



DEPARTMENT OF DEFENSE

**HUMAN FACTORS ENGINEERING
TECHNICAL ADVISORY GROUP
(DOD HFE TAG)**

MEETING 73



15 – 19 APRIL 2019

held at

ABERDEEN PROVING GROUND, MD

MEETING THEME:

LOOKING TO THE FUTURE: CHARTING THE ROAD AHEAD

The role and prominence of Human Factors in the Department of Defense continues to grow as future technology solutions provide greater capability while requiring natural, intuitive interaction techniques. Balancing these two seemingly contradictory goals requires forethought and strategic planning in order to obtain the desired results. Designing for future technologies that do not exist yet, the operation and integration of which can't be fully realized for weeks, months, or years to come, necessitates the use of roadmaps to chart the way forward.

Enabling a system operator to perform complex tasks in demanding situations does not happen by accident. The focus of this DoD HFE TAG is to identify the challenges associated with planning for future technology solutions, inspire collaboration amongst agencies with similar challenges and goals, and to share lessons learned within and across related disciplines.

Monday, 15 April

0930 – 1600	Meeting Registration	MTF Foyer
1000 – 1600	G-45 (by invite only)	Auditorium
1430 – 1500	New Member Orientation	Room 10A
1500 – 1600	Executive Committee Meeting	Room 10A
1600 – 1700	Operating Board Pre-TAG Meeting	Room 10A

Tuesday, 16 April (Combined TAG/NDIA Audience)

0730 – 1600	Meeting Registration	MTF Foyer
	<i>Plenary Session</i>	Auditorium
0800 – 0815	Dr. John Plaga, DOD HFE TAG Chair	
0815 – 0900	BG Jay Gallivan, Army Futures Command	
0900 – 0930	Dr. Jim Pharmer, NAWCTSD	
0930 – 1000	Mr. Ira L. Minor, SPAWAR	
1000 – 1030	Break	
1030 – 1130	Human Systems Community of Interest Dr. Kevin Geiss (Moderator), 711 th Human Performance Wing, AFRL	Auditorium
	<i>Community Cross Briefs</i>	Auditorium
1130 – 1140	NDIA HSD: Dr. Jared Freeman	
1140 – 1150	Army Research Labs: Dr. Corde Lane	
1150 – 1200	DoD HFE TAG: Dr. John Plaga	
1200 – 1400	Lunch	No host
1200 – 1400	Poster Session	MTF Foyer
1400 – 1530	JHSISC/WG Activity Panel	Auditorium
1400 – 1530	Concurrent NDIA Roundtable Discussions	Rooms 10A, 10B, 3, 4, 5, 15
1530 – 1600	Break	
1600 – 1630	Round Table Outbrief	Auditorium
1630 – 1700	Closing Remarks	Auditorium
1730 – 1900	Optional NDIA Reception **Pay in advance on NDIA website	Top of the Bay APG

Wednesday, 17 April

0800 – 1600	Meeting Registration	MTF Foyer
0830 – 1000	Mixed Reality I	Room 10A
0830 – 1000	Standardization I	Room 10B
0830 – 1000	Modeling and Simulation	Classroom 3
0830 – 1000	Test & Evaluation	Classroom 4
1000 – 1030	Break	
1030 – 1200	Virtual Immersive Technology Showcase	Room 10A
1030 – 1200	HFE/HSI I	Room 10B
1030 – 1200	MBSE Panel	Classroom 3
1030 – 1200	Trust in Autonomy	Classroom 4
1200 – 1330	Lunch	No host
1330 – 1500	Virtual Immersive Technology Showcase	Room 10A
1330 – 1500	Safety/Survivability/Health Hazards	Room 10B
1330 – 1500	Design Tools & Techniques	Classroom 3
1500 – 1530	Break	
	<i>Service Caucuses</i>	
1530 – 1700	Navy	Room 10A
1530 – 1700	Air Force	Room 10B
1530 – 1700	Army	Classroom 3
1530 – 1700	NASA	Classroom 4
1730 – 2000	Optional Dinner/TAG Mixer **Pay as you go, menu prices	Steelefish Grille

