



6th workshop on “Battlefield Acoustics” & NATO HFM-285 & CCIEP Experts meeting

October 16-18, 2018 – Saint-Louis, France

Call for Papers

The acoustic environment of the battlefield is of major importance for military operations. Military equipment, such as air and ground vehicles, electric generators, etc., often are significant sources of continuous noise, whereas weapons such as artillery guns, mortars or small-caliber weapons used by snipers are important sources of impulse noise.

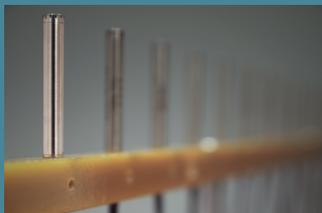
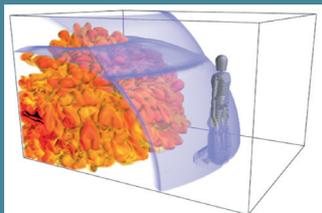
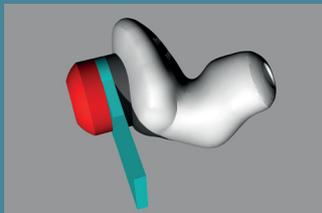
These sources create sounds, loud enough to be detectable at a long-distance. Sensor systems **detection**, surveillance and for tracking targets have been developed over the last years to be used in battlefield and peacekeeping operations. Acoustics offer Non-Line-of-Sight, full space coverage (360°) and an ideal complement to other detection technologies.

Hearing protection devices are an important issue for all personnel exposed to extreme noise levels: aircrafts crews, artillery staff or dismounted soldiers. The first priority consists in limiting their noise exposure to an acceptable level while not impeding their perception of the acoustic environment. Beyond the simple need to protect operational staff, earplugs or earmuffs have to offer improved **intelligibility of the speech** when using the radio communication devices.

Blast injuries are one of the most important sources of casualties in current military operations. The comprehension of the generation of blast overpressure, propagation and injury mechanisms involves very challenging topics as well as the study of personal protective equipment against blast waves.

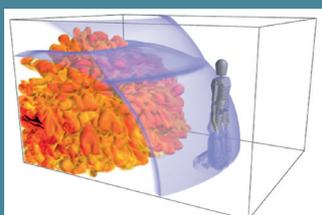
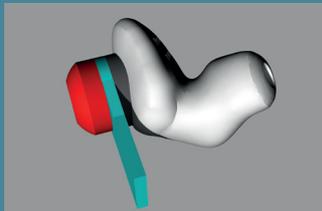
The following topics will be addressed:

- Acoustic environment on the battlefield: vehicle, helicopter, weapon noise, IED, etc.
- Hearing protection, audio communication and situational awareness:
 - Acoustic protectors (earplugs, earmuffs, etc.)
 - Auditory hazard, damage risk assessment, noise regulation
 - Noise control and audio communication (enhanced active personal protection devices)
 - Enhanced hearing, 3D Audio Display, augmented and virtual hearing
- Mechanisms of blast injuries and related protective equipment
- Acoustic detection of threats
 - Acoustic sensors for UAV detection, counter-sniping and sensor networks
 - Performance of acoustic systems for detection and localization, taking into consideration the influence of environmental conditions (acoustic propagation)
- National or international actions in these fields (DGA, BAAINBw, EDA, NATO, etc.)



Bundesministerium
der Verteidigung





The “Direction Générale de l’Armement” (DGA) and the “Bundesamt für Ausrüstung, Informationstechnik und Nutzung der Bundeswehr” (BAAINBw), associated with the French-German Research Institute of Saint-Louis (ISL)*, will organized this workshop. Specific sessions are coordinated with NATO HFM-285 & CCIEP Noise Team of Experts.

The workshop will have two days of plenary presentation in which the participants can share the results of their theoretical and experimental work in talks of about 20 minutes.

A **specific session** will be organized with **NATO HFM-285** (Speech Understanding of English language in Native and non-Native speakers/listeners in NATO with and without Hearing Deficits and one with **CCIEP Team of Experts** / Noise & Hearing Protection (Improving hearing protection for NATO soldiers and enhance the interoperability of the personal equipment / joint operations & STANAG 4690).

Exhibition: Exhibition of protective equipments and acoustic systems are welcome: audio protection and communication devices, earplugs, earmuffs, protective equipment and vests against blast waves, sensors, microphones, measurement systems, software ... The exhibition will be located in the lobby in front of the conference room and will be accessible to the public during the breaks. Registration fee is 200€ for the exhibitors.

Accommodation: A list of nearby hotels is available on the ISL Web site (<http://www.isl.eu/index.php/en/contact-en/hotels-en>). Please book your room directly with the hotel. Some hotels have special rates for ISL visitors.

Date: **October 16-18, 2018**

Location: **French-German Research Institute of Saint-Louis – ISL**
5 rue du Général Cassagnou – BP 70034
68301 SAINT-LOUIS Cedex – France

Registration and submission:
<http://www.isl.eu/batac2018>

Call for papers: title and abstract to be submit before **May 25, 2018**

Conference registration: before **October 1, 2018**

Registration fees: 75 €, including the internet access of the proceedings, the coffee breaks, lunches at ISL and dinner at a local restaurant on October 16.

Registration fees for exhibitors: 200 €

Contact: ♦ Communication Unit ISL
+33 (0)3 89 69 51 33 – E-mail: BatAc@isl.eu

Organizational committee:

- ♦ Isabelle METZGER
+33 (0)3 89 69 51 94 – E-mail: isabelle.metzger@isl.eu
- ♦ Magdalena KAUFMANN-SPACHTHOLZ
+33 (0)3 89 69 53 18 – E-mail: communication@isl.eu
- ♦ Pierre NAZ
+33 (0)3 89 69 50 98 – E-mail: pierre.naz@isl.eu

Scientific committee:

- ♦ Pierre NAZ (ISL)
- ♦ Bernd FISCHER (ISL)
- ♦ Thierry PAUCHARD* (DGA, France, E-mail: thierry-a.pauchard@intradef.gouv.fr)
- ♦ Thomas WESSLING (WTD 91, Germany)
- ♦ Roland JACOB** (BwZK, Germany, mail: rolandjacob@bundeswehr.org)

* chairman of the CCIEP Noise Team of Experts
** chairman of the HFM-285