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PROGRAM

of the International Conference *Greener and Safer Energetic and Ballistic Systems*



held at the Military Technical Academy
Bucharest, ROMANIA

MAY 22nd – 23rd, 2015

GSEBS Conference is a multiplier event for the GSEBS Intensive Program organized by:

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École Nationale Supérieure de Techniques Avancées de Bretagne - Brest
Imperial College of London
University of Coimbra

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Eng. Andreea VOICU- Military Technical Academy – Bucharest



Lecture program of the GSEBS – Friday, May 22

	1. Session Chairman Assoc.prof. Traian ROTARIU MTA-Aula Magna
08.30	Opening – speech, Gl.bg.prof. Cristian BARBU, Rector of the Military Technical Academy
08.35	Partners welcome – eng. Costache George-Cătălin – CEO SIEMENES Romania Other messages
08.40	Adam CUMMING, University of Edinburgh, UK <i>Perspectives in the area of GSEBS and IM technology</i>
09.00	Break
09.10	Michel ARRIGONI, ENSTA Bretagne – Brest, France <i>Recent advances in underwater blast mitigation</i>
09.30	Paul LOCKING, BAE Systems – Land, Shrivenham, UK <i>Explosive materials characterisation by TNT equivalence</i>
09.50	William PROUD, Imperial College London, Institute of Shock Physics, UK <i>The characterisation and modelling of polymer bonded energetic systems</i>
10.10	Boris KHASAINOV, S.A.R.L. SimulExplo, France <i>Two-step heat release in explosives and low- velocity detonations</i>
10.30	Coffee Break/Industry Showcase
10.40	José BARANDA RIBEIRO, University of Coimbra, Portugal <i>Life-Cycle Assessment methodology: a tool for the evaluation of environmental and toxicological impacts of ammunitions</i>
11.00	Hartmut KROEBER, Jutta BÖHNLEIN-MAUß, Fraunhofer Institute für Chemische Technologie (ICT), Germany <i>The REACH Regulation: The Need of Substitution of Critical Substances in Propellants</i>
11.20	Ove DULLUM, FFI - Kjeller, Norway <i>Various works related to Green Ammunition at FFI</i>
11.40	Hristo P. HRISTOV, Hristo I. HRISTOV, Defence Institute, MoD - Bulgaria <i>Bulgarian experience in test ranges contamination research</i>
12.00	Coffee Break /Industry Showcase
12.10	Francois BAUER, Advices in Ferrorelaxor Polymer, France <i>PVDF shock compression sensor in shock waves physics</i>
12.30	Adrian ROTARIU, Eugen TRANA, Florina BUCUR, Military Technical Academy, Bucharest, Romania <i>Numerical simulation study on the ring fragmentation</i>
12.50	Thomas KLAPÖTKE, Quirin AXTHAMMER, Ludwig Maximilian University of Munich <i>The Nitrocarbamate Moiety for Safer Energetic Materials</i>
13.10	Ruth TUNNELL, QuinetiQ, UK <i>A new method for determining the vapour pressure of nitroglycerine above solid rocket propellants</i>
13.30	Lunch break/Industry Showcase
	2. Session Chairman Prof. Jose BARANDA RIBEIRO MTA-Aula Magna
14.30	Cristina SANTOS LOURO, University of Coimbra, Portugal <i>Ceramic armour materials for ballistic application's:performance and future improvements</i>
14.50	Jean Baptiste MOULLIET, Altair, France <i>Radioss for defense applications</i>
15.10	Marin LUPOAE, Military Technical Academy, Bucharest, Romania <i>The progressive collapse evaluation of buildings due to blast attacks</i>
15.30	Hristo HRISTOV, Defence Institute, MoD – Bulgaria <i>Personal ballistic protection requirement for Bulgarian soldier</i>
15.50	Coffee Break/Industry showcase
16.10	Krasimir KALEV, Vasil Levski National Military University, Bulgaria <i>Analytical determination of pressure in the gun barrel taking into account the wear</i>

