Test Instrumentation Workshop

Pre-Program Agenda

Monday, May 13

2:00 PM – 5:00 PM   Registration Desk Open

Tuesday, May 14

8:00 AM – 5:00 PM   Exhibitors Set-up

8:00 AM – 12:00 PM   Hands-on-Lab Set-up

1:00 PM – 5:00 PM   Hands-on-Lab Exercise Open

8:00 AM – 5:00 PM   Pre-workshop Tutorials – see all the details – separate registration a must.

Program Agenda (4/23/24)

Wednesday, May 15

8:00 AM - 8:10 AM   Opening Ceremony

National Anthem, performed by **Kerry O'Malley** *by video*

8:10 AM - 8:20 AM   ITEA Welcome

Mark Phillips, ITEA Chairman

8:20 AM - 8:30 AM   Welcome

Dr. Jean Paul "JP" Santos, TIW Program Chair, NAWC-WD Point Mugu, Airborne Instrumentation Systems Department

8:30 AM - 9:15 AM   Keynote Speaker

Dan Osburn, Chairman, EXCOM Range Commanders Council and Executive Director, 412th TW (Edwards AFB)

9:15 AM - 10:00 AM   Keynote Speaker

George Rumford (SES), Director, Test Resource Management Center

10:00AM - 10:05 AM   Announcement of Technical Tracks

Scott Kujiraoka, TIW Technical Program Chair, GBL Systems (NAWC-WD Point Mugu)

10:05AM - 10:30 AM   Break with Exhibitors

10:30 AM – 12:30 PM Technical Tracks

TRACK 1 Telemetry and Relay

Track Lead: **Mike VanMeter**, NAVAIR Ranges SRF Lead, NAVAIR Ranges (PAX River)

10:30 – 11:00 BOA DCS - Supporting Beyond Line-of- Sight Data Collection, **Patrick Freemyers**, NSWC Dahlgren BOA DCS Lead and **Chris Patscheck**, Raven Defense

11:00 – 11:30 BLOS Capabilities for Flight Test**, Jason Countryman**, US Navy

11:30 – 12:00 STAR Self-Interference Cancellation for TM, **Kamal Bhakta,** US Navy

12:00 – 12:30 5G Cellular Telemetry Developments, **Robert Ziegler**, Peraton Labs

TRACK 2 Interoperability of Ranges

Track Lead: **Doug Nelson**, Sr. Combat Systems Engineer, Teknicare

10:30 – 11:00 MOSAIC Amphibious Test Range Overview, **Kevin Percey**, Redstone Test Center

11:00 – 11:30 Federated Resources & Analytics Mission Environment (FRAME) for the "Range of the Future" **Sunil Samtani**, Altio Labs

11:30 – 12:00 Technology Maturation Projects – Flight Research Return on Investment (ROI), **Benjamin Tomlinson**, NASA

12:00 – 12:30 To Be Announced

TRACK 3 Tracking Radar & TSPI Systems

Track Lead: **Alvia Sandberg**, Telemetry Engineer, Redstone Test Center

10:30- 11:00 Hybrid Tracking System for GPS Denied Environments (HYTS) Overview, **Steve Meyer NAWC-WD China Lake, Gary Glazner, Alvia Sandberg**, and **Scott Kujiraoka** GBL Systems

11:00 – 11:30 High Accuracy TSPI Field Test Results, **Benjamin Kupferschmidt**, Curtiss-Wright

11:30 – 12:00 5G based Positioning and Sensing for T&E Environments, **Achilles Kogiantis**, Altio Labs

12:00 – 12:30 To Be Announced

TRACK 4 Flight Termination

Track Lead: **Russ Fielder**, Sr. System Engineer, SATECH (NAWCWD-China Lake)

10:30 – 11:00 Water-proofed Microphone Flight Test Results, **Sid Jones**, Naval Air Warfare Center Aircraft Instrumentation Division

11:00 – 11:30 Application of Li-Ion Batteries, LDPC, and Distributed Design Capabilities in Flight Termination, **Jonathan Wright**, Redstone Test Center/Army Test and Evaluation Command

11:30 – 12:00	Flight Test Demonstration and Sensors Validation of Fiber Optics Sensing System (FOSS) on USAF T-38C, **Hon Chan**, NASA Armstrong Flight Research Center
12:00 – 12:30	To Be Announced