Thursday, 18 April

0800 – 1600	Meeting Registration	MTF Foyer
0830 – 1000	Technical Society/Industry I	Room 10A
0830 – 1000	Standardization II	Room 10B
0830 – 1000	Healthcare Special Interest Group	Classroom 3
0830 – 1000	Extreme Environments	Classroom 4
1000 – 1030	Break	
1030 – 1200	Cyber Security	Room 10A
1030 – 1200	Standardization III	Room 10B
1030 – 1200	Cognitive Readiness	Classroom 3
1030 – 1200	Human Performance Measurement	Classroom 4
1200 – 1330	Lunch	No host
1330 – 1500	Mixed Reality II	Room 10A
1330 – 1500	HFE/HSI II	Room 10B
1330 – 1500	Training I	Classroom 3
1330 – 1500	Personnel	Classroom 4
1500 – 1530	Break	
1530 – 1700	Technical Society/Industry II	Classroom 4
	<i>Service Caucuses</i>	
1530 – 1700	FAA	Room 10A
1530 – 1700	DHS	Room 10B
1530 – 1700	VHA	Classroom 3

Friday, 19 April

0830 – 1000	Training II	Room 10A
0830 – 1000	Sustained Operations	Room 10B
	<i>End of Technical Program</i>	
1030 – 1200	Operating Board Post TAG Meeting	Room 10A

What is the DOD HFE TAG?

The Department of Defense Human Factors Engineering Technical Advisory Group (DOD HFE TAG) is composed of technical representatives from the Department of Defense (DoD), National Aeronautics and Space Administration (NASA), Federal Aviation Administration (FAA), Department of Homeland Security (DHS), and the Veterans Health Administration (VHA) with research and development responsibility in human factors and related disciplines.

There is no limitation on the number of uniform or civilian representatives from the above governmental entities. Representatives from organizations and activities with allied interests and technical experts in special topical areas are also invited to attend specific meetings.

Also participating in the HFE TAG are official representatives of technical societies or industry associations with a stated interest in human factors. These representatives must be credentialed by the HFE TAG before attending. Refer to the Technical Society/ Industry (TS/I) site for more information.

Origin

The Department of Defense Human Factors Engineering Technical Group was implemented by a Memorandum of Understanding signed by the Assistant Secretaries of the Services in November 1976 for the purpose of coordinating and communicating research and development at the working level among the services and other Government agencies involved in Human Factors Engineering. The first HFE TAG meeting convened on August 9–10, 1977 in Fort Washington, Pennsylvania.

Goals

The major goal of the HFE TAG is to provide a mechanism for the timely exchange of technical information in the development and application of human factors engineering by enhancing the coordination among Government agencies involved in HFE technology research, development, and application. The HFE TAG also assists, as required, in the preparation and coordination of tri-service documents, and sponsors in-depth technical interaction, which aids in identifying HFE technical issues and technology gaps.

Scope

Because of the diversity of the subject matter covered by the HFE discipline, the scope of the technical areas addressed by the HFE TAG is broad. For the purposes of the HFE TAG, HFE is defined as dealing with the concepts, data, methodologies and procedures which are relevant to the development, operation and maintenance of hardware and software systems. The subject matter subsumes all technologies aimed at understanding and defining the capabilities of human operators and maintainers.

Composition

The Department of Defense Human Factors Engineering Technical Advisory Group (DOD HFE TAG) is composed of technical representatives from the Department of Defense (DoD), National Aeronautics and Space Administration (NASA), Federal Aviation Administration (FAA), Department of Homeland Security (DHS), and the Veterans Health Administration (VHA) with research and development responsibility in human factors and related disciplines.

TAG Proponent

Dr. James “Ben” Petro

Acting Director, Human Systems Directorate, Office of the Under Secretary of Defense for Research and Engineering/Director of Defense Research and Engineering (Research and Technologies) (OUSD(R&E)/DDRE(RT))

More Information

More information about the TAG, including details and presentations from previous meetings, is available at: <http://www.acq.osd.mil/rd/hptb/hfetag>

Any questions, concerns, or requirements can be directed to the 2019 TAG Chair Mr. John Plaga, Human Systems Integration Directorate, 711th Human Performance Wing, Wright-Patterson AFB, john.plaga@us.af.mil.

