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***Programme of the Advanced Research Workshop***  
***“Soft Target Protection”***

**Day 1 Arrival day (17<sup>th</sup> October 2018)**

Arrival of participants. Accommodation in the Masaryk Dormitory.

**18:00 – 20:00 pm** Dinner

**Day 2 Beginning of workshop (18<sup>th</sup> October 2018)**

**7:30 – 8:30 am** Breakfast

**8:30 – 9:00 am** Registration of workshop participants

**9:00 – 9:50 am**

*Chairmen:* Prof. Ing. Ladislav Hofreiter, CSc.,  
Dr. Tech. Sc. Prof. Viacheslav Berezutskyi

Opening session and welcome greetings from the organisers of workshop and delegations

- Prof. Ing. Ladislav Hofreiter, CSc., *Faculty of Security Engineering, University of Žilina, Slovakia;*
- Dr. Tech. Sc. Prof. Viacheslav Berezutskyi, *National Technical University "Kharkiv Polytechnic Institute", Kharkov, Ukraine;*
- Prof. Ing. Zdeněk Dvořák, Ph.D., *Faculty of Security Engineering, University of Žilina, Slovakia;*
- Col. Ing. Vladimír Kavický, Ph.D., *Ministry of Defence, Slovakia;*
- Prof. Ing. Jíří Máca, CSc., *Faculty of Civil Engineering, Czech Technical University in Prague, Czech Republic*



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## Block 1: Theoretical aspects of soft target protection

Chairman: Ing. Lucia Figuli, Ph.D.

**9:50 am**

Speaker: **Prof. Ing. Ladislav Hofreiter, CSc.**, Faculty of Security Engineering,  
University of Žilina, Slovakia

**Ing. Zuzana Kubíková**, Faculty of Security Engineering, University of  
Žilina, Slovakia (co-author)

“The theoretical problems of soft target protection”

**10:10 am**

Speaker: **Dr. Tech. Sc., prof. Viacheslav Berezutskyi**, National Technical  
University "Kharkiv Polytechnic Institute", Kharkov, Ukraine

“Risk management in the protection of Soft Targets”

**10:30 am**

Speaker: **Dr. Tech. Sc, prof. Oleksandr Zaporozhets**, National Aviation  
University, Kyiv, Ukraine

“Risk assessment methodology for safety and security problem solving”

**10:50 – 11:10 am** Coffee break

## Block 2: Counter terrorism

Chairman: Ing. Matúš Ivančo

**11:10 am**

Speaker: **Gen. (Ret.) Prof. Dr. Ing. Mieczysław Bieniek**, Krakowska Akademia  
im. Andrzeja Frycza Modrzewskiego, Poland

“Soft Target Protection in a conflict area”

**11:30 am**

Speaker: **Dr. Tech. Sc, prof. Makhailo Vorozhbiian.**, Ukrainian State  
University of Railway Transport, Kharkiv, Ukraine

“Terror acts at Ukrainian railroad facilities”

**11:50 am**

Speaker: **Ing. Vít Krajiček**, ICESERVE24, Slovakia

“Protection of individuals as Soft Targets in North African and Arabian countries”

**12:10 – 13:00 pm** Lunch



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### Block 3: Technical and technological solution for soft target protection

Chairman: **Dipl. -Ing. Alexander Kravcov, Ph.D.** MIExpE

**13:00 pm**

Speaker: **Assoc. prof. Tünde Anna Kovács, Ph.D.**, *Donát Bánki Faculty of Mechanical and Safety Engineering, Óbuda University, Hungary*

**Dipl. -Ing. Zoltán Nyikes**, *Donát Bánki Faculty of Mechanical and Safety Engineering, Óbuda University, Hungary*

“Designing Principles for High - Energy Absorbing Materials”

**13:20 pm**

Speaker: **Asst. Dr. Ing. Jovan Trajkovski**, *Faculty of Mechanical Engineering, University of Ljubljana, Slovenia*

