

2012 INSENSITIVE MUNITIONS & ENERGETIC MATERIALS TECHNOLOGY SYMPOSIUM

"Insensitive Munitions & Energetic Materials Advancements and Their Benefits to the Warfighter."



SYMPOSIUM AGENDA

PLANET HOLLYWOOD HOTEL ► LAS VEGAS, NV

MAY 14-17, 2012

WWW.NDIA.ORG/MEETINGS/2550

EVENT #2550

A SPECIAL THANK YOU TO MSIAC FOR PROVIDING THE SYMPOSIUM PROCEEDINGS CD

MONDAY ▷ MAY 14, 2012

3:00 PM - 6:00 PM

REGISTRATION / POSTER PRESENTATION SET UP

4:30 PM - 6:00 PM

OPENING NETWORKING RECEPTION

Thank you to our sponsor: Insensitive Munitions European Manufacturers Group



TUESDAY ▷ MAY 15, 2012

7:00 AM - 6:00 PM

CONFERENCE REGISTRATION

7:00 AM - 8:00 AM

CONTINENTAL BREAKFAST

8:00 AM - 8:15 AM

WELCOME ADDRESS

- ▶ Mr. Gary Wittmer
NDIA IM/EM Section Chair

8:15 AM - 8:45 AM

KEYNOTE ADDRESS

- ▶ Capt Jeremy Brent "SINBAD" McCraney, USAF
Instructor/Officer in Charge, Tactics and Training, USAF Advanced Maintenance and Munitions Officer School

8:45 AM - 9:05 AM

PLENARY PAPER PRESENTATION

- ▶ 14103: LIFE CYCLE DEMILITARIZATION CONSIDERATIONS FOR IM DEVELOPMENT
Presenter: Mr. Anthony Di Stasio, U.S. Army RDECOM-ARDEC

9:05 AM - 9:20 AM

AWARDS PRESENTATION

9:20 AM - 10:20 AM

POSTER SESSION NETWORKING BREAK

Thank you to our sponsor: ATK Aerospace Systems



10:20 AM - 12:00 PM

BREAKOUT PRESENTATIONS

SESSION 1A - SYSTEMS 1

SESSION CHAIR: Mr. David Olson

10:20 AM	13904	TEST AND CHARACTERIZATION OF DLE-C054 IN 120-MM MORTARS <i>Presenter: Dr. Robert Hatch, ATK Aerospace Systems</i>
10:40 AM	13857	81MM HE MORTAR CARTRIDGES M889A1, M889A2, AND M821A12 HARMONIZED IM/FHC TESTING RESULTS <i>Presenter: Mr. Daniel Zaloga, U.S. Army RDECOM-ARDEC</i>
11:00 AM	13832	INSENSITIVE CAST PLASTIC BONDED EXPLOSIVE SOLUTION FOR A 76 MM SHELL <i>Presenter: Mr. Philippe Chabin, EURENCO</i>
11:20 AM	13813	IMI 120 MM IM HE-MP AMMUNITION <i>Presenter: Mr. Eli Shachar, IMI-ISRAEL</i>
11:40 AM	13819	60/81 HE MORTAR IM ENHANCEMENT PROGRAM <i>Presenter: Mr. Nickolas Baldwin, U.S. Army RDECOM-ARDEC</i>

SESSION 1B - SYNTHESIS

SESSION CHAIR: Dr. Andrew Sanderson

10:20 AM	13715	DNGU: SYNTHESIS, FORMULATION, AND TESTING OF AN AFFORDABLE, LESS-SENSITIVE ENERGETIC MATERIAL <i>Presenter: Dr. Neil Tucker, BAE Systems</i>
10:40 AM	13814	TOWARDS LOW-COST TATB BASED FORMULATIONS <i>Presenter: Ms. Anne Keromnes-Wuillaume, CEA Le Ripault</i>
11:00 AM	13872	MANUFACTURE OF SYM-TRIAMINOTRINITROBENZENE (TATB) BY THE BENZIGER METHOD AT HOLSTON ARMY AMMUNITION PLANT <i>Presenter: Mr. Mike Ervin, BAE Systems</i>
11:20 AM	13897	PREPARATION OF COMMON NITRATE ESTERS BY MILD NITRATION OF POLYOLS <i>Presenter: Dr. Nicholas Straessler, ATK Aerospace Systems</i>
11:40 AM	13690	TEX: A RATIONAL, NEXT-GENERATION IM EXPLOSIVE & PROPELLANT COMPONENT <i>Presenter: Dr. Steve Velarde, ATK Energetic Systems</i>