16.30	Carlos FERREIRA, Fausto FREIRE, Jose BARANDA RIBEIRO, University of Coimbra, Portugal <i>Do the substances banned by REACH actually have a significant toxicological impact?</i>
16.50	Traian ROTARIU, Sorin ESANU, Military Technical Academy, Bucharest, Romania <i>Advances in the area of greener munitions and energetics</i>
19.00	Dinner at the Palace of the National Military Circle – Bucharest, 1 Constantin Mile street, Bucharest 010141

	3. Parallel Session of partners Cahirman Prof. Titi PARASCHIV MTA - L-100 Room
14.30	Titi PARASCHIV, Dan POSTOLEA, George-Cătălin COSTACHE, Titu Maiorescu University, Bucharest, Romania <i>The chemical kinetics of redox reactions</i>
14.45	Titi PARASCHIV, Dumitru GRIGORE, Cătălin ȘTEFAN, Titu Maiorescu University, Bucharest, Romania <i>The mathematical processing of signals</i>
15.00	Dan POSTOLEA, Camelia PETRESCU, Cristian SECOȘAN, Titu Maiorescu University, Bucharest, Romania <i>Using the elasticity of a function in the social area</i>
15.15	Cătălin ȘTEFAN, Adrian-Ion URICHIANU, Ruxandra PARASCHIV, Media One, Bucharest, Romania <i>EEG Pattern to pick up and transmit commands to devices</i>
15.30	Dan POSTOLEA, Adrian-Ion URICHIANU, Ruxandra PARASCHIV, Titu Maiorescu University, Bucharest, Romania <i>Statistical methods for biosignals processing</i>
15.45	Titi PARASCHIV, George-Cătălin COSTACHE, Alexandru CONSTANTIN, Titu Maiorescu University, Bucharest, Romania <i>Command and remote control of a chemical reactor</i>
16.00	Coffee Break
16.15	Viorica-Ionela TRINCU, Cristian SECOȘAN, Titu Maiorescu University, Bucharest, Romania <i>Design and analysis of a hybrid wind-photovoltaic system</i>
16.30	Dumitru GRIGORE, Camelia PETRESCU, Titu Maiorescu University, Bucharest, Romania <i>Multiple correlations between EEG and GSR patterns in the field of remote motion command and control</i>
16.45	Adrian BĂICUȘI, Florentin CHIVULESCU, South Wind, Bucharest, Romania <i>Human crowd dynamics and economical behavioral shifts</i>
17.00	George-Cătălin COSTACHE, Teodor SARU, Alexandru CONSTANTIN, Siemens Romania, Bucharest <i>Transmission of commands at distance in integrated technical systems</i>
17.15	Oana-Raluca BĂNĂȚEANU, Teodor SARU, Florentin CHIVULESCU, Titu Maiorescu University, Bucharest, Romania <i>Systemic substantiation of the decision making process</i>
17.30	Titi PARASCHIV, Dan POSTOLEA, Alexandru NEDU, Titu Maiorescu University, Bucharest, Romania <i>Mathematical model and software used to improve cognitive characteristics</i>
17.45	Viorel ȚIGĂNESCU, George-Cătălin COSTACHE, Traian STAMATE, Ionut TOMIȚĂ, Military Technical Academy, Bucharest, Romania <i>Motion Control with integrated drive monitoring. Algorithms and Methods for endurance testing machines</i>

