

Tuesday, 8 June 2021

TIME	LOCATION	SESSION
17:00–18:00	Czech restaurant "Plzeňský dvůr"	Welcome Drink

Wednesday, 9 June 2021

TIME	LOCATION	SESSION
08:00–12:00	University club - foyer	Registration
09:00–9:10	Hall A	Welcome Speech Chair: <i>Vlastimil Neumann, University of Defence, Brno</i>
09:10–10:00	Hall A	Keynote Speech Chair: <i>Klára Cibulová, University of Defence, Brno</i> Co-chair: <i>Petr Kolář, University of Defence, Brno</i> Alexander Kravcov , Chief of the explosive modelling laboratory in close cooperation with Engineering Corps of Czech Army
10:00–10:30	University club - foyer	Coffee Break
10:10–13:25	Hall A	Student Competition Chair: <i>Marian Rybanský, University of Defence, Brno</i> Co-chair: <i>Paweł Maciejewski, War Studies University in Warsaw, Warsaw</i>
		Development of flight simulation device for perception assessment <i>Stanislav Kusmirek, Vladimír Socha, Lenka Hanáková, Tomáš Malich, Timotej Gavura, Vaclava Piorecka, Viktor Valenta, Andrej Lalis</i>
		Device for measuring multicopters performance parameters <i>Stanislav Kusmirek, Tomáš Malich, Vladimír Socha, Lenka Hanáková, Timotej Gavura, Karel Hylmar</i>
		AI-based air-to-surface mission planning for opportunity targets using predictive LAR approach <i>Mustafa Rasit Ozdemir, Levent Cevher, Seyda Ertekin</i>
		Severe weather: sting jet <i>David Sládek, Alžběta Schneidrová</i>
		Systemic safety data collection and processing in aviation safety oversight <i>Kateřina Grötschelová, Andrej Lališ, Natalia Guskova</i>
		Problematic aspects of the Danube-Oder-Elbe canal in connection with the Army of the Czech Republic <i>Martin Sedláček, Jaroslav Zelený</i>
		CFD simulation of propellant gas flow motion in gas – operated systems <i>Dinh Tien Vu, Stanislav Procházka, Zbyněk Krist, Le Huu Ban, Bien Van Vo</i>
		A study on disaster management databases <i>Robert Bešťák, Rino Sekhar Rajasekharan, Gilles Dusserre</i>

10:10–13:25	Hall A	Tank barrel scanning device <i>Tomáš Dyk, Martin Drahanský, Stanislav Procházka</i>
		Influence of gas port on forces and their impulses acting in an automatic weapon <i>Dinh Tien Vu, Stanislav Procházka, Zbyněk Krist, Bien Van Vo</i>
		Conceptual design of an experimental dual-control surface-to-air missile <i>Michal Karpiński</i>
		Security analysis of the Raspbian Linux operating system and its settings to increase resilience against attacks via network interface <i>Petr Františ, Petr Gallus</i>
		The under the noise LFM signal parameter estimation possibility analysis <i>Minh Van Duong, Jiří Veselý, Petr Hubáček, Přemysl Janů, Filip Dvořák</i>
10:30–13:00	Hall B	Session 6.1: Air Force and Aircraft Technology Chair: <i>Karel Mañas, University of Defence, Brno</i> Co-chair: <i>Miloslav Bauer, University of Defence, Brno</i>
		Aerial landscape recognition via multi-input neural networks <i>Jakub Hnidka, Ladislav Kopečný</i>
		Setting the flight parameters of an unmanned aircraft for distress detection on the concrete runway <i>Luděk Čičmanec, Jiří Mašlaň</i>
		Methods for the identification and analysis of human errors in current military aviation <i>Ondřej Zavila, Ondřej Mach, Miloslav Bauer</i>
		Pre-research of the infrared screening for protection of air force bases and within airport transport systems in the period of COVID-19 <i>Tomáš Musil, Beáta Semrádová, Stanislav Fábry</i>
		Helicopter firefighting to support ground operation <i>Zbyšek Korecki, Ondřej Mach, Teodor Baláž</i>
	Hall C	Investigation of mechanical properties achieved by additive manufacturing <i>Jakub Hnidka, Karel Mañas, Richard Vysoký, Václav Tříška, Adolf Jílek</i>
		Innovative processes in preparing models and measuring them in the wind tunnel <i>Juraj Hub, Dalibor Rozehnal, Bára Konvalinková</i>
		Session 8.1: Communication and Information Technology Chair: <i>Kamil Halouzka, University of Defence, Brno</i> Co-chair: <i>Markéta Vršecká, University of Defence, Brno</i>
		Personal cyber security in email communication <i>Kamil Halouzka, Pavel Kozak, Ladislav Buřita, Petr Matoulek</i>
		A newsfeed as an experimental environment for information management <i>Jonathan Cawalla, Hans-Christian Schmitz</i>
		Security analysis of the Raspbian Linux operating system and its settings to increase resilience against attacks via network interface <i>Petr Františ, Petr Gallus</i>

