

## CSAT Workshop AGENDA

21-22 June 2016, Tuesday/Wednesday

Tuesday, June 21, 2016

Meeting Time: 0800-2100

Odeum Conference Center

**Presenter**

**Presentation Topic**

**Time**

1. Dr. Rick Sisson, WPI	Welcome	0800-0815
2. Vic Champagne, ARL	Workshop Objectives and New Developments	0815-0845
3. Dr. Brian James, Ellsworth AFB	CS Implementation in US Air Force	0845-0915
4. Michael Nicholas, Boeing	Cold Spray Development for Apache Mast Support	1045-1105
5. Dr. Tim Eden, Penn State	Applied Research Lab Cold Spray Development	0945-1015
<b>Exhibit Area</b>		
6. Neil Matthews, RUAG	Cold Spray for Australian Defense Department	1100-1130
7. Blake Barnett/Dan Kaplowitz, ARL	Cold Spray Additive Manufacturing & Structural Repair	1130-1200
<b>Exhibit Area</b>		
8. Kirkland Brooks, ES3, Inc.	Aircraft Component Repair using Low Pressure CS	1230-1300
9. Jarrod Schell, MOOG	Cold Spray Aerospace Applications	1300-1330
10. Trung Nguyen, NAVAIR	CS & Additive Technologies for Naval Aircraft	1330-1400
11. Dr. Christian Widener, SDSMT	Transitioning CS to DoD/Commercial Applications	1400-1430
<b>Exhibit Area</b>		
12. Aaron Nardi, UTRC	Structural Cold Spray Aluminum Alloy Development	1500-1530
13. S. Arunachalam, Safe Inc.	Cold Spray Structural Repair of Al 7075-T651	1530-1600
14. Dr. Ovidiu Marin, Quantum Technology	Helium Recovery for the Cold Spray Process	1600-1630
15. Rob Hrabe, HF Webster Eng Services	OSD Mantech Program & Powder Processing/Storage	1630-1700
<b>RECEPTION - sponsored by Valimet</b>		
16. Bus Transportation from WPI to MOOG	22 Town Forest Road, Webster, MA, 01570	1830-1900
<b>Demonstration of OSD Mantech Cold Spray Helium Recovery System-Networking</b>		
17. Bus Transportation	Back to WPI from MOOG, Webster MA	2030-2100



MOOG



**Wednesday, June 22, 2016**

**Meeting Time: 0800-1700 Odeum Conference Center**

**Presenter**

**Presentation Topic**

**Time**

1. Ken Young, Boeing	CS Protective Erosion Coatings	0800-0830
2. Dr. D. Cote/B. McNally, WPI	Advanced Powder Characterization and Modeling	0830-0900
3. Mostafa Hassani-Gangaraj, MIT	Single Particle Supersonic Impact	0900-0930
4. Ozan Ozdemir, SDSMT	Prediction of Particle Impact Conditions via CFD Model	0930-1000
<b>Exhibit Area</b>		<b>1000-1030</b>
5. Tom Stamey, PSNSY	Cold Spray Repair of Main Pump Housing	1030-1100
6. Dan Greving, Honeywell, AR	Cold Spray Application Development at Honeywell	1100-1130
7. Heidi Lovelock, TWI	CORSAIR European Collaborative Project	1130-1200
<b>Exhibit Area</b>		<b>LUNCH 1200-1300</b>
8. Dr. Iulian Marinescu, Rolls Royce	Process Monitoring Solutions for Cold Spray	1300-1330
9. J. Lareau/S. Glass/A. Diaz, PNNL	Cold Spray Fabrication of NDE Qualification Samples	1330-1400
10. Dr. Atieh Moridi, MIT	Fatigue behavior of Structural Cold Spray Coatings	1400-1430
<b>Exhibit Area</b>		<b>BREAK and NETWORKING 1430-1500</b>
11. Dr. Julio Villafuerte, Centerline/ Linh Tran, L.J. Walch	Aerospace New Trends: Saving with Cold Spray Process	1500-1530
12. Dr. Klassen, Helmut-Schmidt University	Systematic Tuning of Cold Spraying for Aerospace	1530-1600
13. Victor Champagne, ARL	Cold Spray Joining of Dissimilar Materials and Wrap-up	1630-END