“Soft Target Protection by using blast resistant trash receptacles”

**13:40 pm**

Speaker: **Asst. prof. Chiara Bedon**, *Department of Engineering and Architecture, University of Trieste, Italy*

“Performance of TGU glass windows under explosive loading”

“Design and mitigation of glass structures under dynamic loads: on-site vibration experiments and simulations”

**14:00 pm** Coffee break

**14:20 pm**

Speaker: **Dr. Tech. Sc, asst. prof. Serhii Sukach**, *Kremenchug National University of Mikhail Ostrogradsky, Kremenchuk, Ukraine*

“Normalization of the magnetic fields of electrical equipment in case of unauthorized influence on critical information infrastructure facilities”

**14:40 pm**

Speaker: **Dr. Ing. Michal Grazka**, *Faculty of Mechatronics and Aeronautics, Military University of Technology, Poland*

“Advanced experimental and numerical analysis of behaviour structural materials including dynamic conditions of fracture for needs of designing protective structures”



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**15:00 pm**

Speaker: **Col. (Ret.) Dr. Ing. Leopold Kruszka**, *Faculty of Civil Engineering and Geodesy, Military University of Technology, Poland*

“Experimental analysis of blast resistance for various security building components”

**15:20 pm**

Speaker: **Aaron Mc Daid, MSc., AIFireE**, *Czech Technical University in Prague, Czech Republic - external member of the Institute*

“Investigation into the use of post-fire corridor smoke clearance in the early stages of fire development in super high-rise buildings”

**15:40 – 16:00 pm** Coffee break

#### **Block 4: Scheme and organisational measures**

*Chairman:* Ing. Zuzana Zvaková, Ph.D.

**16:00 pm**

Speaker: **Dr. Tech. Sc, prof. Mykola Khovorst**, *Kharkov National University of Municipal Economy named by A.N. Beketova, Ukraine*

“Assessment of the crowded evacuation potential, including people with disabilities”

**16:20 pm**

Speaker: **Assoc. prof. Ing. Martin Hromada, Ph.D.**, *Faculty of Applied Informatics, Tomas Bata University in Zlín, Czech Republic*

**Assoc. prof. Ing. David Řehák, Ph.D.**, *Technical University of Ostrava, Czech Republic (co-author)*

“Critical Infrastructure vs. Soft Targets – Czech view”

**16:40 pm**

Speaker: **Assoc. prof. Pavel Mañas, PhD.**, *Faculty of Military Technology, University of Defence, Brno, Czech Republic*

“Soft Target Protection – civil – military cooperation on development of protective barriers”

**17:00 – 17:30 pm** Summary and organizational instructions

**18:00 – 23:00 pm** Gala dinner



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## Day 3 Continuation of the workshop (19<sup>th</sup> October 2018)

**7:30 – 8:30 am** Breakfast

### **Block 5: Blast protection**

Venue: *Masaryk Dormitory Congress Centre, Thákurova 1, 160 41, Prague 6*

**9:00 am**

Chairman: Dipl. -Ing. Alexander Kravcov, Ph.D., MIExpE

Speaker: **Prof. Ing. Vladimír Křístek, DrSc.**, *Faculty of Civil Engineering, Czech Technical University in Prague, Czech Republic*

“Safety design of Underground Structures”

**9:20 am**

Speaker: **Dipl. -Ing. Alexander Kravcov, Ph.D., MIExpE**, *Faculty of Civil Engineering, Czech Technical University in Prague, Czech Republic*

“Defectoscopy of the Ultra-High Strength Steel after high velocity impact”

**9:40 am**

Speaker: **Ing. Jiří Pachman, Ph.D.**, *University of Pardubice, Faculty of Chemical Technology, Institute of Energetic Material, Czech Republic*

“Experimental characterization of material under impact of explosively driven flyer plate”