12:00 PM - 1:20 PM

LUNCH

Thank you to our sponsor: National Technical Systems



1:20 PM - 2:40 PM

BREAKOUT PRESENTATIONS

SESSION 2A - TESTING 1

SESSION CHAIR: Dr. Pierre-Francois Peron

1:20 PM	13893	PREDICTIVE MODELING OF LSGT PERFORMANCE RESULTS FOR COMPOSITION C-4 <i>Presenter: Mr. Matt Hathaway, BAE Systems</i>
1:40 PM	13817	REACTIVE MATERIAL FORMULATION STUDY FOR SURFACE IGNITION OF EXPLOSIVE <i>Presenter: Ms. Nausheen Al-Shehab, Picatinny Arsenal</i>
2:00 PM	13676	REMOVING FULL-SCALE TESTING BARRIERS: A FUNDAMENTAL DETONATION CHARACTERIZATION TECHNIQUE FOR NOVEL ENERGETIC FORMULATIONS AT THE LABORATORY SCALE <i>Presenter: Dr. Matthew Biss, U.S. Army Research Laboratory</i>
2:20 PM	13882	INSENSITIVE MUNITION LOGISTICAL CONFIGURATION TESTING <i>Presenter: Mr. Michael Birch, Raytheon Missile Systems</i>

TUESDAY ▷ MAY 15, 2012 (CONTINUED)**SESSION 2B - INGREDIENTS 1**

SESSION CHAIR: Mr. Mike Ervin

1:20 PM	13880	DEMONSTRATION OF 1-NITRAMINO-2,3-DINITROXYPROPANE AS AN ENERGETIC PLASTICIZER COMPONENT IN AN HMX-BASE PBX <i>Presenter: Mr. Mike Willcox, AWE</i>
1:40 PM	13876	STUDIES ON RDX OF IMPROVED CRYSTAL QUALITY <i>Presenter: Dr. Sarah Headrick, BAE Systems</i>
2:00 PM	13844	NTO FOR INSENSITIVE COMPOSITIONS <i>Presenter: Ms. Genevieve Eck, EURENCO</i>
2:20 PM	13809	DEVELOPMENT OF AN EFFICIENT ALTERNATIVE PROCESS FOR DNAN PRODUCTION <i>Presenter: Dr. Sarah Headrick, BAE Systems</i>

2:40 PM - 3:00 PM**NETWORKING BREAK****3:00 PM - 4:20 PM****BREAKOUT PRESENTATIONS****SESSION 3A - IM TECHNOLOGIES 1**

SESSION CHAIR: Mr. Pierre Pelletier

3:00 PM	13929	FREEDM (FUTURE REQUIREMENTS OF ENHANCED ENERGETICS FOR DECISIVE MUNITIONS) <i>Presenter: Mr. Anthony Di Stasio, U.S. Army RDECOM-ARDEC</i>
3:20 PM	13804	A NOVEL TUNEABLE EFFECTS EXPLOSIVE CHARGE <i>Presenter: Dr. Eamon Colclough, QinetiQ</i>
3:40 PM	13669	MSIAC WORKSHOP ON IM TECHNOLOGY GAPS - HOW TO REDUCE MUNITIONS EFFECTS TO FRAGMENT, SHAPED CHARGE JET AND EXPLOSIVELY FORMED PROJECTILES AGGRESSIONS? <i>Presenter: Dr. Pierre-Francois Peron, MSIAC</i>
4:00 PM	13848	CHARACTERIZATION OF VOIDS IN AN INSENSITIVE RDX-BASED NANOCOMPOSITE EXPLOSIVE <i>Presenter: Dr. Hongwei Qiu, Stevens Institute of Technology</i>

SESSION 3B - FORMULATIONS 1

SESSION CHAIR: Mr. Steve Nicolich

3:00 PM	14113	EXPLORING THE HMX-BASED PBXS WITH THE TATB SHOCK SENSITIVITY <i>Presenter: Dr. Igor Plaksin, ADAI, University of Coimbra</i>
3:20 PM	13884	DEVELOPMENT AND EVALUATION OF GRANULAR INSENSITIVE MELT POUR EXPLOSIVES <i>Presenter: Mr. Alberto Carrillo, BAE Systems</i>
3:40 PM	13840	DECREASING SHOCK-SENSITIVITY BY COATING NITRAMINE PARTICLES WITH FOX-7 OR FOX-12 <i>Presenter: Mr. Peter Gerber, Fraunhofer ICT</i>
4:00 PM	13827	UNDERWATER PERFORMANCE DEMONSTRATIONS AND IM RESPONSES OF TWO INSENSITIVE EXPLOSIVES <i>Presenter: Mrs. Mari-Ella Sairiala, PVTT</i>

