



Imperial College
London

PROGRAM

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



held at the Military Technical Academy
Bucharest, ROMANIA

MAY 26th – 27th

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

Military Technical Academy - Bucharest
École Nationale Supérieure de Techniques Avancées de Bretagne - Brest
Imperial College of London
University of Coimbra

Financially supported
by the European Commission through the ERASMUS+ Programme

www.gsebs.eu

COLLABORATORS:



SPONSORS WHO SUPPORTED THE MOVEMENT OF A PART OF THE GUESTS:



Lecture program of the GSEBS 2016 – Thursday, May 26th

	1. Session Chairman Assoc.prof. Traian ROTARIU MTA-Aula Magna
08.30	Opening – speech, Col.prof. Constantin VIZITIU, Rector of the Military Technical Academy
08.35	Adam CUMMING - University of Edinburgh, UK <i>Future prospects and strategy for Munitions Vulnerability and Environmental Impact</i>
09.05	Donald Fossey – The Falcon Project – UK <i>Valley of Death. Why promising research projects fail to ever make it to production</i>
09.25	Paul LOCKING - BAE Systems – Land, Shrivenham, UK <i>Gurney Energy & Velocity Comparisons</i>
09.45	Thomas K LAPÖTKE, Jörg STIERSTORFER, Tomasz WITKOWSKI Ludwig-Maximilian University of Munich, Germany <i>High-nitrogen energetic materials</i>
10.05	Coffee Break/Industry Showcase
10.20	Boris KHASAINOV - S.A.R.L. SimulExplo, France <i>On the Mechanism of Initiating Efficiency of Lead Azide.</i> <i>Modeling of nanothermite/explosive hybrid compositions and experimental validation</i>
10.40	José CAMPOS - University of Coimbra, Portugal <i>Metal oxide nanoparticle production from detonation – modelling and experimental developments</i>
11.00	William PROUD - Imperial College London, Institute of Shock Physics, UK <i>Ignition and detonation in energetic materials: An introduction</i> <i>The characterisation and modelling of polymer bonded energetic systems</i>
11.20	Adrian ROTARIU, Eugen TRANA, TRAIAN ROTARIU, FLORINA BUCUR - Military Technical Academy, Bucharest, Romania <i>On the effect of reactive envelopes on blast parameters</i>
11.40	Carlos FERREIRA, Fausto FREIRE, José RIBEIRO, Roland CLIFT - University of Coimbra, Portugal <i>Valorization of energetic material from ammunition in civil explosives</i>
12.00	Lunch Break /Industry Showcase
	2. Session Chairman Prof. Jose BARANDA RIBEIRO MTA-Aula Magna
13.00	Marius-Ionuț MĂRMUREANU Military Equipment and Technologies Research Agency, Romania <i>An erosive burning model for solid rocket motor internal ballistics</i>
13.20	Marin LUPOAE - Military Technical Academy - Bucharest, Romania <i>Blast attacks on buildings</i>
13.40	Krasimir KALEV - Vasil Levski National Defence University, Bulgaria <i>One approach for studying the cannon barrel wall heat transfer</i>
14.00	Marius Valeriu CÎRMACI-MATEI, Laviniu HALLER Military Technical Academy, Bucharest, Romania <i>Assault Weapon's Dynamic Analysis</i>
14.20	Coffee break/Industry Showcase
14.30	Calin MOISE, Dorel DOROBANTU, Alina PRUNA, Marius ENACHESCU University Politehnica of Bucharest, Romania <i>Carbon nanomaterials for law enforcement clothing</i>
14.50	Milko Berner, Iliyan Hutov – Vasil Levski National Defence University, Bulgaria



	<i>Green technologies for nano energetic materials</i>
15.10	Iuliana-Florina PANĂ, Michel ARRIGONI, Constantin PUICĂ, Octavian ORBAN – Military Equipment and Technologies Research Agency, Romania <i>Experimental study regarding underwater blast wave mitigation by bubble curtains</i>
15.20	Gabriela TOADER, Edina RUSEN, Mircea TEODORESCU, Aurel DIACON, Paul STANESCU, Traian ROTARIU, Adrian ROTARIU – Military Technical Academy, Politehnic University of Bucharest, Romania <i>New types of polyurea nanocomposites with enhanced mechanical properties</i>
15.40	<i>Coffee Break/Industry showcase</i>
16.00	Luminita Cristina ALIL, Michel ARRIGONI, Marcel ISTRATE ENSTA Bretagne – Brest, Military Technical Academy, STIMPEX SA <i>Delamination of UHMWPE at high strain rates by laser induced shockwave</i>
16.20	Muhamed SUČESKA - Brodarski Institute, Croatia <i>Prediction of performance of explosives by thermochemical calculations. Recent advances in EXPLO5 code</i>
16.40	Traian ROTARIU, Sorin ESANU – Military Technical Academy <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, Restaurant, Groud Floor.