Lecture program of the GSEBS – Saturday, May 23

	4. Session Chairman Dr. William G. PROUD, Imperial College London MTA-Aula Magna
08.30	Kalpani VITHARANA, Imperial College of London, UK <i>Blast wave transmission through the thorax and the effects on structures within the lung</i>
08.45	Florina BUCUR, Adrian ROTARIU, Eugen TRANA, Liviu MATACHE, Cristian BARBU Military Technical Academy, Bucharest, Romania <i>Experimental study on blast effects upon small scale structures</i>
09.00	David SORY, Anabela CEPA-AREIAS, Darryl OVERBY, Sara M RANKIN, William G PROUD, Imperial College of London, UK <i>Effects of strain rate and load on biological systems for blast injury studies</i>
09.15	Thuy-Tien NGUYEN, Imperial College of London, UK <i>A shock tube system for studies of blast injuries and blast mitigations</i>
09.30	Marius MOLDOVAN, Military Technical Academy, Bucharest, Romania <i>Aspects regarding development of a breaching charge</i>
09.45	Eduardo FERNANDES, University of Coimbra, Portugal <i>Assessment of Texture influence in copper flyer acceleration using HI DYNA2D</i>
10.00	<i>Coffee break/Industry showcase</i>
10.15	Iliyan HUTOV, Radi GANEV, Yordan PETKOV, Vasil Levski National Military University, Bulgaria <i>Simulation of lightweight energy absorbing materials on structures under blast load</i>
10.30	Ionuț NICOLAESCU, Military Technical Academy, Bucharest, Romania <i>Determination of the Johnson-Cook constitutive model parameters for high strain rate deformation</i>
10.40	Marius CÎRMACI-MATEI, Adrian ROTARIU, Eugen TRANĂ, Laviniu HALLER, Cloe VASINGHEN, Lucian BOGDAN, Military Technical Academy, Bucharest, Romania <i>Laboratory test procedures for nonlethal small caliber projectiles</i>
10.50	Andreea VOICU, Mircea TEODORESCU, Traian ROTARIU, Tudor Viorel TIGANESCU, Military Technical Academy, Bucharest, Romania <i>“Smart” polymeric binders for energetic materials</i>
11.00-12.00	<i>Poster Session/Industry showcase</i>
12.00	Scientific Committee Meeting
12.15	<i>Awarding of prizes</i> <i>Closing remarks</i>



Poster program - GSEBS – Saturday May 23

5. Session

Chairman: Assoc. Prof. Traian ROTARIU, MTA

Location: Entrance hall of Aula Magna

Posters should be displayed on Friday, May 22nd, before 12:00.

The poster sessions will take place on Saturday, May 23rd, from 11:00 to 12:30 h.

Authors should be present for discussion at the posters.

1.	Krupka Miloslav - OZM Research, Hrochuv Tynec, Czech Republic Pachman Jiri, Kunzel Martin, Selesovsky Jakub - Institute of Energetic Materials, University of Pardubice, Czech Republic Marsalek Roman, Pospisil Martin - Institute of Radioelectronics, Brno University of Technology, Czech Republic <i>OPTIMEX - Fiber Optical System for Determination of EM Performance</i>
2.	Jiri PACHMAN, Martin KUNZEL, Jakub SELESOVSKY - Institute of Energetic Materials, University of Pardubice, Czech Republic <i>Photonic Doppler Velocimetry for Characterization of EM</i>
3.	Ana-Mihaela FLOREA et al., National Research and Development Institute for Chemistry and Petrochemistry ICECHIM, Bucharest, Romania <i>TNT-molecularly imprinted membranes via phase inversion method</i>
4.	Dan BULIGA, Military Technical Academy, Bucharest, Romania <i>Numerical simulation of concrete dynamic response using RHT material model</i>
5.	Sandra LOURENÇO, University of Coimbra, Portugal <i>Analysis of welded aluminum-aluminum, copper-copper and copper-aluminum assemblies using the explosive welding method</i>
6.	Vlad CUCU, Military Technical Academy, Bucharest, Romania <i>Cold-formed steel structures – an alternative to the classic steel structures</i>
7.	Doru GOGA, Bogdan PULPEA, Military Technical Academy, Bucharest, Romania <i>Green pyrotechnics and their applications</i>
8.	Bogdan BELEGA, Military Technical Academy, Bucharest, Romania <i>Bird-strike impact simulation with an aircraft wing using SPH bird model</i>
9.	Catalina CRISAN, Military Technical Academy, Bucharest, Romania <i>Greener primary explosives</i>
10.	Iuliana-Florina CIORTAN, Constantin PUICĂ, Octavian ORBAN, Military Technical Academy, Bucharest, Romania <i>Underwater explosion mitigation study using explicit dynamics simulation</i>
11.	Luminita-Cristina ALIL, Luminița-Cristina ALIL, Cristian BARBU, Simona BADEA, Florin ILIE, Military Technical Academy, Bucharest, Romania <i>Aspects regarding the use of polyethylene fibers for personal armor</i>
12.	Marius PARVAN, Military Technical Academy, Bucharest, Romania <i>Initiation of energetic materials by LASER means</i>
13.	Liviu-Cristian MATAACHE, Teodora ZECHERU, Constantin ENACHE, Adrian ROTARIU, Traian ROTARIU, Eugen TRANĂ, Scientific Research Center for CBRN Defense and Ecology, Romania <i>A theoretical method of propellants ballistic parameters calculus</i>
14.	Simona BADEA, Mihaela MUREȘAN, Eniko VOLCEANOV, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Utilization of the coal fly ash in multilayer composite structures for explosion mitigation</i>
15.	Alexandra DAN, Battalion Mountain Hunters „General Leonard Mociulschi” Predeal <i>The development of the chinese anti-satellite weapon system. Environmental implications at international level</i>
16.	Claudiu LĂZĂROAIE, Ciprian SĂU, Tudor CHERECHEȘ, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Collective protection systems: design of the access system</i>
17.	Liviu MATAACHE, Teodora ZECHERU, Simona BADEA, Radu ȘTEFĂNOIU, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Physical model of ceramic-high entropy alloys-based layered structures for ballistic protection</i>