4:20 PM - 4:40 PM**NETWORKING BREAK**

4:40 PM - 6:00 PM

BREAKOUT PRESENTATIONS

SESSION 4A - STANDARDIZATION 1

SESSION CHAIR: Mr. Patrick Lamy

4:40 PM	13858	ARMY INSENSITIVE MUNITIONS BOARD REVIEW OF HARMONIZED TESTING <i>Presenter: Dr. Brian Fuchs, U.S. Army RDECOM-ARDEC</i>
5:00 PM	13785	IM TECHNOLOGY GAP WORKSHOP – GUN PROPULSION TECHNOLOGY <i>Presenter: Mr. Emmanuel Schultz, MSIAC</i>
5:20 PM	13842	EDA JOINT PROJECT ON INSENSITIVE MUNITIONS & AGEING (IMA): OVERVIEW <i>Presenter: Mrs. Caroline Nguyen, SAFRAN SME Le Bouchet Research Centre</i>
5:40 PM	13874	MSIAC IM DATABASES - BENEFITS OF WEB-BASED MIGRATION <i>Presenter: Dr. Pierre-Francois Peron, MSIAC</i>

SESSION 4B - PROCESSING 1

SESSION CHAIR: Mr. Andrew Wilson

4:40 PM	13869	DEVELOPMENT AND SCALE UP OF NEW PROCESS FOR PRODUCTION OF HIGH PURITY ADN <i>Presenter: Mrs. Helen Stenmark, EURENCO</i>
5:00 PM	13850	LARGE SCALE MANUFACTURING OF INSENSITIVE EXPLOSIVE IMX-104 <i>Presenter: Mr. Virgil Fung, BAE Systems</i>
5:20 PM	13899	RECENT DEVELOPMENTS IN CL-20 SYNTHESIS AND PROCESSING <i>Presenter: Dr. Nicholas Straessler, ATK Aerospace Systems</i>
5:40 PM	14102	NITROTRIAZOLONE (NTO) PROCESS OPTIMIZATION : IMPROVED MANUFACTURING TECHNOLOGY FOR INSENSITIVE MUNITIONS <i>Presenter: Mr. Timothy Dawag, U.S. Army RDECOM-ARDEC</i>

6:00 PM

SESSIONS ADJOURN

WEDNESDAY ▷ MAY 16, 2012

7:00 AM - 6:30 PM

CONFERENCE REGISTRATION

7:00 AM - 8:00 AM

CONTINENTAL BREAKFAST

8:00 AM - 9:20 AM

BREAKOUT PRESENTATIONS

SESSION 5A - IM TECHNOLOGIES 2

SESSION CHAIR: Mr. Pierre-Olivier Vignaud

8:00 AM	13641	STING RAY TORPEDO - IM WARHEAD SYSTEM INSERTION <i>Presenter: Mr. Chuck Spencer, BAE Systems</i>
8:20 AM	13822	INSENSITIVE MUNITIONS PACKAGING TECHNOLOGY <i>Presenter: Mr. Daniel Pudlak, U.S. Army RDECOM-ARDEC</i>
8:40 AM	13907	SOLID ROCKET MOTOR VENTING SOLUTIONS <i>Presenter: Mr. Peter Cahill, Aerojet</i>
9:00 AM	14101	IM TACTICAL ROCKET MOTOR FAILURE MODE ANALYSIS PROTOCOL <i>Presenter: Mr. Raymond Coleno, Roxel France</i>

WEDNESDAY > MAY 16, 2012 (CONTINUED)**SESSION 5B - MUNITIONS TECHNOLOGIES**

SESSION CHAIR: Mr. Stephen Struck

8:00 AM	13865	TRANSLATING THE IM BEHAVIOUR OF MUNITIONS TO OPERATIONAL CONSEQUENCES <i>Presenter: Mr. Peter Hooijmeijer, TNO</i>
8:20 AM	13895	DEMOM-BASED IM FORMULATIONS FOR THE 120MM MORTAR <i>Presenter: Dr. Eric Bukowski, U.S. Army Research Laboratory</i>
8:40 AM	13915	60/81 MM PROJECTILES FILLED WITH IMX-104 <i>Presenter: Mr. Erik Boykin, U.S. Army RDECOM-ARDEC</i>
9:00 AM	13928	81MM RELIABILITY TESTING <i>Presenter: Mr. Daniel Zaloga, U.S. Army RDECOM-ARDEC</i>

