

**NATO SCIENCE FOR PEACE AND SECURITY (SPS) PROGRAMME:
“G5014 - Holographic and Impulse Subsurface Radar for Landmine and IED Detection”**



Project meeting in Kharkiv at IRE-NASU - NATO Project G5014, 8-11 May 2017

The meeting was organized in the 19th month from the kick-off of the project as planned in the original project timeline, and had two major goals: revision of the project status (both technically and administrative), and strengthening the partners' knowledge of the IRE-NASU research activities to better focus thoughts and efforts on the remaining tasks of this project.

Participants:

- ⤴ IRE NASU (Usikov Institute – meeting host): Gennadiy Pochanin, Liudmyla Varyanitz-Roshchupkina, Oleksandr Pochanin, Vadym Ruban, Oleksandr Shuba, Pavlo Kholod, Oleksandr Orlenko, Sergiy Roshchupkin, Sergii Masalov, Tatiana Ogurtsova.
- ⤴ INSTITUTE FOR SOILSCIENCE AND AGROCHEMISTRY (Ukraine): Stanislav Truskavetsky, Konstantin Viatkin, Oleksandr Sherstyuk.
- ⤴ UNIVERSITY OF FLORENCE (Italy): Lorenzo Capineri, Pierluigi Falorni
- ⤴ FRANKLIN & MARSHALL COLLEGE (USA): Tim Bechtel

The visit in Kharkiv started on **9th of May** with the meeting between Tim Bechtel and Gennadiy Pochanin, Vadym Ruban, Stanislav Truskavetsky, Konstantin Viatkin, Oleksandr Sherstyuk for preparing a paper on the important results obtained from the soil testing and analysis of based on data collected during the measurement campaign near Toretsk (Donbass area, 4 km from the frontline of conflict) in August 2016. The study of the electromagnetic properties has been fundamental for subsequent design of experiments and radar specifications to match landmine detection and discrimination to the actual soil and field conditions in the conflict zone.

During the plenary meeting of the **10th of May**, Lorenzo Capineri presented the status and progress of the various tasks, and in agreement with the partners proposed a refinement of the project schedule.

The 11th of May was devoted to the training of the Ukraine research staff on the algorithms that are envisaged for implementation on the electronic platform, and technical discussions about the design of electronic boards that have been developed.

The day is ended with very interesting visits to the various labs at IRE NASU where the theoretical and experimntal research is carried out. This part of the visit was very fruitful to strengthen the reciprocal knowledge of the scientific backgrounds of the teams, and for addressing potential future collaborations between the NATO project teams. In the conclusive meeting in the afternoon , the project coordinator Prof. Lorenzo Capineri met the head of the Radiointrosopy Department of the IRE NASU Prof. Sergey A. Masalov and a possible framework agreement between the two instutitions for researcher and student mobilty exchanges was discussed.

Prof. Lorenzo Capineri
NATO G5014 SfPS Project Coordinator