SESSION AGENDAS: WEDNESDAY

SubTAG: Mixed Reality I

Chairs: Marianne Paulsen, Patrick Violante

17 April 2019 | 0830 – 1000

Room 10A

0830 – 0840 **Welcome and SubTAG Introduction**

Marianne Paulsen

NUWC Keyport

0840 – 0905 **Evaluation of Training Effectiveness**

Matthew Pierce

Naval Air Warfare Center Training Systems Division

0905 – 0930 **Human-AI Interaction for Intelligent Squad Weapons**

Gabriella Larkin

Army Research Labs

0930 – 0955 **Shooting and Postural Stability in a VR Environment with Physical Motion**

LT Adam Biggs

USAF

SESSION AGENDAS: WEDNESDAY

SubTAG: Standardization I

Chairs: Daniel Wallace, Bob Copeland

17 April 2019 | 0830 – 1000

Room 10B

TBD – See bulletin boards.

SESSION AGENDAS: WEDNESDAY

SubTAG: Modeling and Simulation

Chairs: John Ramsay, Mihriban Whitmore, Alex Hoover

17 April 2019 | 0830-1000

Classroom 3

- 0830 – 0835 **Modeling and Simulation Introductions**
Dr. John Ramsay (*US Army, CCDC Soldier Center*), Dr. Mihriban Whitmore (*NASA*), Mr. Alex Hoover (*Department of Homeland Security*)
- 0835 – 0850 **Musculoskeletal Models of Parachute Landing Falls for Field Training Operations**
Mr. Connor Pyles
Johns Hopkins University Applied Physics Laboratory
- 0855 – 0910 **Lexicon of Mood: Ethical Implications for IA Design**
2LT Carrie Wasdyke, COL James Ness
United States Military Academy, West Point
- 0915 – 0930 **Squad Performance Model**
Mr. James DiGioia
Combat Capabilities Development Command Soldier Center
- 0935 – 0950 **Getting Serious About Credibility of Computational Models and Their Utility in Regulatory and OT&E Assessments**
Mr. John Rice
DOD HFE TAG Emeritus
- 0950 – 1000 **Modeling and Simulation SubTAG Business**
Dr. John Ramsay (*US Army, CCDC Soldier Center*), Dr. Mihriban Whitmore (*NASA*), Mr. Alex Hoover (*Department of Homeland Security*)

SESSION AGENDAS: WEDNESDAY

SubTAG: Test & Evaluation

Chairs: Darren Cole, Stephanie Nicholas

17 April 2019 | 0830 – 1000

Classroom 4

0830 – 0840	Introduction Mr. Darren Cole <i>USAF</i>
0840 – 0905	Assessment of Pilot Workload and Performance in Aircraft Systems Design Cycle Dr. Tom “MACH” Schnell <i>University of Iowa, Operator Performance Lab</i>
0905 – 0930	Pilot Training Next (PTN) – Evidence of Skill Transfer Dr. Heather Wojton, Dr. Daniel Porter <i>Institute for Defense Analysis</i>
0930 – 0955	Initial Validation of the Trust of Automated Systems Test (TOAST) Dr. Heather Wojton, Dr. Daniel Porter <i>Institute for Defense Analysis</i>
0955 – 1000	Closing Remarks Mr. Darren Cole <i>USAF</i>

SESSION AGENDAS: WEDNESDAY

SubTAG: HFE/HSI Management & Application I

Chairs: Chelsey Lawson, Vicki Ahlstrom

17 April 2019 | 1030 – 1200

Room 10B

1030 – 1040 **Welcome and SubTAG Business**

Chelsey Lawson

Naval Surface Warfare Center-Dahlgren Division

1040 – 1100 **Impact of Adaptive Agent Timing in Variable Inter-Arrival Time Environments**

1st Lt David Canzonetta

AFIT/ENV

1100 – 1120 **Intuitive Sonar Displays**

Dr. Dennis Folds

Lowell Scientific Enterprises

1120 – 1140 **Soldier Touch Points**

Ms. Dana Perriello

Picatunny Arsenal

1140 – 1200 **A Framework for Effective Inclusion of AI in Intelligence Analysis**

Mr. Stephen Dorton

Sonalysts, Inc.