**Hosts, Dr. Rick Sisson and Dr. Diran Apelian**

Worcester Polytechnic Institute

Ph: 508-831-5335

[sisson@wpi.edu](mailto:sisson@wpi.edu)

**The Odeum Conference Center is located  
within the WPI Campus Center.**

**WiFi access will be available during the CSAT workshop.**



**Technical Coordinator, Victor Kenneth Champagne, Jr.**

Technical Leader, US Army Research Laboratory Center for Cold Spray

ATTN: RDRL-WMM-D, BLDG 4600, Aberdeen Proving Ground, MD 21005-5069

Ph: (410) 306-0822, [victor.k.champagne.civ@mail.mil](mailto:victor.k.champagne.civ@mail.mil)

<http://www.arl.army.mil/www/default.cfm?page=369>

**Sponsor/Workshop Administrators, Rob Hrabe and Faye Kann**

VRC Metal Systems, LLC

525 University Loop, Suite 211, Rapid City, SD 57701-0436

Ph: 605-209-5196 [Rob] [rob.hrabe@vrcmetalsystems.com](mailto:rob.hrabe@vrcmetalsystems.com)

Ph: 605-716-0064 [Faye] [faye.kann@vrcmetalsystems.com](mailto:faye.kann@vrcmetalsystems.com)  
[workshop@coldsprayteam.com](mailto:workshop@coldsprayteam.com)



**THANK YOU to our SPONSOR -  
TUESDAY MORNING BREAK!**



## **CSAT EXHIBITORS**

**Army Research Laboratory**

**Buehler**

**CenterLine**

**ES3, Inc.**

**Metal Tech & Mgmt.**

**MOOG**

**Penn State-ARL**

**South Dakota School of Mines and Technology**

**Sturbridge Metallurgical**

**Temple University**

**UTRC**

**VRC Metal Systems**

**Worcester Polytechnic Institute**

**THANK YOU to our SPONSOR - TUESDAY NIGHT RECEPTION!  
VALIMET and MR. GEORGE CAMPBELL**



# CSAT POSTER SESSION AND EXHIBITS

<b>Draper</b>	<b><i>Complex Devices/Systems of the Future are Not Flat</i></b>
<b>Northeastern University</b>	<b><i>1. Material Model Calibration for High Strain Rate Particle Impacts 2. Atomic and Microscale Simulations of High Velocity Impact of Particles</i></b>
<b>Saint-Gobain</b>	<b><i>Application of Silicone Adhesive Tapes for Thermal Spray Masking</i></b>
<b>South Dakota School of Mines and Technology</b>	<b><i>CFD for Cold Spray: Detail, Accuracy, and Computational Cost</i></b>
<b>University of Connecticut</b>	<b><i>Computation, Microstructural, and Mechanical Studies of Cold-Spray Splats</i></b>
<b>University of Massachusetts</b>	<b><i>Parametric Single Micro-Particle Impact Study for Extreme Deformation Mechanics in Cold Spray</i></b>
<b>University of North Carolina – Chapel Hill</b>	<b><i>Kinetic Closure of Johnson-Cook Plasticity Models</i></b>
<b>University of North Texas</b>	<b><i>First Principles Calculations and Peridynamics Simulations of Cold Spray of Aluminum Alloys</i></b>
<b>University of Southern California</b>	<b><i>Effects of Post-processing Heat Treatments on Cold Sprayed Aluminum Alloys</i></b>
<b>University of Southern Mississippi</b>	<b><i>USM research on Pneumatic Cushion Technology</i></b>
<b>Worcester Polytechnic Institute</b>	<b><i>1. The Microstructural Evolution of Powder Aluminum Alloys after Thermal Processing 2. Simplifying the Mosaic: A Statistical Learning Approach to Predicting Bulk Properties in Laser-Assisted CS 3. Experimental Characterization for Through-Process Modeling of CS Aluminum Alloys</i></b>