

2016 LWAG– Grenoble, October 17-18th

Monday, October 17th, GALILEE Building, 3SR Laboratory, 1270 rue de la piscine, Grenoble campus

Time	TITLE	SPEAKERS	INSTITUTIONS
8h00	Welcome reception		
8h30	Wednesday morning – Opening ceremony Pascal FORQUIN , Grenoble Alpes University, 3SR Lab., RV Division (France)		
Wednesday morning – Invited Lecture 1 François BARTHELEMY , DGA-Bourges (France) ; Pascal FORQUIN , Grenoble Alpes University, 3SR Lab., RV Division (France)			
8h45	The thick backing plate, or depth of penetration technique: historical development and applications to ceramic armor material and system design	Stephan J. BLESS	New York University Tandon School of Engineering (United States)
Monday morning, Session 1 - Soldier ballistic protection François BARTHELEMY , DGA-Bourges (France) ; Pascal FORQUIN , Grenoble Alpes University, 3SR Lab., RV Division (France)			
9h30	Protected surface rate and injury level reduction with 3D CAD Protection model	Veronique BRET	Ministry of Defense, DGA Land Systems (France)
9h50	Assessment of helmet behaviour against impact with rifle ammunition with incidence	Benoit CORDEAU	Ministry of Defense, DGA Land Systems (France)
10h10	Experimental and numerical results for the back face signature of a composite armour system against rifle ammunition	Ana AZEVEDO	Royal Military Academy (Belgium), School of Engineering, University of Edinburgh (United Kingdom)
10h30	Coffee break and Poster Session		
Monday morning, Session 2 – New protective solutions against impact and blast Fabien RONDOT , ISL, French-German Research Institute of Saint-Louis (France) ; Daniel RITTEL , Technion - Israel Institute of Technology (Israel)			
11h00	New blast protection solutions for military vehicles	Arthur VOISIN	Renault Trucks Defense (France), Génie et Matériaux Textiles (France)
11h30	Optimal design of polyurea coated aluminium plates under hydrodynamic loading. Does side matter?	Daniel RITTEL	Faculty of Mechanical Engineering, Technion - Israel Institute of Technology (Israel)
11h40	New protection levels of UHMWPE armour: From a hydrocode model of HB26 to new generation Dyneema® for armour applications	Cyril CLERICI	DSM Dyneema (Netherlands)
12h00	Influence of ceramic geometry and confinement on ballistic efficiency for single shots and multi-hit	Maxime DARTOIS	TCAA FR (France)
12h20	Lunch at 3SR		
13h30	Visit in 3SR Lab.		
Monday afternoon, Session 3 - Investigation of the ballistic efficiency of armour configurations Frederik COGHE , Royal Military Academy (Belgium) ; Benoit CORDEAU , Ministry of Defence - DGA Land Systems (France)			
14h30	Protection against WHA Rod Penetrators Based on the Utilization of the Dwell Effect for a Light-Weight Ceramic Armor Material	Andreas HEINE	Fraunhofer EMI (Germany)
14h50	Influence of ceramic bevelling on ballistic efficiency for single shots on tiles junctions	Maxime DARTOIS	TCAA FR (France)
15h10	Methodology to estimate V50 function of areal density for spall liners against Stanag 2920 fragments	Maxime DARTOIS	TCAA FR (France)
15h30	Comparison of Ballistic Performances on SPS and Microwave Sintered Alumina Compacts	Francois BARTHELEMY	French MOD DGA Land systems (France), Laboratory of Crystallography and Materials Science (France), Centre Sciences des Matériaux et des Structures (France), ICB (France)
15h50	Coffee break and Poster Session		
Monday afternoon, Session4 - Experimental testing and numerical simulation of ballistic impact Wayne CHEN , Purdue University (United States), Maxime DARTOIS , DGA Land Systems (France)			
16h20	Experimental and numerical study of the failure of thin ceramics against mild steel core ammunition	Angel MIRANDA	Royal Military Academy (Belgium), 2 - University of Burgos (Spain)
16h40	Numerical and experimental investigations on ricochet of 7.62mm NATO projectiles against aluminium targets	Marina SEIDL	Institut franco-allemand de recherches de Saint-Louis (France)
17h00	Characterisation of ballistic response of an armour ceramic material: experimental tests and numerical modelling	Hakim ABDULHAMID	THIOT INGENIERIE (France)
17h20	SAPHIR project: toward a better understanding of Sapphire integration into transparent armors	Matthieu GRAVELEAU	Saint-Gobain CREE (France), SCERAM (France), Laboratoire sols, solides, structures, risques (France), DGA (France)
17h40	LWAG General Assembly		

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Tuesday, October 18th, GALILEE Building, 3SR Laboratory, 1270 rue de la piscine, Grenoble campus

Time	TITLE	SPEAKERS	INSTITUTIONS
8h15	Welcome reception		
Tuesday morning – Invited Lecture 2 Andreas HEINE , Fraunhofer EMI (Germany) ; Jaap WEERHEIJM , TNO (The Netherlands)			
8h45	Adiabatic shear across the scales: the engineer's perspective	Daniel RITTEL	Faculty of Mechanical Engineering, Technion - Israel Institute of Technology (Israel)
Tuesday morning, Session 5 - Dynamic testing and modelling of materials used in protective solutions Andreas HEINE , Fraunhofer EMI (Germany) ; Jaap WEERHEIJM , TNO (The Netherlands)			
9h30	Some results on the mechanics of soft and inverse freezing gels	Yonatan ROTBAUM	Faculty of Mechanical Engineering, Technion - Israel Institute of Technology (Israel)
9h50	On the use of the edge-on impact experiment to characterize damage of a bonded-polymer under impact loading	Thibaut VIANT	Grenoble Alpes University, 3SR Lab., RV division(France)
10h10	Experimental study on viscoelastic properties of Ultra-High Molecular Weight Polyethylene Composites (Tensylon TM)	Pavel MOSTOVYKH	Military Technical Academy (Romania), Ecole Nationale Supérieure de Techniques Avancées Bretagne (France)
10h30	Coffee break and Poster Session		
Tuesday morning, Session 6 - Damage and fracturing mechanisms under impact Stephan BLESS , New York University (United States) ; Michel ARRIGONI , ... (France)			
11h00	Dynamic Damage and Fracture Resistance of MAX Phase Ti ₃ SiC ₂	Leslie LAMBERSON	Drexel University (United States)
11h20	Use of an edge-on impact configuration to analyse the fragmentation process in sapphire ceramic	Pascal FORQUIN	Grenoble Alpes University, 3SR Lab., RV division(France)
11h40	Transverse Impact of High Performance Yarn	Wayne CHEN	Purdue University (United States)
12h00	Failure mechanisms of armour steels under EFP impact	Andreas KLAUZAR	French-German Research Institute ISL (France)
12h20	Conclusion of LWAG2015		
12h30	Lunch at 3SR		
13h30	Departure to DYMAT TM/LWAG tour		