10:30–13:00	Hall C	Cybersecurity as a new type of security and its new perception <i>Miroslav Tomšů</i>
		Patch antenna for monitoring UWB signals <i>Jana Olivová, Kateřina Vavrečková, Marie Richterová, Miroslav Popela</i>
		Attacks on devices using SSL/TLS <i>Václav Plátěnka, Antonín Mazálek, Zuzana Vránová</i>
		Behaviour analysis of web users by mean shift clustering <i>Michal Turčaník</i>
		Satellite signal DVB-S2 <i>Markéta Vršecká</i>
	Hall D	Session 4.1: Geospatial and Meteorological Support Chair: <i>Václav Talhofer, University of Defence, Brno</i> Co-chair: <i>David Sládek, University of Defence, Brno</i>
		Ship detection using Sentinel-1 SAR images <i>Jiří Horák, Lucie Orlíková, Pavel Kukuliac</i>
		Comparison of the military maps of passability developed with use of different methods <i>Krzysztof Pokonieczny, Wojciech Dawid, Sylwia Borkowska</i>
		Digital terrain models suitability for helicopter landing sites identification <i>Eva Mertová</i>
		Automation of the terrain classification process due to passability taking the microrelief shapes into consideration <i>Wojciech Dawid, Krzysztof Pokonieczny</i>
		Segmentation and object-based land cover classification of airborne images in Kraliky county <i>Jiří Horák, Milan Večeř, Peter Golej, Lucie Orlíková</i>
		Use of hydrologic model for the analysis of military vehicle fording <i>Filip Dohnal, Marian Rybanský</i>
		Soil passability analysis in the open terrain <i>Silwia Borkowska, Krzysztof Pokonieczny</i>
		Map reading skills of future officers <i>Jaromír Čapek, Martin Hubáček, Vladimír Kovařík, Hana Hubová</i>
	Hall E	Session 7: Avionics, Radar Systems and Air Defence Chair: <i>Přemysl Janů, University of Defence, Brno</i> Co-chair: <i>Vadim Starý, University of Defence, Brno</i>
		Conceptual design of an experimental dual-control surface-to-air missile <i>Michal Karpiński</i>
		Design of commercial-off-the-shelf system for monitoring UAV's accumulator <i>Khac Lam Pham, Jan Leuchter, Ngoc Nam Pham, Van Thuan Pham</i>
		The under the noise LFM signal parameter estimation possibility analysis <i>Minh Van Duong, Jiří Veselý, Petr Hubáček, Přemysl Janů, Filip Dvořák</i>
		Use of the MATLAB® System Identification Toolbox® for the creation of specialized software for parameters identification <i>Rudolf Jalovecký, Ladislav Valoušek</i>

10:30–13:00	Hall E	A simulation software for testing of image matching algorithms in UAV terrain-aided navigation <i>Stanisław Grzywiński, Piotr Turek, Witold Bużantowicz</i>
		Air defence command and control system modelling and simulation for war-gaming <i>Lukáš Gacho, Alexandr Štefek, Josef Časar, Vadim Starý</i>
		Design and simulation system for quadrotor UAVs <i>Khac Lam Pham, Jan Leuchter, Radek Bystřický, Van Thuan Pham, Ngoc Nam Pham</i>
		Researching UAV threat – new challenges <i>Jan Farlík, Josef Časar, Vadim Starý, Lukáš Gacho</i>
		Comparison of pilots' abilities connected with military flight training using simulation technologies <i>Rudolf Jalovecký, Miroslav Jirgl</i>
13:00–14:00	Czech restaurant "Plzeňský dvůr"	Lunch
14:30–17:00	Red Church (Comenius Square)	Sightseeing - Špilberk Castle, St. Peter's and Paul's Cathedral, Vegetable Market Square