SESSION AGENDAS: WEDNESDAY

SubTAG: Modeling and Simulation

Special Session

Model-Based Systems Engineering Panel

Chairs: John Ramsay, Mihriban Whitmore, Alex Hoover

17 April 2019 | 1030-1200

Classroom 3

1030 – 1200 Panel Presentation

“Model-Based Systems Engineering: A Unique Opportunity for the Human Systems Integration Community”

Panel Chair: COL (ret) Larry Shattuck

Panel Members: CAPT (ret) Ira Minor, Dr. Jim Pharmer, Mr. Jeff Markiewicz, Mrs. Cindy Whitehead, LtCol Matt Taranto

SESSION AGENDAS: WEDNESDAY

Trust in Autonomy Special Interest Group

Chairs: Lauren Reinerman-Jones, Daniel Barber

17 April 2019 | 1030 – 1200

Classroom 4

1030 - 1040	Opening Remarks Lauren Reinerman-Jones <i>UCF-IST</i>
1040-1105	Presentation - Building Kennedy: Working Towards Ambient Intelligence Assisting Combat Staff David Price (Presenter), Jeffrey Bennett, Jason H. Wong <i>Naval Information Warfare Center</i>
1105-1130	Presentation Lt David Canzonetta <i>Air Force Institute of Technology</i>
1130- 1155	Presentation – Transparency and Communication Patterns in Human-Robot Teaming Shan Lakhmani <i>US Army Research Laboratory</i>
1155-1200	Closing Remarks Lauren Reinerman-Jones <i>UCF-IST</i>

SESSION AGENDAS: WEDNESDAY

SubTAG: Safety, Survivability, and Health Hazards

Chair: Cindy Whitehead

17 April 2019 | 1330 – 1500

Room 10B

- | | |
|-------------|---|
| 1030 – 1035 | Welcome and Introduction
Cindy Whitehead
<i>NAVSEA O5H3</i> |
| 1035 – 1055 | Help Wanted: Ergonomist/Magician
Dr. Dan Mountjoy
<i>711th Human Performance Wing (AFRL)</i> |
| 1055 – 1115 | Exoskeleton Roadmap
CPT Cliff Johnson
<i>711th Human Performance Wing (AFRL)</i> |
| 1115 – 1135 | Ergonomics and Human Assistive Technologies at NUWC Keyport
Aaron Clark
<i>Naval Undersea Warfare Center Keyport</i> |
| 1135 – 1155 | Health Hazards and HSI Considerations for Joint Capabilities Integration and Development System (JCIDS) Process
MAJ Mike Hartenstine, Robert Booze
<i>U.S. Army Public Health Center</i> |
| 1155 – 1200 | SubTAG Business, Elect Co-Chair
Cindy Whitehead
<i>NAVSEA O5H3</i> |

SESSION AGENDAS: WEDNESDAY

SubTAG: Design: Tools and Techniques

Chairs: Chelsey Lawson and Gina Thomas

17 April 2019 | 1330-1500

Classroom 3

- | | |
|-------------|---|
| 1330 – 1340 | Welcome and SubTAG Business
Chelsey Lawson (<i>NSWC Dahlgren</i>), Gina Thomas (<i>711 HPW, USAF HSI</i>) |
| 1340 – 1400 | AMPED-UP
Mr. Patrick O’Neill
<i>USAF 711th HPW/HPIC</i> |
| 1400 – 1420 | ONR Decision Tools
Dr. Jason Wong
<i>SPAWAR Pacific</i> |
| 1420 – 1440 | Analytical Hierarchy Process
Mr. Christopher Plott
<i>Alion Science & Technology</i> |
| 1440 – 1500 | Human-Automation Function Allocation and Crew Configuration
Analysis for Future Vertical Lift
Mr. Scott Scheff
<i>HF Designworks, Inc.</i> |

SESSION AGENDAS: THURSDAY

SubTAG: Technical Society/Industry I

Chairs: Steve Merriman, Barbara Palmer, Frank Lacson

18 Apr 2019 | 0830 – 1000

Room 10A

0830 – 0900 **TS/I: Providing value to HFE TAG via Information Exchange**
Steve Merriman, Barbara Palmer, and Frank Lacson
TS/I SubTAG Co-Chairs

0900 – 0930 **Roundtable Discussion: Impact of “Rapid” Acquisition Policies**
TS/I Representatives

0930 – 1000 **HSI and DevOps: Lessons learned and opportunities for applying the “Three Ways” for non-traditional DoD Systems Acquisition**
Frank Lacson
AUSGAR Technologies

SESSION AGENDAS: THURSDAY

SubTAG: Standardization II

Chairs: Daniel Wallace, Bob Copeland

18 April 2019 | 0830 – 1000

Room 10B

TBD – See bulletin boards.