9:20 AM - 10:20 AM

POSTER PRESENTATION NETWORKING BREAK

Thank you to our sponsor: TNO



10:20 AM - 12:00 PM

BREAKOUT PRESENTATIONS**SESSION 6A - SYSTEMS 2**

SESSION CHAIR: Mr. Philippe Chabin

10:20 AM	14591	SUCCESS IN VENTING PENETRATOR WARHEADS <i>Presenter: Mr. Stephen Kelley, Air Armament Center, Eglin AFB</i>
10:40 AM	13826	40MM ENHANCED BLAST INSENSITIVE EXPLOSIVE MUNITIONS <i>Presenter: Mr. Aw Cheng Hok, ST Kinetics</i>
11:00 AM	13845	NEW FRENCH IM GP BOMBS: DEVELOPMENT UPDATE <i>Presenter: Mr. Laurent Delrieu, French MoD-DGA</i>
11:20 AM	13816	TESTING OF AN IM UPGRADED M430A1 40 MM GRENADE <i>Presenter: Ms. Nausheen Al-Shehab, Picatinny Arsenal</i>
11:40 AM	14116	FULL-SCALE IM CHARACTERISATION OF A SHORT RANGE AIR-TO-AIR MISSILE <i>Presenter: Mr. Benjamin Smit, Rheinmetall Denel Munition</i>

SESSION 6B - CHARACTERIZATION 1

SESSION CHAIR: Mr. Wim de Klerk

10:20 AM	13909	HEATING RATE EFFECT ON SLOW COOK-OFF RESPONSE <i>Presenter: Dr. Ernest Baker, U.S. Army RDECOM-ARDEC</i>
10:40 AM	TBD	TBD
11:00 AM	TBD	TBD
11:20 AM	13896	CHARACTERIZATION OF AGEING OF NC BASED GUN PROPELLANTS BY MOLAR MASS DEGRADATION OF NITROCELLULOSE AND ITS MODELLING BY RANDOM CHAIN SCISSION MODELS <i>Presenter: Dr. Manfred Bohn, Fraunhofer ICT</i>
11:40 AM	13830	CHARACTERIZATION OF 2, 4-DINITROANISOLE (DNAN) <i>Presenter: Mr. Philip Samuels, U.S. Army RDECOM-ARDEC</i>

12:00 PM - 1:30 PM

LUNCH

1:30 PM - 3:10 PM

BREAKOUT PRESENTATIONS

SESSION 7A - TESTING 2

SESSION CHAIR: Mr. Ken Graham

1:30 PM	13764	SHAPED CHARGE JET INITIATION PHENOMENA OF PLASTIC BONDED HIGH EXPLOSIVES <i>Presenter: Dr. Werner Arnold, MBDA-TDW</i>
1:50 PM	13825	REACTIVE MATERIAL CANDIDATES FOR LOW COLLATERAL DAMAGE-PART 1: ARENA TESTING <i>Presenter: Mr. Jeff Widener, ATK Aerospace Systems</i>
2:10 PM	13910	ARMY INSTITUTE FOR MULTI SCALE REACTIVE MODELING ADVANCES <i>Presenter: Mr. Daniel Murphy, U.S. Army RDECOM-ARDEC</i>
2:30 PM	13868	TUBE TESTING FOR IM ASSESSMENT OF THE BOOSTER EXPLOSIVES PBXN-5 AND ITEX-07 <i>Presenter: Mr. Helmut Zoellner, DynITEC GmbH</i>
2:50 PM	13866	AN EFP IMPACT IN COMPARISON WITH THE IM FRAGMENT IMPACT TEST <i>Presenter: Mr. Gert Scholtes, TNO</i>

SESSION 7B - FORMULATIONS 2

SESSION CHAIR: Mr. Bruno Nouguez

1:30 PM	13906	EXUDATION PROBLEMS AND SOLUTIONS WITH THE GIM MELT-CAST EXPLOSIVE <i>Presenter: Mr. Marc Brassard, Defence R&D Canada Valcartier</i>
1:50 PM	13815	STUDIES ON OSX-12 FORMULATION, AN ALUMINIZED DNAN BASED MELT-POUR EXPLOSIVE <i>Presenter: Ms. Annie Vézina, General Dynamics-OTS, Canada</i>
2:10 PM	13632	DEVELOPMENT AND CHARACTERISATION OF A BASED TNT IM EXPLOSIVE COMPOSITION XF®11585. APPLICATIONS FOR THE 60 MM TO 120 MM CALIBER RANGE <i>Presenter: Mr. Christophe Coulouarn, Nexter Munitions</i>
2:30 PM	13846	A NEW GENERATION OF MALLEABLE PLASTIC EXPLOSIVE BLOCKS <i>Presenter: Mr. Bernard Mahé, EURENCO</i>
2:50 PM	13877	LESS SENSITIVE COMBINED EFFECTS EXPLOSIVES <i>Presenter: Ms. Paula Cook, U.S. Army RDECOM-ARDEC</i>

