3 min) Mirna Maravić Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons by the Ministry of Economy in Croatia 12:28 IL6 (15+3 min) Zrinka Kovarik Medical countermeasures on chemical weapons 12:43 <i>Lunch 1 (77 min)</i> 14:00 Session PANEL (90 min) Chair: L. De Sio Moderated (U-shape): presenting their concerns or challenges. <i>Topic 1: Systems to be addressed, concerning the priorities?</i> <i>Topic 2: The role of the mobile labs in addressing priorities?</i> <i>Topic 3: Challenges to increasing viability of the mobile labs?</i> <i>Topic 4: The role of networking events, such as this one?</i> <i>Topic 5: Bottlenecks?</i> 15:30 Session CHEMICAL THREATS 2 (55 min) Chair: M. Morgan KL2 (20+5 min) Peter Hotchkiss Advances in science and technology: opportunities for and risks to the implementation of the Chemical Weapons Convention 15:55 IL7 (15+3 min) Laura Marshall Sampling strategies and challenges after a chemical event 16:13 IL8 (15+3 min) Alyssa Walsh Threats management 16:31 <i>free time (29 min)</i> 17:00 Session VISITS – Working Coffee break 2 (45+45 min) Laboratory tour to KTF chem laboratories starting in front of the KTF (link): 17:00 Group 1 (30 min) Matko Erceg 17:30 Group 2 (30 min) Matko Erceg (dean – Visit to laboratories opening) 18:00 <i>free time (90 min)</i> 19:30 WELCOME RECEPTION addressing of the distinguisheds (10 min) (120 min) in front of the Ballroom	08:30 09:00 Registration (30 min) Session PLENARY 2 (60 min) Chair: A. Abdelghani PL2 (25+5 min) Eduard Ilobet Unattended wireless sensing networks for warfare agent detection 09:30 PL3 (25+5 min) Fabiana Arduini Paper-based electrochemical (bio)sensors as smart, sustainable, and robust advanced detection and identification systems 10:00 <i>Coffee break 3 (30 min)</i> 10:30 Session ADV. DETECTION & IDENTIFICATION (115 min) Chair: E. Robot KL3 (20+5 min) Janez Zavašnik Plasma-engineered lightweight composite materials for broadband electromagnetic wave absorption 10:55 IL9 (15+3 min) Ines Primožić Harnessing Heterocyclic Compounds to Target Cholinesterase Activity 11:13 IL10 (15+3 min) Ivana Panžić Nitride Quantum Dots for Rapid and Sensitive Explosive Detection 11:31 IL11 (15+3 min) Kwang-Un Jeong Anisotropic liquid crystal networks from programmed reactive mesogens for optical applications 11:49 IL12 (15+3 min) Behl Syrine Graphene-based gas sensors for real time detection of chemical threats 12:07 IL13 (15+3 min) TBA TBA Quantum computing and AI for identifying target molecules that could potentially be chemical warfare agents 12:28 IL14 (15+3 min) Jean-Charles Quevillon The French mobile laboratory experience 12:43 <i>Lunch 2 (77 min)</i> 14:00 Session ADV. DETECTION & IDENTIFICATION (115 min) Chair: S. Ben Ali KL4 (20+5 min) Adnane Abdelghani Nanotechnology for advanced detection and identification of chemical threats 14:30 IL15 (15+3 min) Luciano De Sio Next-generation colorimetric biosensors for real-time detection of harmful pathogens in drinking water 14:48 IL16 (15+3 min) Anton Köck Advanced gas sensing detection based on simultaneous thermal and optical activation of nanomaterials 15:06 IL17 (15+3 min) Vilko Mandić Nanostructured gas sensors for detection of chemical threats 15:24 IL18 (15+3 min) Maria P. P. Iritia Nanostructured Materials for SERS based Gas Sensing of CWAs 15:42 IL19 (15+3 min) Matteo Guidotti Bridging the gap between labs and incident sites: pros and cons of advanced mobile CBRN laboratories 16:00 Session POSTERS – Working Coffee break 4 (60 min) in front of Ballroom J. Hyeon: Natural Rubber-Based Stretchable Heat Transfer Materials D. Yu: Triphenylamine-based electrochromic