SESSION AGENDAS: THURSDAY

SubTAG: Healthcare

Chairs: Tandi Bagian, Jill Marion, and Mihriban Whitmore

18 April, 2019 | 0830 - 1000

Classroom 3

0830 – 0900 **Introduction, Considerations of Future Healthcare**

Tandi Bagian (*VA*), Jill Marion (*FDA*), Mihriban Whitmore (*NASA*)

0900 – 0920 **A Survey Study of Real Time Vital Signs Monitor System for Critical Care Air Transport Team (CCATT)**

Thomas Karathanos

U.S. Air Force School of Aerospace Medicine

0920 – 0940 **EXOSKELETONS: A Literature Review on Their Promise and Potential Ergonomic Risks**

Kevin Purcell

U.S. Army Public Health Center

0940 – 1030 **Discussion – Top Three Areas for Federal Collaboration and Strategies for Future Work**

Tandi Bagian

SESSION AGENDAS: THURSDAY

SubTAG: Extreme Environments

Chairs: Dawn Chandler and John Plaga

18 April 2019 | 0830-1000

Classroom 4

- 0830 – 0830 **Extreme Environments Introduction**
Dawn Chandler (*NSWC Dahlgren*), John Plaga (*711 HPW, USAF HSI*)
- 0830 – 0855 **Increase in Cerebral Blood Flow After a Single Hypoxic Hypobaric Exposure**
Dr. Paul M Sherman
711HPW/USAFSAM
- 0855 – 0920 **Diffusion Tensor Imaging of White Matter Integrity in Military Personnel Exposed to Chronic Hypobaria**
Dr. Paul M. Sherman
711HPW/USAFSAM
- 0920 – 0945 **Effective Combat Casualty Care Operations (ECCCHO): TCCC Card Redesigns & Patient Handoff Technology Constraints in Extreme Environments**
Dr. Camilla Knott
TiER1 Performance
- 0945 – 1000 **Extreme Environments SubTAG Business**
Dawn Chandler (*NSWC Dahlgren*), John Plaga (*711 HPW, USAF HSI*)

SESSION AGENDAS: THURSDAY

SubTAG: Cyber Security

Chairs: Marianne Paulsen, Patrick Violante

18 April 2019 | 1030 – 1200

Room 10A

1030 – 1035 **Welcome and SubTAG Introduction**

Marianne Paulsen
NUWC Keyport

1035 – 1050 **Thinking About Security Beyond Layer Seven**

Matthew Canham
UCF-IST

1050 – 1105 **Cognitive Factors of HFE That Drive Manpower, Personnel, and Training for Cybersecurity Operations**

Alex Hoover
Department of Homeland Security

1105 – 1120 **Assessing Cyber Situational Awareness of Military Operators: Literature Review and Applications**

Jason Wong
Naval Information Warfare Center

1050 – 1105 **Discussion: Humancentric Cybersecurity Engineering**

Marianne Paulsen
NUWC Keyport

1105 – 1110 Break

1110 – 1125 **Cybersecurity Protection Teams Across the Military Services (*Restricted to Government Only*)**

Rebecca Iden
Naval Information Warfare Center

1125 – 1130 **Discussion and Session Closeout**

Marianne Paulsen
NUWC Keyport

SESSION AGENDAS: THURSDAY

SubTAG: Standardization III

Chairs: Daniel Wallace, Bob Copeland

18 April 2019 | 1030 – 1200

Room 10B

TBD – See bulletin boards.