3:10 PM - 3:30 PM

NETWORKING BREAK

3:30 PM - 5:10 PM

BREAKOUT PRESENTATIONS

SESSION 8A - PROPELLANTS AND PROPULSION FORMULATIONS

SESSION CHAIR: Mr. Elbert Caravaca

3:30 PM	13625	ECL® - A NEW PROPELLANT TECHNOLOGY HAS REACHED MATURITY <i>Presenter: Dr. Beat Vogelsanger, Nitrochemie Wimmis AG</i>
3:50 PM	13803	BRINGING IM PROPELLANTS WITHIN REACH <i>Presenter: Mr. Tom Somerville, BAE Systems</i>
4:10 PM	13854	ARDEC IGNITERS FOR GUN SYSTEMS <i>Presenter: Dr. Eugene Rozumov, U.S. Army RDECOM-ARDEC</i>
4:30 PM	13881	IMPROVED IM PROPERTIES OF AN RDX/TPE BASED LOVA PROPELLANT FOR ARTILLERY APPLICATIONS <i>Presenter: Mr. Wim de Klerk, TNO</i>
4:50 PM	13738	SCALE-UP OF THE INSENSITIVE ENERGETIC BINDER, CELLULOSE ACETATE NITRATE AND DEVELOPMENT OF IM-CAN BASED GUN PROPELLANTS <i>Presenter: Dr. Thelma Manning, U.S. Army RDECOM-ARDEC</i>

WEDNESDAY ▷ MAY 16, 2012 (CONTINUED)**SESSION 8B - PROCESSING 2**

SESSION CHAIR: Mr. Tim Mahoney

3:30 PM	13878	EXPLOSIVES COATING VIA ADVANCED CLUSTER ENERGETICS FLUID ENERGY MILL TECHNOLOGY <i>Presenter: Mr. Alberto Carrillo, BAE Systems</i>
3:50 PM	13805	ANALYZING PRODUCTION PROCESSES OF ENERGETIC MATERIALS USING ULTRASOUND TECHNOLOGY <i>Presenter: Mr. Rajen Patel, U.S. Army RDECOM-ARDEC</i>
4:10 PM	13879	NOVEL MANUFACTURING PROCESS FOR THE THERMOBARIC EXPLOSIVES PBXIH-18 AT HOLSTON ARMY AMMUNITION PLANT <i>Presenter: Mr. Mike Ervin, BAE Systems</i>
4:30 PM	13903	COMPRESSION MOLDING OF ULTRA-FINE TATB WITH VARIOUS MOLD RELEASES† <i>Presenter: Dr. D. Mark Hoffman, Lawrence Livermore National Laboratory</i>
4:50 PM	13862	PROCESS IMPROVEMENT AND OPTIMIZATION OF INSENSITIVE EXPLOSIVE IMX-101 <i>Presenter: Mr. Virgil Fung, BAE Systems</i>

5:10 PM - 6:30 PM**SYMPOSIUM RECEPTION**

Thank you to our sponsor: BAE Systems

BAE SYSTEMS**THURSDAY ▷ MAY 17, 2012****7:00 AM - 12:00 PM****CONFERENCE REGISTRATION****7:00 AM - 8:00 AM****CONTINENTAL BREAKFAST****8:00 AM - 9:40 AM****BREAKOUT PRESENTATIONS****SESSION 9A - PROPELLANTS AND PROPULSION SYSTEMS**

SESSION CHAIR: Mr. Paul Braithwaite

8:00 AM	13873	FOLLOW-UP TO LESS SENSITIVE AND "GREEN" PROPELLANT <i>Presenter: Mr. Charles Wiehahn, Rheinmetall Denel Munition</i>
8:20 AM	13851	DEVELOPMENT OF ELECTRICALLY CONTROLLED ENERGETIC MATERIALS FOR 120MM TANK IGNITERS <i>Presenter: Dr. Kimberly Chung, U.S. Army RDECOM-ARDEC</i>
8:40 AM	TBD	TBD
9:00 AM	14112	IMPACT MITIGATION APPROACH FOR THE 105MM ARTILLERY PROPULSION SYSTEM <i>Presenter: Mr. Tony Wey, U.S. Army RDECOM-ARDEC</i>
9:20 AM	14109	CHARACTERISTICS OF PROPELLANT BED REACTION WHEN SUBJECTED TO HIGH VELOCITY FRAGMENT IMPACT <i>Presenter: Mr. Brian Krzewinski, U.S. Army Research Laboratory</i>