TRACK 5 Spectrum Usage I

Track Lead: **Bruce Johnson**, Chief Engineer, NAWCAD-Pax River

10:30 – 11:00	Spectrum Policy Report, **William Keane**, Duane Morris LLP
11:00 – 11:30	AWS-3 2025-2110 MHz Sharing Lessons Learned, **Charles (Ed) Coyle**, Defense Information Systems Agency, PEO Spectrum
11:30 – 12:00	Spectrum Sensors Use in a Shared Environment, **Frederick Howard**, PEO Spectrum
12:00 – 12:30	ATR's use of Commercial Services for airborne Telemetry Re-Radiation, **Dennis Normyle**, NAWC-AD Pax River

12:30 PM – 1:30 PM	Lunch with Exhibitors
1:30 PM – 3:30 PM	Hands-on-Lab running concurrently.
1:30PM – 3:30 PM	Technical Tracks

TRACK 6 Spectrum Usage II

Track Lead: **Tim Chalfant** Engineering Consultant, TRMC (GMRE, Inc.)

1:30 – 2:00	Spectrum Usage Measurement and Deconfliction, **Phiroz Madon**, Peraton Labs
2:00 – 2:30	Orchestrator and Distributed Integrator (ORDER) – Leveraging Open Architectures for AI/ML Adaptive Orchestration in Dynamic Spectrum Environments, **Andrew Portune**, Peraton Labs
2:30 – 3:00	Spectrum Data Analytics, **Anthony Triolo**, Altio Labs
3:00 – 3:30	Weaver Architecture, **Ricardo Barreto**, US Navy

TRACK 7 Constrained RF Environment

Track Lead: **Max Apalboym**, Chief Engineer, NAWCWD-Point Mugu

1:30 – 2:00	Parametric Devices in Front-End Communications Systems, **Sean Chen**, UCLA
2:00 – 2:30	Using Filters to Help Mitigate Near Term Radio Frequency Interference (RFI), **Steven Warner**, NAWCWD
2:30 – 3:00	Mitigating RF Blackout with Mu-Negative Metamaterial, **Evan Mouchard**, Airborne Instrumentation Division, Point Mugu NAWCWD
3:00 – 3:30	X-59 Telemetry Data Processing at NASA AFRC, **Bruce Lipe**, NASA

TRACK 8 Development of Future BLOS Skillset

Track Lead: **Athen Pham**, RF Engineer, NAWC WD-Point Mugu

1:30 – 2:00   Telemetry Receive/Record & Re-Radiation Pod, **Bruce Johnson**, Aircraft Instrumentation Division Prototyping, Instrumentation and Experimentation Dept. NAWCAD

2:00 – 2:30   Designing for Beyond Line of Sight in RF Systems, **Dr. Jean Paul "JP" Santos**, NAWC-WD – Airborne Instrumentation Systems Dept.

2:30 – 3:00   Lessons Learned in the Development of BLOS TM Systems, **Scott Kujiraoka**, GBL Systems

3:00 – 3:30   Noise Figure Testing of Active Directly Matched HF/VHF Antenna Receiver, **Prof. Yuanxun Ethan Wang**, UCLA

TRACK 9   Cybersecurity

Track Lead: **Jason Schalow**, 412th Communications Squadron; Edwards, AFB

1:30 – 2:00   Spanning the Gap: Overcoming Cybersecurity Challenges with Managing Testing Data in the Cloud, **Jeff Kalibjian**, Peraton Labs

2:00 – 2:30   Defensive AI: Leveraging Artificial Intelligence to Combat Cybersecurity Threats, **Jason Schalow**

2:30 – 3:00   Time Series Anomaly Detection for Network Security, **Payton Rudnick**, 412th Communications Squadron, Edwards AFB

3:00 – 3:30   To Be Announced

3:30 PM – 3:45 PM   Stretch with Exhibitors

3:45PM - 5:15PM   **Panel 1 Digital Engineering through the Lens of T&E**

Moderator: **Will Harrell**, Digital Engineer Lead, TRMC

Panel Members: **Brian Kelly**, Chief Data and Analytics Officer Army Test & Evaluation Command, ATEC

Kevin Percey, Program Manager, MOSAIC, Redstone Test Center,

Amber Willet, Branch Head, Naval Test Wing Atlantic, Test & Evaluation Data Division