SESSION AGENDAS: THURSDAY

SubTAG: Cognitive Readiness

Chairs: Kellie Turner, Anne Cybenko

18 April 2019 | 1030-1200

Classroom 3

1030 – 1045 **Cognitive Operations Gear (COG) Pack™: Developing a Domain Flexible Software Architecture to Determine Cognitive State**

Mr. Allen W. Dukes, Scott J. Duberstein, Justin R. Estep
711 HPW/RHCPA

1045 – 1100 **WiGL's 21st Century Smart Power Innovation**

Dr. Ahmad Glover and Mr. Cherif Chibane
G38 Consulting, LLC

1100 – 1115 **Effect of Performing a Cognitive Task on EEG Gait-Related Spectral Perturbations**

Mr. Mohammad J. Alam¹, Cortney Bradford², and Dr. Jamie R. Lukos¹
¹Naval Information Warfare Center, ²Army Research Lab

1115 – 1130 **Community-Wide Performance Measurement, Analytics & Data Management**

Dr. Mitch Tindall
Naval Air Warfare Center Training Systems Division

1130 – 1145 **Early Definition of Training: Speed to the Fleet**

Ms. Tawne Frick and Dr. Emily Anania
Naval Air Warfare Center Training Systems Division

1145 – 1200 **Cognitive Readiness SubTAG Business**

Ms. Kellie Turner and Dr. Anne Cybenko
711 HPW/RHXM

SESSION AGENDAS: THURSDAY

SubTAG: Mixed Reality II

Chairs: Marianne Paulsen, Patrick Violante

18 April 2019 | 1330 – 1500

Room 10A

1330 – 1340 **Welcome and SubTAG Introduction**

Marianne Paulsen

NUWC Keyport

1340 – 1405 **Augmented Ship Transits for Improved Decision Making (ASTRID)**

Amelia Kracinovich

Naval Information Warfare Center

1405 – 1430 **Supporting a Rapidly Advancing Industry: Ensuring XR Utility and Usability Through Software Development, HF Research, and Novel Applications**

Caroline Kingsley

Charles River Analytics

1430 – 1455 **Auditory Information Design for Virtual Reality (VR) and Mixed Reality (MxR) Systems**

Dennis Folds

Lowell Scientific Enterprises

1455 – 1500 **Session Closeout**

Marianne Paulsen

NUWC Keyport

SESSION AGENDAS: THURSDAY

SubTAG: HFE/HSI Management & Application II

Chairs: Chelsey Lawson, Vicki Ahlstrom

18 April 2019 | 1330 – 1500

Room 10B

1330 – 1340 **Welcome and SubTAG Business**
Chelsey Lawson
Naval Surface Warfare Center-Dahlgren Division

1340 – 1410 **Emergent SAE Standards in the HSI Area**
Mr. Steve Merriman (*SCMerriman Consulting, LLC*), Mr. Frank Lacson
(*AUSGAR Technologies*)

1410 – 1440 **Organizational Drift**
Mr. Tim Ratliff Sr.
Sayers and Associates Corporation

1440 – 1500 **SubTAG Business and Discussion**
Chelsey Lawson
Naval Surface Warfare Center-Dahlgren Division

SESSION AGENDAS: THURSDAY

SubTAG: Training I

Chair: Adam Biggs

18 April 2019 | 1330 - 1500

Classroom A

1330 – 1335 Welcoming Remarks and Speaker Introduction

Chair: Adam Biggs

1335 – 1400 Development of Quantitative Performance Metrics for the Biomechanical Assessment of the Parachute Landing Fall

Eyal Bar-Kochba, Connor Pyles, Leah Strohsnitter, John Clark, Quang Luong, Catherine Carneal, John Ramsay, Samuel Corner
Johns Hopkins University and U.S. Army CCDC

1400 – 1425 Marksmanship Asymptotic Performance and Learning Curves

Andrew D. Johnson, Jonathan W. Sagan, Grant J. Roush, M. Bernadette McCann, Kayelin Tiggs, Michael D. Reddix, Micah J. Kinney, R. Michael Hands

Leidos and Naval Medical Research Unit Dayton

1425 – 1450 Generalized Training for Visual Search

Michelle R Kramer, Courtney L Porfido, Patrick H Cox, Dwight J Kravitz, Stephen R Mitroff

