Forging the future - BE-US joint effort in science for a safer world

Dear Madam, Sir

The Belgian Royal Higher Institute for Defense and US Army DEVCOM and US Office of Naval Research – Global have the pleasure to invite you to this first bilateral workshop on defense research. The aim of the event is to familiarize the Belgian Research community with available funding mechanisms and to identify and share new, crazy, and potentially disruptive ideas (and not to discuss past successes).

The "Forging the future - BE-US joint effort in science for a safer world" workshop to be held at the ***Royal Military Academy*** **in Brussels, BE, on 7th June 2022** will be a first of its kind conference to bring together the Belgian research and technology community and representatives from the Belgium Ministry of Defense (MoD) and the United States of America Department of Defense (DoD).

This one-day meeting will provide academic institutions, research institutions and government representatives an **opportunity to discuss emerging research and technologies** across a broad range of topic areas with a goal of building collaboration across the research community and with government agencies.

The **preliminary workshop program** and the **registration** form are available here.

It is built around **6 topical areas** (described below) where researchers will be invited to present 10-minutes "lightning" talks describing their blue sky, crazy ideas. Speakers will be selected based on abstracts selection. Abstracts should describe concepts and vision rather than focusing on preliminary data and past efforts. **Abstracts should be sent to IRSD-khid-wtod-dir@mil.be and need to be received by 1st May 2022.**

During the event, you will have plenty of **networking opportunities** and the event will be closed by a reception. In addition, we offer the possibility of **bilateral talks with BEL Defense and/or US Defense funding authorities.**

Filip Martel

Colonel Filip Martel, ir
Director
Scientific & Technologic Research Department
Royal Higher Institute for Defense

Jonathon Brame

Dr Jonathon Brame
Basic & Applied Research Team Lead
DEVCOM Atlantic / Army Futures Command

POC: BEL: Lucie Geurts (lucie.geurts@mil.be)
US: Scott Walper (scott.a.walper.civ@mail.mil)

Topic areas

1. **Aerodynamics –** Numerous fields of study contribute to the success, optimization, and evolution of aviation applications. This topic area will include presentations on enabling technologies and systems including physics, fluid and gas dynamics, and materials as they pertain to aerodynamics of flight.

2. **Power, Energy, and Energetics** – This topic area will encompass emerging technologies in energy production, storage, transfer, and utilization including processes, systems integration, and materials development. Areas of interest include propulsion, energetic materials, and next generation power systems (including green or renewable energy) of both the chemical and biological variety.

3. **Human Performance & Protection –** Research programs touching human protection and performance across marine, terrestrial, and air-borne environments will be discussed highlighting the new technologies and systems in undersea medicine, noise-induced hearing loss, ballistic protection, and others. Advances in applied systems (bio)materials development, and engineered biological systems as they pertain to protection of personnel and infrastructure will be discussed in this topic area.

4. **Data Science / Processing** - The continuous acquisition of data require new solutions for data storage, processing, analysis, and security and privacy issues. Building reliable systems for information storage and recovery will be vital to enable the advances in artificial intelligence, machine learning, and other emerging capabilities. This topic area will discuss emerging capabilities in data science including infrastructure and the emerging tools for data analysis to enable decision-making.

5. **Logistics, Sustainment and Maintenance –** Enabling effective and continuous response and capabilities across environmental conditions and battlespaces requires highly adaptable systems. This topic area will discuss emerging technologies that advance mission goals through enhanced materials (corrosion resistance, improved durability, etc.), point-of-need production, and other systems that aide in maintaining operational endurance.

6. **Synthetic Biology –** Engineering biological systems harnesses functionality and features biology has to offer that are far superior to conventional technologies. Engineered biology can find application in meta-materials, sensor and sense making, information processing, platform molecule production, and environmental and human health. This topic area will span from foundational research to enabling technologies and applied systems.

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