	3. Parallel session of the collaborators The theory of measurements in the technical domain Chairman Professor Titi PARASCHIV MTA - LARMA Room
14.30	Dumitru GRIGORE – Military Technical Academy, Ruxandra Victoria PARASCHIV – University of Bucharest, Laura Olga ANGHELINA – Siemens SRL Romania <i>Multiple stimuli action on the gsr functions involved in the remote motion command and control</i>
14.45	Dan POSTOLEA – Titu Maiorescu University, Teodor SARU – Military Technical Academy <i>Employing the modified Newton-Raphson approach for calculation of the energetic systems features</i>
15.00	Titi PARASCHIV – Titu Maiorescu University, Alexandru CONSTANTIN – University Politehnica of Bucharest, TEODOR SARU – MILITARY TECHNICAL ACADEMY <i>Chemical potentials minimizing methods. Lagrange multipliers method</i>
15.15	Dan POSTOLEA, Camelia PETRESCU – Titu Maiorescu University <i>White-Johnson-Dantzig (W-J-D) method used for calculating the characteristics of an explosive system</i>
15.30	Titi PARASCHIV – Titu Maiorescu University, Dumitru GRIGORE, George Cătălin COSTACHE – Military Technical Academy <i>Mathematical modeling of flow in a solid propellant rocket engine</i>
15.45	George Cătălin COSTACHE, Cătălin ȘTEFAN – Military Technical Academy, Alexandru CONSTANTIN – University Politehnica of Bucharest <i>Remoteboard: web service remote control for a training stand</i>
16.00	Coffee Break

	4. Parallel session of the collaborators The theory of measurements in the technical domain Cahirman Professor Dan POSTOLEA MTA - LARMA Room
16.15	Oana MATEESCU, Iulian IPATE – Titu Maiorescu University <i>Statistical measurement techniques of sociodemographic and criminological indicators as predictors of relapse occurrence</i>
16.30	Iulian IPATE, Oana MATEESCU – Titu Maiorescu University <i>Quantitative indicators of the relationship between the type of offenders and the likelihood of relapse occurrence</i>
16.45	Boyan V. ALEXANDROV, Veliko P. PETROV, Vasil Levski National Defence University, Bulgaria <i>ISIS/ISIL into the “INTERNET” – Political and military weapon</i>
17.00	Kaloyan ILIEV, Veliko PETROV - Vasil Levski National Defence University, Bulgaria <i>Analysis of the collateral damage in modern conflicts</i>
17.10	Veliko PETROV, Kaloyan ILIEV - Vasil Levski National Defence University, Bulgaria <i>NATO Crisis Response System</i>
17.20	Yosif YOSIFOV, Todor PESHEV – Vasil Levski National Defence University, Bulgaria <i>Comparative analysis of the accuracy of the algorithms for determining the parameters of a moving object optimal by different criteria</i>
17.30	Valentin TOPALOV, Vasil Levski National Defence University, Bulgaria <i>Erosion action of the setting upon barrel wear</i>
17.40	Stamen ANTONOV - Vasil Levski National Military University, Bulgaria <i>Possibilities for automation of designing elements of small arms using CAD/CAM/CAE systems</i>
17.50	Conyu Grigorov CONEV - Vasil Levski National Military University, Bulgaria <i>Investigation of the dependence of the second frequency changing of natural cross vibrations of the small arm barrel with complex shape and mass that is attached on the barrels end</i>
18.00	Vetsislav DIMITROV, Krasimir KALEV, Ognyan PETROV, Ana MADGAROVA - Vasil Levski National Military University, Bulgaria <i>Algorithm for automation engineering in the design of complex structural steel construction</i>