George Washington University

1450 – 1500 Discussion and Closing Remarks

Chair: Adam Biggs

SESSION AGENDAS: THURSDAY

SubTAG: Personnel

Chairs: James F. Johnson and LT Michael Natali, USN

18 April 2019 | 1330-1500

Classroom B

- | | |
|-------------|--|
| 1330 – 1340 | Personnel Selection and Classification: Introduction & Business
James F. Johnson, LT Michael Natali
<i>USN</i> |
| 1340 – 1400 | Assessing Person-Job Fit for Careers in Remotely Piloted Aircraft Sensor Operators
Angela Clark ¹ , Laura G. Barron ¹ , Thomas R. Carretta ² , and James F. Johnson ¹
¹ <i>HQ Air Force Personnel Center</i> / ² <i>Air Force Research Laboratory</i> |
| 1400 – 1420 | Enhancing Enlisted Personnel Management with Non-Cognitive Measures
Cristina Kirkendall
<i>U.S. Army Research Institute</i> |
| 1420 – 1440 | Correlates of Preference for a UAS Pilot Career
Mark R. Rose, John D. Trent, and James F. Johnson
<i>HQ Air Force Personnel Center</i> |
| 1440 – 1500 | Validation of the Adaptive Vocational Interest Diagnostic (AVID)
Christopher D. Nye ^{1,2} , Cristina Kirkendall ³ , James Rounds ^{4,2} , Fritz Drasgow ^{4,2} ,
Oleksandr S. Chernyshenko ^{5,2} , Stephen Stark ^{6,2}
¹ <i>Michigan State University</i> / ² <i>Drasgow Consulting Group</i> / ³ <i>U.S. Army Research Institute</i> / ⁴ <i>University of Illinois</i> / ⁵ <i>Nanyang Technological University</i> / ⁶ <i>University of South Florida</i> |

SESSION AGENDAS: THURSDAY

SubTAG: Technical Society/Industry II

Chairs: Steve Merriman, Barbara Palmer, Frank Lacson

18 Apr 2019 | 1530 – 1700

Classroom 4

1530 – 1600 **Roundtable Discussion: Tech Society News**

TS/I Representatives

1600 – 1630 **TS/I Business: Charter, Membership, HFE Hot Issues list**

Steve Merriman, Barbara Palmer, Frank Lacson

TS/I SubTAG Co-Chairs

1630 – 1700 **TS/I Potpourri: Standards Implementation, Strategic Planning**

TS/I Representatives

SESSION AGENDAS: FRIDAY

SubTAG: Training II

Chair: Adam Biggs

19 April 2019 | 0830 - 1000

Room 10A

- 0830 – 0835 **Welcoming Remarks and Speaker Introduction**
Chair: Adam Biggs
- 0835 – 0855 **Improving Training Effectiveness with 2- and 3-Dimensional Visualizations: Doctrine Statement Creation**
Ms. Megan Kozub, Ms. Teeya Roche, Mr. William Wagner Jr., Dr. Elizabet Haro
Naval Surface Warfare Center Dahlgren Division (NSWCDD)
- 0855 – 0915 **Novel Marksmanship Training for Close Combat**
Adam Biggs
Naval Medical Research Unit Dayton
- 0915 – 0935 **AWARE: Anti-air Warfare Awareness and Readiness Environment**
Jordan Haggit, Ryan Meyer, Rod Ford, Dan Roseman, Anna Grome, Andrew Stewart, Mac Clenney
TiER1 Performance Solutions
- 0935 – 0955 **Attentional Trainer to Improve Control of Unmanned Systems (ATTICUS)**
Angie Sebok
TiER1 Performance Solutions
- 0955 – 1000 **Closing Remarks**
Chair: Adam Biggs

SESSION AGENDAS: FRIDAY

SubTAG: Sustained Operations

Chairs: Thomas E. Nesthus, Anthony T. Thomas

19 April 2019 | 0830 – 1000

Room 10B

0830 – 0840 SUSOPS Introduction and Business

Thomas E. Nesthus

FAA, Civil Aerospace Medical Institute

0840 – 0900 Sustained Operations Research at the Naval Aeromedical Research Unit Dayton

J. Lynn Caldwell, Richard Arnold

Naval Medical Research Unit Dayton

0900 – 0920 Genetic Landscape of Neurobehavioral Resiliency and the Ability of Caffeine to Rescue Performance Under Repeated Sleep Loss

Allison Brager

Walter Reed Army Institute of Research

0920 – 0940 Personalized Caffeine Recommendations for Enhancing Alertness During Sleep Loss

Jaques Reifman

USAMRMC/TATRC/BHSAI

0940 – 1000 NASA AMES Fatigue Countermeasures Laboratory

Erin Flynn-Evans

NASA Ames Research Center