SESSION 9B - CHARACTERIZATION 2

SESSION CHAIR: Dr. Roy Kelly

8:00 AM	13829	IRREVERSIBLE GROWTH OF DNAN BASED FORMULATIONS <i>Presenter: Mr. Philip Samuels, U.S. Army RDECOM-ARDEC</i>
8:20 AM	13870	FOX-7; MAIN CHARACTERISTICS AND PARAMETERS WITH IMPACT ON SENSITIVITY OF CRYSTALS AND FORMULATIONS <i>Presenter: Dr. Janis Ritums, Swedish Defence Research Agency</i>
8:40 AM	13926	DEVELOPMENT AND CHARACTERIZATION OF NEW FAMILIES OF EXPLOSIVES ABLE TO GENERATE SPECIFIC EFFECTS <i>Presenter: Mrs. Christelle Collet, SAFRAN SME</i>
9:00 AM	13675	FORMULATION AND CHARACTERIZATIONS OF NANOENERGETIC COMPOSITIONS <i>Presenter: Dr. Arnaud Beaucamp, CEA/DAM Le Ripault</i>
9:20 AM	13852	IMX-104 CHARACTERIZATION FOR DoD QUALIFICATION <i>Presenter: Ms. Leila Zunino, U.S. Army, PM-Combat Ammunition Systems</i>

9:40 AM - 10:00 AM

NETWORKING BREAK

10:00 AM - 11:40 AM

BREAKOUT PRESENTATIONS

SESSION 10A - STANDARDIZATION 2

SESSION CHAIR: Mr. Matt Beyard

10:00 AM	13828	A NEW IMPULSE FOR THE FRENCH MURAT POLICY <i>Presenter: Mr. Serge Bordachar, DGA/IPE</i>
10:20 AM	13729	INSTRUMENTATION OF LIQUID FUEL FIRES <i>Presenter: Mr. Kevin Ford, Naval Air Warfare Center Weapons Division</i>
10:40 AM	13639	HEAT FLUX AND THERMAL RESPONSE MEASUREMENTS FOR DESIGNING A PROPANE FUEL FAST COOK OFF TEST APPARATUS <i>Presenter: Dr. Jon Yagla, Kratos Defense</i>
11:00 AM	13651	THE IM SHIP: DESIGN CONSIDERATIONS TO MITIGATE MUNITION HAZARDS <i>Presenter: Mr. Thomas Swierk, NAVSEA/NSWC Dahlgren</i>
11:20 AM	13849	SHAPED CHARGE JET ATTACKS: WHAT SHAPED CHARGE? WHICH TEST SET-UP? <i>Presenter: Mr. Yves Guengant, IMEMG</i>

SESSION 10B - FORMULATIONS 3

SESSION CHAIR: Dr. Per Sjoberg

10:00 AM	13890	DETONATION AND BLAST CHARACTERISTICS OF COMBINED EFFECTS EXPLOSIVES <i>Presenter: Dr. Paul Anderson, U.S. Army RDECOM-ARDEC</i>
10:20 AM	13650	ASSESSMENT OF DEMN-BASED IM FORMULATIONS FOR OCTOL REPLACEMENT <i>Presenter: Dr. Eric Bukowski, U.S. Army Research Laboratory</i>
10:40 AM	13888	A SAFE AND EFFECTIVE METHOD TO REMOTELY MIX SMALL QUANTITIES OF ENERGETIC COMPOSITIONS <i>Presenter: Mr. Brad Cragun, ATK Aerospace Systems</i>
11:00 AM	13889	MELTABLE EXPLOSIVES FOR PRESSED APPLICATIONS <i>Presenter: Mr. Omar Abbassi, U.S. Army RDECOM-ARDEC</i>
11:20 AM	13847	DLE-C067: A NEW INSENSITIVE CAST-CURE FORMULATION FOR LARGE MUNITION USE <i>Presenter: Mr. Michael Adams, ATK Aerospace Systems</i>

SYMPOSIUM ADJOURNS

CAPTAIN JEREMY B. McCRANEY

Captain Jeremy B. McCraney is the Officer in Charge of Tactics and Training and an Instructor assigned to the United States Air Force Advanced Maintenance and Munitions Officer School, Nellis Air Force Base, Nevada. The school provides graduate-level instruction in expeditionary combat support for USAF maintenance and munitions officers and senior enlisted, with the goal of increasing an operational wing's capability and lethality. Additionally, Captain McCraney is responsible for the bi-annual development and production of aircraft and munitions maintenance tactics, techniques, and procedures for the United States Air Force.