Thursday, 10 June 2021

TIME	LOCATION	SESSION
08:00–12:00	University club - foyer	Registration
09:00–10:00	Hall A	Keynote Speech Chair: <i>Klára Cibulová, University of Defence, Brno</i> Co-chair: <i>Petr Kolář, University of Defence, Brno</i> Jelena Tamuliene , Senior research fellow of Vilnius University, Lithuania
10:00–10:30	University club - foyer	Coffee Break
10:30–13:00	Hall A	Session 1.1: Weapon Systems Chair: <i>František Racek, University of Defence, Brno</i> Co-chair: <i>Pavel Skalický, University of Defence, Brno</i>
		Determining the effectiveness of radio altimeter sensor in restrictive technical solutions of proximity fuses <i>Stanisław Grzywiński, Stanisław Żygadło</i>
		CFD simulation of propellant gas flow motion in gas – operated systems <i>Dinh Tien Vu, Stanislav Procházka, Zbyněk Krist, Le Huu Ban, Bien Van Vo</i>
		New approach in evaluation of camouflage pattern spectral reflectance qualities <i>František Racek, Jaroslav Krejčí, Ivan Pemčák</i>
		Methods for determining of UAS hit probability <i>Jaroslav Krejčí, Teodor Baláž, Miroslav Švec</i>

10:30–13:00	Hall A	Effect of shot duration on firing accuracy when burst fire of unguided rockets <i>Pavel Konečný, Duy Phon Nguyen, Van Bien Vo</i>
		Effect of some structural parameters on the operation of automatic system with simple blow-back breech <i>Van Tan Dang, Van Bien Vo, Martin Macko, Van Dung Nguyen, Tien Sy Ngo, Dinh Tien Vu</i>
		Strength of pistol frangible bullet during firing <i>Roman Vítek, Xuan Son Bui, Jan Komenda</i>
		Evaluation of explosion resistance of ballistic polymeric materials <i>Pavel Skalický, Jan Komenda, Roman Vítek, Luděk Jedlička, Jana Vlhová</i>
		Ignition of small rocket motor using black powder igniters <i>Roman Buldra, František Krejčíř, Pavel Konečný</i>
		The analysis of 7.62 mm x 39 ammunition ballistic pressure measurement results by a pressure gauge and a piezoelectric transducer <i>Jana Vlhová, Roman Vítek</i>
		Shelf life modeling of smokeless powders using results of multi-temperature study on stabilizer consumption <i>František Krejčíř, Jan Adam, Roman Buldra</i>
		Hall B
	Methodology for creating a model of vehicle life cycle costs and the methods of modelling <i>Jan Furch, Vlastimil Konečný</i>	
	The effects of valve timing on performance characteristics of converted CNG engine <i>Hong Hai Nguyen, Dang Quoc Tran, Štefan Čorňák, Huu Chan Ho</i>	
	Hall B	Towards a common platform simulator for European armored combat vehicles using a modular software architecture <i>Stefan Stavrev, Dimitar Ginchev</i>
		Experimental analysis of blunt impact on human head caused by a moving unsecured object in vehicle – injury potential approach <i>Zdeněk Krobot, Jaroslav Hrubý, Jan Furch, Vlastimil Neumann</i>
		The degradation process of technical elements on vehicles and modeling methods <i>Anh Dung Hoang</i>
		Design of hybrid propulsion and its configuration in proposed unmanned ground vehicle <i>Peter Droppa, Miroslava Cúttová</i>
		Intelligent transport systems in the Czech Republic <i>Zdeněk Krobot, Jiří Stodola, Petr Stodola</i>
Prediction of the lifetime of tank track components using the accelerated testing <i>Zdeněk Vintr, Xuan Phong Cu, Duc Son Mai</i>		

