

**51st Combined Light Armor Survivability Panel (CLASP)**  
**Johns Hopkins University Applied Research Lab (JHU APL)**  
**Laurel, MD 20723**  
**22-23 June 2022**

Wednesday, 22 June 2022 - Final				
Time		Title	Presenter	Organization
8:00 - 8:30	0:30	Registration		
8:30 - 8:35	0:05	Welcome & Introductions	Ken Branham	AFMC A4-EN
8:35 - 8:45	0:10	Welcome to APL: JHU/APL Pioneering Research with Mission Intent	Andrew Merkle	JHU/APL
8:45 - 8:55	0:10	JHU/APL Materials Research for Extreme Environments	Morgan Trexler	JHU/APL
8:55 - 9:10	0:15	DSIAC Introduction	Brian Benesch	DSIAC
<b>Transparent &amp; Aircraft Armor</b>				
9:10 - 9:40	0:30	Novel Transparent Armor Structures	Zhiyong Xia	JHU/APL
9:40 - 10:10	0:30	Advanced Sealant for Extended Transparent Armor Service Life	Jesse Kelly	Luna Labs
10:10 - 10:25	0:15	BREAK		
10:25 - 10:55	0:30	Advancing the State of the Art in Spaced Armor	Emily Tunis	Hardwire
10:55 - 11:25	0:30	Laminated Glass Interlayer Research for Blast Protection	Adam Maisano	JHU/APL
11:25 - 11:55	0:30	Mechanical Testing and Modeling of Structural Silicone Window Attachments for Improved Blast Resistance	Sal Nimer	JHU/APL
11:55 - 12:25	0:30	<b>LUNCH</b>		
<b>CLASSIFIED SESSION</b>				
12:25 - 12:55	0:30	<b>Aviation threats or CONOPS pushing helos small arms WEZ</b>	CWO5 Bart Schmidt	ASDAT
12:55 - 13:25	0:30	<b>Stryker Enhanced Armor (SEA) Program</b>	Scott Schoenfeld	DEVCOM - ARL
13:25 - 13:55	0:30	<b>RPG Crush Up Characterization Against Baseline and Modified ACV Armor</b>	Patrick Hart	PEO LS
13:55 - 14:25	0:30	Transparent Armor	Parimal Patel	DEVCOM - ARL
14:25 - 14:40	0:15	BREAK		
14:40 - 15:00	0:20	Overview of ONR Investments in Extra Light Weight Armor Development	Anisur Rahman	ONR
15:00 - 15:20	0:20	Ceramic Grain Size Dependence On Ballistic Performance	James Wollmershauser	NRL
<b>Transparent &amp; Aircraft Armor continued</b>				
15:20 - 15:50	0:30	High Performance Glasses with Pressure-Induced Topological Changes	Matt Mancini	Penn State
<b>Body Armor</b>				
15:50 - 16:20	0:30	Effect of Backing Material On Helmet Backface Deformation from Non-Penetrating Ballistic Impacts	Caroline Howes	JHU/APL
<b>Tour</b>				
16:20 - 17:00	0:40	Tour of Intelligent Systems Center	Morgan Trexler	JHU/APL

@CLASSIFIED Presentation

Group dinner/refreshments (TBD).

Thursday, 23 June 2022 - Final				
Time		Title	Presenter	Organization
8:00 - 8:30	0:30	Registration		
<b>Body Armor continued</b>				
8:30 - 9:00	0:30	AM for Mesoscale Tailoring of Heterogenous Ceramics	Nick Ku	DEVCOM - ARL
<b>Ground Vehicle Light Armor</b>				
9:00 - 9:30	0:30	Composite Patch Repair of Armor Cracks on Tactical Wheeled Vehicles	Chris Vallejo	NextGen Aero
9:30 - 10:00	0:30	Just-In-Time Ballistic Protection	Robert Kargus	Army Futures Command
10:00 - 10:30	0:30	Effect of architectures and curvatures for UHMWPE Panels	Timothy Zang	DEVCOM - ARL
10:30 - 10:45	0:15	BREAK		
<b>Basic Research</b>				
10:45 - 11:15	0:30	Long Nanofiber Reinforcement of Bulk Ceramics for Extreme Toughness, Strength, and Multifunctionality	Luiz Acauan	MIT
11:15 - 11:45	0:30	Machine Learning for Rational Design of Impact Resistant Composites	Grace Gu	UC Berkeley
<b>Modeling and Simulation</b>				
11:45 - 12:15	0:30	Multi-Degree of Freedom Blast Effects Simulator	Robert Kargus	Army Futures Command
12:15 - 13:15	1:00	<b>LUNCH</b>		
<b>Modeling and Simulation continued</b>				
13:15 - 13:45	0:30	Development of Lightweight, Impact-Resistant Materials through Architecture and Interference Lithography	Kevin Nakahara	CalTech
13:45 - 14:15	0:30	ML for Beta Titanium Alloy Development	K. Ryan Bratton	INL
<b>Tour including following briefs</b>				
14:15 - 16:15	2:00	Testing and Evaluating Headborne Personal Protective Equipment for Blast Overpressure; JHU/APL Human Performance and Biomechanics	Vanessa Alphonse, and Kyle Ott	JHU/APL
16:15 - 16:15		<b>WRAP UP &amp; ADJOURN</b>		