Lecture program of the GSEBS – Friday, May 27

	5. Session Chairman Dr. William G. PROUD, Imperial College London MTA-Aula Magna
09.00	Mário GONÇALVES - University of Coimbra, Portugal <i>Behavior of WC-Ni powder from medium to high strain rates</i>
09.20	Ovidiu IORGA, Liviu MATAACHE, Nicoleta PETREA - Scientific Research Center for CBRN Defense and Ecology, Tudor-Viorel TIGANESCU, Traian ROTARIU - Military Technical Academy <i>Theoretical and experimental aspects regarding aero-dispersed explosive systems</i>
09.40	Gustavo CARVALHO - University of Coimbra, Portugal <i>Explosive welding of dissimilar materials: Aluminium-Steel and Aluminium-Copper</i>
10.00	Ana Sofia RIBEIRO - University of Coimbra, Portugal <i>Metrology of Detonation of emulsions with optic fiber</i>
10.20	Diana NISTORAN, Bogdan RENCHEZ, Marius CÎRMACI, Ioan VEDINAȘ - Military Technical Academy <i>Study regarding mitigation of noise generated by small caliber armament systems</i>
10.40	Coffee break/Industry showcase
11.00	Poster Session/Industry showcase
12.00	Scientific Committee Meeting
12.15	Awarding of prizes



	<i>Closing remarks</i>
--	------------------------

Poster program - GSEBS – Friday May 27

6. Session

Chairman: Assoc. Prof. Traian ROTARIU, MTA

Location: Entrance hall of Aula Magna

Posters should be displayed on Thursday, May 26th, before 12:00.

The poster sessions will take place on Friday, May 27th, from 11:15 to 12:15 h.

Authors should be present for discussion at the posters.

1.	Lavinu HALLER, Andrei MANDACHE-DODOIU, Daniel ZVÎNCU, Bogdan PULPEA Military Technical Academy, Bucharest, RO <i>Safety measures for urban military operations</i>
2.	Mihai Gabriel IOSIF, Gabriel EPURE, Teodora ZECHEU - Scientific Research Center for CBRN Defense and Ecology, Romania <i>System for cluster munitions safe destruction</i>
3.	Ana-Mihaela FLOREA, Tanța-Verona IORDACHE, Traian ROTARIU, Carmen LAZAU, Anita-Laura RADU, Anamaria ZAHARIA, Bianca GEORGESCU, Monica DULDNER, Stela IANCU, Andrei SÂRBU - National Research and Development Institute for Chemistry and Petrochemistry ICECHIM, Bucharest, RO <i>Molecularly imprinted films for 2,4,6-trinitrotoluene recognition via sol-gel method</i>
4.	Răzvan PETRE, Nicoleta PETREA, Teodora ZECHEU, Gabriel EPURE, Raluca GINGHINĂ, Gheorghe HUBCA - Scientific Research Center for CBRN Defense and Ecology, Romania <i>Fibre-reinforced composite materials applications</i>
5.	LEVARD Quentin ARRIGONI Michel, KERAMPAN Steven, PHILIPPE Nicolas - ENSTA Bretagne Brest, France <i>Internal ballistic modelisation for pyromecanism</i>
6.	Simona BADEA, Mihaela MURESAN, Ioana LAZAR Scientific Research Center for CBRN Defense and Ecology, Romania <i>Blast response of modular structures reinforced with elastomeric coatings</i>
7.	Thomas BOUCHET - ENSTA Bretagne <i>Study of the attenuating power of a reactive armoring with cavitation effect</i>
8.	Alexandre TRONCHE-MACAIRE, Driss LARAQUI, Michel ARRIGONI-ENSTA Bretagne <i>Simulation of an underwater explosion: comparison of radioss and speed</i>
9.	Jeremie TARTIERE – ENSTA Bretagne <i>CETO pyrotechnic actuator</i>
10.	Alexandru DENA – Military Technical Academy <i>Non-lethal firearms challenges</i>
11.	Bogdan Ionut IFTIMIE, Viorel Tudor TIGANESCU, Octavian ORBAN, Marius Silviu MOLDOVAN - Military Technical Academy <i>Experimental research on ballistic protection screen</i>
12.	Alexandru TRIFU – Military Technical Academy <i>Missile propellant testing for establishing the safety depositing</i>
13.	Leonid CĂTĂRARU, Ovidiu PETRE – Military Technical Academy <i>IED and explosive effects fundamentals</i>