10:30–13:00	Hall C	Session 3: Military Engineering Chair: <i>Eva Zezulová, University of Defence, Brno</i> Co-chair: <i>Petr Dvořák, University of Defence, Brno</i>
		The evaluation of the possibilities of new organizational structures of engineer troops in the field of engineer mobility support <i>Ota Rolenic, Klára Cibulová, Jaroslav Zelený</i>
		Problematic aspects of the Danube-Oder-Elbe canal in connection with the Army of the Czech Republic <i>Martin Sedláček, Jaroslav Zelený</i>
		Railway temporary bridges and pillars in the Czech Republic <i>Martin Benda, Jan Sobotka, Dalibor Coufal</i>
		The effect of engineer devices for mobility support used in the NATO on command and control <i>Ota Rolenic, Jaroslav Zelený, Martin Sedláček, Tibor Palasiewicz</i>
		Point clouds and projects of the Czech army corps of engineers <i>Jan Sobotka, Martin Benda, Dalibor Coufal</i>
		Protection of the critical infrastructure areas – remarks and ideas <i>Klára Cibulová, Pavel Mañas, Jan Šafranko</i>
		The exponential probe measurement using the direct ultrasonic pass-through method <i>Eva Zezulová, Tereza Komárková, Zdeněk Hejmal, Patrik Stoniš</i>
		The use of non-destructive testing method for the determination of concrete elements applicable for military base perimetric protection <i>Dalibor Coufal, Jan Sobotka, Martin Benda</i>
		Use of 3D printing in support of personnel protection in Covid pandemic <i>Juraj Hub, Jaroslav Slavík, Kamila Hasilová, Miroslav Popela, Adolf Jílek, Radek Bystřický, Martin Benda, Václav Křivánek</i>
	Hall C	Use of pencil probes for blast pressure measurement <i>Petr Dvořák, Zdeněk Hejmal, Branislav Dubec, Jan Holub</i>
		Analytical approach in assessment of deflection of thick concrete plates <i>Branislav Dubec, Pavel Mañas, Jiří Štoller</i>
	Hall D	Session 8.2: Communication and Information Technology Chair: <i>Markéta Vršecká, University of Defence, Brno</i> Co-chair: <i>Kamil Halouzka, University of Defence, Brno</i>
Step motor control in Matlab environment <i>Jana Olivová, Ondřej Šimon, Miroslav Popela, Marie Richterová, Libor Dražan</i>		
Systemic safety data collection and processing in aviation safety oversight <i>Kateřina Grötschelová, Andrej Lališ, Natalia Guskova</i>		
Designing mobile system for authentication of persons accessing secure areas <i>Tomáš Ráčil, Petr Františ, Edita Božková, Lubomír Horký</i>		
		A study on disaster management databases <i>Robert Bešťák, Rino Sekhar Rajasekharan, Gilles Dusserre</i>

10:30–13:00	Hall D	MESH network application <i>Miroslav Hopjan</i>
		Analysis of UAV usage in the physical security area <i>Oldřich Luňáček</i>
		Dispersion related digital optical signal distortion and its compensation using coherent detection <i>Zuzana Vránová, Aleš Dryák, Antonín Mazálek</i>
		Comparison of weather forecast webs of selected national meteorological services <i>Luděk Lukáš</i>
	Hall E	<u>EU SENSE - European Sensor System for CBRN Applications Project - online presentation panel</u> <i>Chair: Małgorzata Gawlik-Kobylińska, University of Warsaw, Warsaw</i>
		The EU SENSE - European sensor system for CBRN applications project introduction <i>Małgorzata Gawlik-Kobylińska</i>
		Dispersion Engine, a support tool to the EU-SENSE system for source location estimation and hazard prediction <i>Robert Sigg</i>
		Current challenges in CBRN domain for end users <i>Phil Menary, Jenny Martin</i>
		EU-SENSE project activities by Technisch-Mathematische Studiengesellschaft mbh <i>Robert Kopp</i>
		EU-SENSE training system for first responders <i>Mariusz Urban</i>
Hall E	European sensor system for CBRN applications - perspectives <i>Magdalena Gikiewicz</i>	
	Closing remarks - expert notes <i>Paweł Maciejewski</i>	
13:00–14:00	Czech restaurant "Plzeňský dvůr"	Lunch
14:10–17:00	Czech restaurant "Plzeňský dvůr"	Sightseeing - city park Lužánky, Villa Löw-Beer, Moravian Square
18:00–22:00	Czech restaurant "Plzeňský dvůr"	Evening reception and buffet including Student Competition Awards (Business Casual Dress code, no uniforms)

