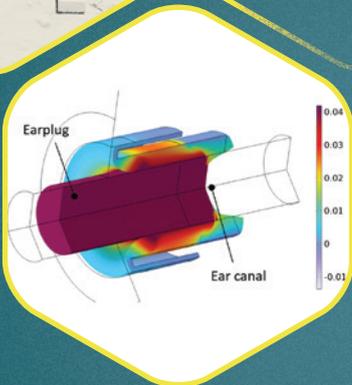


10th Workshop on Battlefield Acoustics

13-15 October 2026 – Saint-Louis, France



BATTLEFIELD ACOUSTICS



CALL FOR PAPERS

The acoustic environment of the battlefield is of major importance for military operations. Military equipment such as ground vehicles, aircrafts, helicopters, electric generators etc. are often 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. Acoustic detection sensor systems that offer early warning, surveillance with the possibility of tracking targets have been developed over the last years. They can be used in battlefield and peacekeeping operations. Acoustics offer Non-Line-of-Sight (NLOS) detection with full space coverage (360°), complementary to other detection technologies for multi-sensor platforms.

Personnel exposed to extreme noise levels, like aircrafts crews, artillery staff or dismantled soldiers need efficient hearing protections. The first priority is to limit their exposure to noise to an acceptable level while not impeding their perception of the acoustic environment. Beyond the simple need to be protected, the design of earplugs or earmuffs has to offer an improved intelligibility of speech picked up by conventional microphones, MEMS or unconventional transducers and transmitted by radio-communication devices.

Current combat tactics increasingly expose dismantled soldiers to shock/blast waves, either from single high-intensity events (explosions) or from repeated low-intensity events throughout the day (artillery fire, breaching, training phases). These particular types of barotrauma, which are often insidious, can cause immediate or delayed auditory and extra-auditory effects which need to be better understood.

The workshop is focused on (but not limited to) the following topics of acoustics, including theory, modeling & simulation, and practical applications:

- **Battlefield sound sources (weapon noise, IED, UAV, vehicles, ...):**
 - Noise suppression & acoustic treatment at the source,
 - Continuous/transient sound sources measurement,
 - Sound propagation,
 - Numerical modeling
- **Hearing protection, audio communication and auditory situational awareness:**
 - Hearing protection,
 - Auditory hazards, damage risk criteria, noise regulation,
 - Talk-through and hear-through systems,
 - Audio communication / speech enhancement,
 - Auditory information restitution
- **Blast effects:**
 - Blast and shock phenomena in air, ground and water,
 - Target response prediction and analysis,
 - Blast-induced injury mechanisms,
 - Survivability and risk assessment,
 - Mitigation techniques for personal protection,
 - Repetitive low level blast exposures
- **Acoustic situational awareness:**
 - Threat detection, localization and classification:
 - Counter-UAV using acoustic sensors,
 - Counter-sniping,
 - Single sensors,
 - Sensor networks
 - Influence of environmental conditions,
- **National or international actions in these fields (DGA, BAAINBw, EDA, NATO, etc.)**

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 organise this workshop.

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 organised on “Noise Rating Criteria and their practical use for weapon noises (AHAH, Leq, etc.)” with the participation of the experts of the NATO group HFM-381 (“Military implications of acute noise-induced changes in hearing”) and of the former group HFM-285.

Exhibition: Possibility to expose protective equipment and acoustic systems: audio protection and communication devices, earplugs, earmuffs, protective equipment and vests against blast waves, sensors, microphones, measurement systems, software, etc. The exhibition will be located in the lobby in front of the conference room and will be accessible to the public during the breaks.

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

Remarks: The workshop will take place in a hybrid mode: classical sessions in Saint-Louis and possible on-line presentations/participations (web-access). The practical details will be sent later to the registered persons.

Date of the Workshop: 13-15 October, 2026

Call for papers: Before 19 June, 2026
(Title & abstract)

Registration: Before 9 September, 2026

Registration
and submission
isl.eu/batac26



REGISTRATION FEES

200 €

For in-person attendance, including the internet access to proceedings, coffee breaks, lunches at ISL **and dinner at a local restaurant on the 13th of October**

150 €

For in-person attendance, including the internet access to proceedings, coffee breaks, lunches at ISL.

100 €

For online participants.

250 €

For exhibitors.

HOSTED BY



Direction générale de l'armement



Bundesministerium der Verteidigung



OTHER INFORMATIONS

Location:

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

Access can only be granted upon presentation of an identity card or passport.

Contact:

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

Organisational committee:

Isabelle METZGER – +33 (0)3 89 69 51 94
isabelle.metzger@isl.eu
Reemt SEIBEL – +33 (0)3 89 69 53 18
communication@isl.eu
Sebastien HENGY – +33 (0)3 89 69 58 94
sebastien.hengy@isl.eu
Véronique ZIMPFER – +33 (0)3 89 69 58 99
veronique.zimpfer@isl.eu

Scientific committee:

Véronique ZIMPFER (ISL)
Sebastien HENGY (ISL)
Bernd FISCHER (ISL)
Thierry PAUCHARD (DGA, France)
Thomas WESSLING (WTD 91, Germany)
Douglas S. BRUNGART* (DoD WRNMMC, US)

* Team leader of the NATO/HFM-381-RTG-T Group