Captain McCraney received his commission in 2004 under the Reserve Officer Training Corps from East Carolina University. After receiving his commission he attended the Maintenance and Munitions Officer Course at Sheppard AFB, TX and in 2007 earned his Master's Degree in Business Administration from Touro University in Cypress, CA and a Master's Degree in Administrative Leadership from the University of Oklahoma in 2012. Throughout his career, he has had a variety of assignments at the wing and squadron levels. His operational level tours include Munitions Accountable Systems Officer (MASO), Armament Flight Commander and Officer in Charge, Munitions Systems at the 355th Fighter Wing, Davis-Monthan AFB, AZ. He also deployed to Afghanistan as the Munitions Flight Commander and MASO in direct support of Operation ENDURING FREEDOM. Furthermore, Captain McCraney served as the Mission Assurance Flight Commander, 1st Space Launch Squadron, Cape Canaveral Air Force Station, FL where he was Chief of Mission Assurance during 11 Delta II launches for the Department of Defense Global Positioning System constellation and the National Aeronautics and Space Administration scientific exploratory missions. Prior to his current assignment, Captain McCraney served as Operations Officer, 704th Munitions Support Squadron, Ghedi Air Base, Italy where he led 138 personnel across 5 flights and 25 Air Force Specialty Codes in ensuring weapons system safety, security, and reliability of United States protection level one (PL-1) munitions assets assigned under the National Atlantic Treaty Organization supporting the 6th Stormo of the Italian Air Force.



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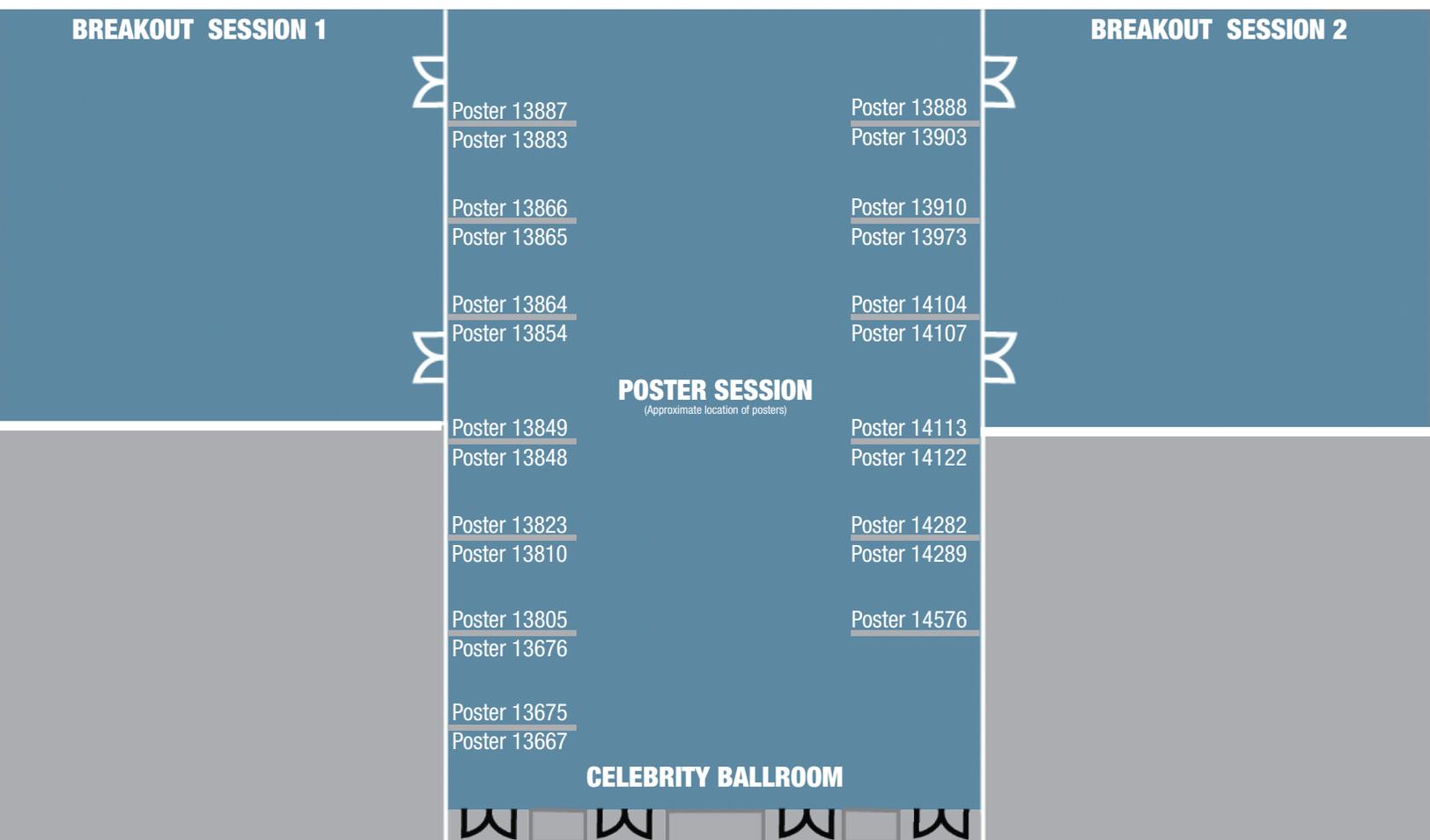
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FOR MORE INFORMATION
CONTACT MARK MAMULA
MARK.MAMULA@AEROJET.COM