18.	Răzvan PETRE, Nicoleta PETREA, Teodora ZECHERU, Gheorghe HUBCA, Ovidiu IORGA, Celina DAMIAN, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Polymer composite materials applications for dynamic stress mitigation</i>
19.	Nicoleta PETREA, Răzvan PETRE, Constantin TOADER, Georgeta MITRU, Vasile ȘOMOĞHI, Ștefan NEAȚU, Scientific Research Center for CBRN Defense and Ecology, Romania <i>A green and very efficient system for decontamination and detoxification of sensitive devices and equipments</i>
20.	Nicoleta PETREA, Marcel SONU, Răzvan PETRE, Ovidiu IORGA, Mihaela FLOREA, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Design of an innovative energy biogenerator for military portable devices</i>
21.	Nicoleta PETREA, Răzvan PETRE, Alexandru BOBEȘ TUREAC, Andrada PRETORIAN, Florentina NEAȚU, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Polymers from renewable resources with applicability in the production of ballistic protection equipments</i>
22.	Teodora ZECHERU, Mihail MANOLESCU, Ciprian SĂU, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Human body simulants for military and forensic research</i>
23.	Claudiu LĂZĂROAIE, Doina TOMA, Florentina ALEXE, Gabriel EPURE, Teodora ZECHERU, Scientific Research Center for CBRN Defense and Ecology, Romania <i>Design of ballistic protection equipment for military feminine staff</i>
24.	Mahdi ZAIRI, ENSTA Bretagne-Brest, France <i>Fire tests for aeronautical material</i>
25.	Gilles TAHAN, ENSTA Bretagne-Brest, France <i>Design and test of a LASER ignition cell for propellants</i>
26.	Florian AUDIGIER, ENSTA Bretagne-Brest, France <i>Sintered materials are perfectly suited for the engineering industry</i>
27.	Thomas FOUREST, ENSTA Bretagne-Brest, France <i>Development and validation of a confined Rayleigh–Plesset model for Hydrodynamic Ram event simulations in fuel tanks</i>
28.	Rodolphe FOUGEYROLLAS, ENSTA Bretagne-Brest, France <i>New door closing system for armoured vehicles which resists to explosion</i>
29.	Lavinia HALLER, Marius CÎRMACI-MATEI, Georgian LUPU, Diana NISTORAN Military Technical Academy, Bucharest, Romania <i>A non lethal configuration of a hand firearm</i>
30.	Anca ALEXANDRU, Military Technical Academy, Bucharest, Romania <i>Flash bang and tears effect hand grenade</i>
31.	Madalina MOLDOVEANU, Dumitrita JAR, Military Technical Academy, Bucharest, Romania <i>Greener propellants</i>
32.	Christophe JACQ, Julien HUEBER, ENSTA Bretagne-Brest, France <i>Numerical simulations and practical experiments regarding bird strike on airplanes</i>
33.	Gabriela NIȚĂ, Edina RUSEN, Mircea TEODORESCU, Paul STANESCU, Traian ROTARIU, Military Technical Academy and Politehnica University of Bucharest <i>New types of performance polymers used in ballistic protection</i>
34.	Viorel ȘERBAN, Military Technical Academy, Bucharest, Romania <i>Liquid and homemade explosives</i>