films for smart information encryption system J. Jang: Nanostructured Fluorescent Films via Self-Assembly for Acid Vapour Monitoring M. Rim: Interfacial Phonon Engineering in Polymer Composites Using Reactive Mesogens M. Oh: Light-Responsive Ionic Skins for Conductivity Switching and Shape Actuation via Azobenzene Mesogens Y. Wi: Zwitterionic Interlocking Enables Polarization-Dependent Photochromism and Ionic Switching in Diarylethene-Based Smart Films D. Gašparić: Development of next-generation solar cells for environmentally sustainable energy production G. Mihalinec: Enabling Reversible Chemistry in Calcium Batteries through SEI Design I. Čurić: Removal of chemical warfare agent simulant using reverse osmosis membranes: Investigation of efficiency and separation mechanisms F. Petronella: Plasmonic nanoplateforms as novel optical diagnostic tools in a one-health perspective F. Zaccagnini: Development of next-generation solar cells for environmentally sustainable energy production A. Avitabile: Selective detection of SARS-CoV-2 spike protein via biofunctionalized gold nanorods TBA TBA: Biofriendly decontamination of chemical warfare agents in ionic liquid media 17:00 <i>free time (150 min)</i> 19:30 Dinner (90 min) at Restaurant Fig leaf	08:30 09:00 Registration (30 min) Session MOBILE LABS & THEIR BENEFITS (60 min) Chair: L. Cetina 09:00 IL20 (15+3 min) Zvonko Orehovc Comprehensive Crisis Management and Safety Innovations in CBRN 09:18 IL21 (15+3 min) Thomas Elßner Detection of current CWA threats by mobile sensors in the field 09:36 IL22 (15+3 min) Michael Gallagher Raman and FTIR Spectroscopy for military personnel and first responders countering chemical threats 09:54 IL23 (15+3 min) Jeremy Van Auken Application note lecture q08Devices 10:12 <i>Coffee break 5 (30 min)</i> 10:30 Session MOBILE LABS & THEIR BENEFITS (115 min) Chair: L. De Sio KL5 (20+5 min) Karim Ben Ali Chemical DIM deployable laboratory: Bringing the Lab to the Sample 10:55 IL24 (15+3 min) Valentina Ključarić Importance of the military segment of CBRN defense in the homeland security system 11:13 IL25 (15+3 min) Sarah Brewer The 80% solution: balancing integrity and decision making in mobile labs in field-based chemical, biological, radiological and nuclear (CBRN) response 11:31 IL26 (15+3 min) Edoardo Cavallieri d Oro Integration of mobile laboratories within a detection sampling and monitoring capacity: the case of the new European capacity designed by Italy called rescEU CBRN-DSIM-IT 11:49 IL27 (15+3 min) Taoufik Bouayoun Contribution of Forensic Institute of Gendarmerie Royale (ICGR) to chemical counterproliferation 12:07 IL28 (15+3 min) Beatriz Ambrosio Development and commissioning of mobile laboratories 12:28 IL29 (15+3 min) Ivana Cetina Dual-use items as potential CBRN terrorist threats 12:43 <i>Lunch 3 (62 min)</i> 13:45 Session ROUND TABLE – Working Coffee 6 (45 min) Chair: N. Lightfoot Moderated (U-shape): underline talks; conclude: <i>T1: Mobile chem. labs play an important role for increasing security.</i> <i>T2: Mobile chem. labs need internal national governmental support.</i> <i>T3: Workshops are essential for strengthening networking.</i> <i>T4: The high level of communication proves this Workshop a success.</i> <i>T5: This workshop should be extrapolated into an annual event.</i> 14:30 Technical break (90 min) 16:00 Session CITY TOUR (75 min) start from Prokurative at 16:30 18:00 <i>free time (90 min)</i> 19:30 CLOSING REMARKS & Addressing of the Distinguished Guests (10 min) WORKSHOP DINNER (150 min) at Restaurant Fig leaf



*This workshop
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