Friday, 11 June 2021

TIME	LOCATION	SESSION
08:00–12:00	University club - foyer	Registration
09:00–10:00	Hall A	<p>Keynote Speech Chair: <i>Klára Cibulová, University of Defence, Brno</i> Co-chair: <i>Petr Koldář, University of Defence, Brno</i></p> <p>Martin Slažanský, Head of Project Management Office in TATRA DEFENCE VEHICLE, a.s.</p>
10:00–10:30	University club - foyer	Coffee Break
10:30–13:00	Hall A	<p>Session 1.2: Weapon Systems Chair: <i>Pavel Skalický, University of Defence, Brno</i> Co-chair: <i>Ivan Pemčák, University of Defence, Brno</i></p> <p>Influence of gas port on forces and their impulses acting in an automatic weapon <i>Dinh Tien Vu, Stanislav Procházka, Zbyněk Krist, Bien Van Vo</i></p> <p>Research technical solution for reducing oscillations of weapons mounted on the vehicle <i>Van Bien Vo, Duy Phon Nguyen, Martin Macko, Van Dung Nguyen, Van Tan Dang</i></p> <p>Analysis of interior ballistics of 9x19 mm Luger bullet using Monte Carlo method <i>Roman Vítek, Xuan Son Bui, Van Minh Do</i></p> <p>Firing stability of automatic grenade launcher mounted on tripod <i>Jiří Balla, Tu Hieu Truong, Van Bien Vo, Van Tan Tran, Van Dung Nguyen, Manh Hung Dao</i></p> <p>Effect of some structural parameters on the firing stability of the PKMS machine gun when firing with complicated boundary conditions <i>Van Bien Vo, Martin Macko, Tu Hieu Truong, Van Dung Nguyen, Duy Phon Nguyen, Dinh Tien Vu</i></p> <p>Study effects of shock absorbers parameters to recoil of automatic weapons <i>Jiří Balla, Van Dung Nguyen, Zbyněk Krist, Minh Phu Nguyen, Van Bien Vo</i></p> <p>Tank barrel scanning device <i>Tomáš Dyk, Martin Dražanský, Stanislav Procházka</i></p> <p>The thermo-chemical model for calculations in the interior ballistics <i>Linh Do Duc, Vladimír Horák, Eliška Jehličková, Dung Nguyen Thai</i></p> <p>Analysing the sensitization of the all-ways action mechanism upon impact on soil <i>Van Bien Vo, Xuan Son Bui, Duc Hung Pham, Van Gion Do</i></p> <p>Study of movement of 125 mm tank cannon recoiling parts <i>Jiří Balla, Tran Van Tan, Zbyněk Krist, Pavel Melša, Nguyen Van Dung, Vo Van Bien</i></p>

10:30–13:00	Hall B	Session 4.2: Geospatial and Meteorological Support Chair: <i>David Sládek, University of Defence, Brno</i> Co-chair: <i>Václav Talhofer, University of Defence, Brno</i>
		Weather phenomena and cloudiness accuracy assessment in TAF forecasts <i>David Sládek</i>
		Severe weather: sting jet <i>David Sládek, Alžběta Schneidrová</i>
		Radar and station measurement thresholds of more accurate forecast of convective precipitation <i>David Šaur, Alla Kulyushina, Ladislav Gaál</i>
		Meteorological data and products use and limitations in practice <i>David Sládek</i>
	Hall C	Session 6.2: Air Force and Aircraft Technology Chair: <i>Zbyšek Korecki, University of Defence, Brno</i> Co-chair: <i>Karel Mañas, University of Defence, Brno</i>
		Aircraft identification: initial study <i>Jakub Hnidka, Jozef Poláček</i>
		Development of flight simulation device for perception assessment <i>Stanislav Kusmirek, Vladimír Socha, Lenka Hanáková, Tomáš Malich, Timotej Gavura, Vaclava Piorecka, Viktor Valenta, Andrej Lalis</i>
		Device for measuring multicopters performance parameters <i>Stanislav Kusmirek, Tomáš Malich, Vladimír Socha, Lenka Hanáková, Timotej Gavura, Karel Hylmar</i>
		AI-based air-to-surface mission planning for opportunity targets using predictive LAR approach <i>Mustafa Rasit Ozdemir, Levent Cevher, Seyda Ertekin</i>
		Use of unmanned aerial systems in airport operations <i>Zbyšek Korecki, Miroslav Janošek, Tomáš Pecháček</i>
		Stability analysis for a concept design of vertical take-off and landing (VTOL) unmanned aerial vehicle (UAV) <i>Ali Arshad</i>
		Investigation of geometric properties achieved by additive manufacturing <i>Jakub Hnidka, Karel Mañas, Václav Tříška, Stanislav Hajda, Emil Svoboda</i>
	Infrared non-destructive inspection: seeking a suitable insert to simulate delamination in a GFRP laminate <i>Václav Tříška, Adolf Jílek, Jakub Hnidka, Karel Mañas, Ondřej Flášar</i>	
	Hall D	Session 5: Military Cybernetics and Robotic Systems Chair: <i>Radek Doskočil, University of Defence, Brno</i> Co-chair: <i>Anna Coufalíková, University of Defence, Brno</i>
A selection and comparison of several algorithms implemented in the pymoo library <i>Van Thuan Pham, Alexandr Štefek, Václav Křivánek, Khac Lam Pham</i>		
The path modelling of the robot motion between obstacles in Matlab® software <i>Radek Doskočil, Thibault Talhouët</i>		

10:30–13:00	Hall D	Complex strategy against supply chain attacks <i>Aneta Coufalíková, Ivo Klaban, Tomáš Šlajs</i>
13:00–14:00	Czech restaurant "Plzeňský dvůr"	Lunch

How to get from the University club to the Czech restaurant „Plzeňský dvůr“? Please see below.