**10:00 – 10:20 am** Coffee break

**10:20 am**

Speaker: **Dr. Ing. Michel Arrigoni**, *ENSTA Bretagne, France*

“Delamination in UHMWPE Tensylon® plates at strain rates above  $10^6\text{s}^{-1}$ ”

**10:40 am**

Speaker: **Assoc. prof. Ing., Pavel Svoboda, CSc.**, *Faculty of Civil Engineering, Czech Technical University in Prague, Czech Republic*

“Methods of evaluation of Limit Depth of Rock Mine Shafts for Underground Shelters in the city areas”

**11:00 am**

Speaker: **Ing. Václav Pospíchal, Ph.D.**, *Faculty of Civil Engineering, Czech Technical University in Prague, Czech Republic*

“Turbulences in Underground tunnels due to Methane Gas Explosion”

**11:20- 13:00 pm** Discussion and summary

**13:00 – 14:00 pm** Lunch



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## **Block 6: Forces for soft target protection (Parallel section)**

Venue: *PVA EXPO PRAHA*, Beranových 667, 199 00, Prague 9

**8:30 – 9:30 am** Organized transport from Masaryk Dormitory Congress Centre to PVA EXPO PRAHA

**09:30 – 09:50 am** Opening of session and welcome greetings from FFF delegations

**09:50 am**

*Chairman:* Ing. Zuzana Kubíková

*Speaker:* **Col. Ing. Vladimír Kavický, PhD.,** *Ministry of Defence, Slovakia*

**Ing. Lucia Figuli, Ph.D.,** *Faculty of Security Engineering, University of Žilina, Slovakia (co-author)*

“Methods of protection of buildings in urban area”

**10:10 am**

*Speaker:* **Assoc. prof. Ing. Jozef Sabol, PhD.,** *The Police Academy of the Czech Republic in Prague, Czech Republic*

“Sophisticated Drones: New Dangerous Tools for Potential Radiological Attack on Selected Soft Targets”

**10:30 am**

*Speaker:* **Ing. Matúš Ivančo,** *Faculty of Security Engineering, University of Žilina, Slovakia*

**Ing. Lucia Figuli, Ph.D.,** *Faculty of Security Engineering, University of Žilina, Slovakia (co-author)*

“Different approaches of numerical simulations of blast”

**10:50 – 11:10 am** Coffee break

**11:10 am**

*Speaker:* **Col. (Ret.) Ing. Štefan Jangl, Ph.D.,** *Faculty of Security Engineering, University of Žilina, Slovakia*

**Ing. Zuzana Zvaková, Ph.D.,** *Faculty of Security Engineering, University of Žilina, Slovakia (co-author)*

“Private Security Services and Soft Target Protection”



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**11:30 am**

Speaker: **Ing. Michal Peňaška**, *Faculty of Security Engineering, University of Žilina, Slovakia*

**Assoc. prof. Ing. Andrej Veľas, Ph.D.**, *Faculty of Security Engineering, University of Žilina, Slovakia (co-author)*

“Possibilities of using modern technologies to improve security in cities”

**11:50 am**

Speaker: **Dr. Ing. Łukasz Kister**, *Information Security Service, Poland*

“Critical infrastructure as a Soft target”

**12:00 pm**

Speaker: **Assoc. prof., Ing. Bohuš Leitner, Ph.D.**, *Faculty of Security Engineering, University of Žilina, Slovakia*

**Ing. Mária Lusková, Ph.D.**, *Faculty of Security Engineering, University of Žilina, Slovakia (co-author)*

“Soft Targets Security Assessment Using Complex System Analysis Methods”

**12:20 – 12:30 pm** Summary

**12:30 -13:00 pm** Lunch

**13:00 pm** FUTURE FORCES FORUM EXHIBITION

**14:00 pm** Departure from PVA EXPO PRAHA to Masaryk Dormitory Congress Centre.

**18:00 – 20:00 pm** Dinner



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