FACILITY DIAGRAM



PLEASE SEE NEXT PAGE FOR POSTER DESCRIPTIONS

BREAKOUT SESSION TOPICS

BREAKOUT SESSION 1	BREAKOUT SESSION 2
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2A- TESTING 1	2B- INGREDIENTS 1
3A- IM TECHNOLOGIES 1	3B- FORMULATIONS 1
4A- STANDARDIZATION 1	4B- PROCESSING 1
5A- IM TECHNOLOGIES 2	5B- MUNITIONS TECHNOLOGIES
6A- SYSTEMS 2	6B- CHARACTERIZATION
7A- TESTING 2	7B- FORMULATIONS 2
8A- PROPELLANTS AND PROPULSION FORMULATIONS	8B- PROCESSING 2
9A- PROPELLANTS AND PROPULSION SYSTEMS	9B- CHARACTERIZATION 2
10A- STANDARDIZATION 2	10B- FORMULATIONS 3

13667	ORIGIN OF TEST REQUIREMENTS AND PASSING CRITERIA FOR THE QUALIFICATION OF PRIMARY AND BOOSTER HIGH EXPLOSIVES <i>Mr. John Adams, Booz Allen Hamilton</i>
13675	FORMULATION AND CHARACTERIZATIONS OF NANOENERGETIC COMPOSITIONS <i>Dr. Arnaud Beaucamp, CEA/DAM Le Ripault</i>
13676	REMOVING FULL-SCALE TESTING BARRIERS: A FUNDAMENTAL DETONATION CHARACTERIZATION TECHNIQUE FOR NOVEL ENERGETIC FORMULATIONS AT THE LABORATORY SCALE <i>Dr. Matthew Biss, U. S. Army Research Laboratory</i>
13805	ANALYZING PRODUCTION PROCESSES OF ENERGETIC MATERIALS USING ULTRASOUND TECHNOLOGY <i>Mr. Rajen Patel, U.S. Army RDECOM-ARDEC</i>
13810	REACTIVE MATERIAL CANDIDATES FOR LOW COLLATERAL DAMAGE - PART II: MODELING AND SIMULATION <i>Mr. Ruslan Mudryy, U.S. Army RDECOM-ARDEC</i>
13823	IM SOLUTION WITH JET DISRUPTOR TECHNIQUE IN SHAPED CHARGE WARHEADS <i>Mr. James Pham, U.S. Army RDECOM-ARDEC</i>
13848	CHARACTERIZATION OF VOIDS IN AN INSENSITIVE RDX-BASED NANOCOMPOSITE EXPLOSIVE <i>Dr. Hongwei Qiu, Stevens Institute of Technology</i>
13849	SHAPED CHARGE JET ATTACKS: WHAT SHAPED CHARGE? WHICH TEST SET-UP? <i>Mr. Yves Guengant, IMEMG</i>
13854	ARDEC IGNITERS FOR GUN SYSTEMS <i>Dr. Eugene Rozumov, U.S. Army RDECOM-ARDEC</i>
13864	MECHANICAL AND THERMAL PERFORMANCE OF REACTIVE AND ENERGETIC MATERIALS <i>Dr. John Densmore, Lawrence Livermore National Laboratory</i>
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13866	AN EFP IMPACT IN COMPARISON WITH THE IM FRAGMENT IMPACT TEST <i>Mr. Gert Scholtes, TNO</i>
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- Promotes IM policy and regulation and the sharing of IM technological progress

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- the Industry, for their design, development, delivery and demilitarisation

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