Kyle Snow, Digital Engineering Lead, 96th Test Wing, Eglin AFB

Jeff Tolleson, Vice President, Peopletec

5:15 PM - 7:00 PM   **RECEPTION HOSTED BY**

RAVEN DEFENSE

Thursday, May 16

8:00AM - 8:10AM	Reconvene

Dr. Jean Paul "JP" Santos, TIW Program Chair, NAWC-WD Point Mugu, Airborne Instrumentation Systems Department

8:10AM - 8:45AM	Featured Speaker

Thomas C. Dowd (SES), Director, Ranges/Targets Operations

8:45AM - 9:25AM	Featured Speaker

Col US Army Ret. Joel Babbitt, Vice President Army Programs, Viasat

"Back Yard Testing, Front Yard Testing, a PM's Perspective on Test"

9:25AM - 10:00AM	Featured Speaker

Vincent M. Liddiard (SES), Executive Director, White Sands Missile Range

10:00 AM - 10:30 AM	Break with Exhibitors
10:30 AM – 3:30 PM	Hands-on-Lab Exercise running concurrently
10:30 AM - 12:00PM	**Panel 2 "*Plant 42, Nothing Happens Here*"**

Moderator: **Dr. David G. Smith**, Director, Air Force Production and Flight Test Facility, Plant 42

Mission briefing, the AF Industrial Mission; Background Support Delivering B-21 to Test; Essential Communication Capabilities Supporting HALE Programs; and Taking care of people, taking care of mission.

12:00 PM – 1:00 PM	Lunch with Exhibitors
1:00 PM – 3:00 PM	Technical Tracks

TRACK 10   Long Range Fires

Track Lead: **Ben Johnson**, Chief Engineer, NAWCWD-China Lake

1:00 – 1:30	Pacific Hypersonic Testing, **Richard Burr**, Director, Point Mugu Sea Range
1:30 – 2:00	Empirical Measurement of Flight Test Video Encoding Quality, **Daniel Crump**, Curtiss-Wright
2:00 – 2:30	Developing Wireless Sensing Technology aboard NASA Experimental Aircrafts, **John Rudy** and **Mark Hagiwara**, NASA
2:30 – 3:00	Wireless Airborne Instrumentation, **Benjamin Baird**, 896th Test Support Squadron, Eglin AFB

TRACK 11 AI / ML Data Analytics

Track Lead: **Thomas Grace**, Electrical Engineer, NAWCAD - PAX River

1:00 – 1:30	Evaluating Radiation Portal Monitor System Performance Using Modeling and Simulation, **John Blackadar**, Department of Homeland Security, CWMD SSD

1:30 – 2:00	How to Instantiate a Neural Network on an FPGA – Methodology and Results, **Scott Wolfson**, U.S. Army Redstone Test Center
2:00 – 2:30	Harnessing the Power of T&E: Pioneering High-Quality Data for AI/ML within the DoD, **Blaine Perry**, US Army Redstone Test Center
2:30 – 3:00	STEPS: Standardized Test Execution and Planning Solution, **Paul Farmer**, Georgia Tech Research Institute

TRACK 12 Live Virtual Constructive

Track Lead: **Shannon Wigent**, President, Laulima Systems

1:00 – 1:30	The MDL Metadata Language, **Ben Kupferschmidt**, Curtiss-Wright
1:30 – 2:00	RTC Approach to Persistent Integrated Developmental Test (RAPID), **Derek Green**, US Army Redstone Test Center
2:00 – 2:30	Electronic Warfare M&S in support of T&E, and a case for AI/ML for Predicting and Evaluating Non-Kinetic Effects, **Matthew Goldsbury** and **Paul D'Urbano**, CTI
2:30 – 3:00	Point Mugu Sea Range LVC Efforts, **Richard Burr**, Director, Point Mugu Sea Range

TRACK 13 Phased Array Antenna Special Session (CUI)

Track Lead: **Tom Young**, Engineering Consultant, TRMC

1:00 – 1:30	SkyRange Capability Overview, **Tyler P. Neale**, TRMC High Speed Systems Test, AEDC/TDH
1:30 – 2:00	Telemetry Signal Acquisition and Tracking Beyond the Edge, **Anand Kelkar**, CDSI
2:00 – 2:30	Advances in Phased Array Antennas for Telemetry, **Satya Ponnaluri**, Blue Halo
2:30 – 3:00	Raven Advanced Phased-array Telemetry Resource (RAPTR), **Chris Patscheck**, Raven Defense

3:00 PM – 3:30 PM	Break with Exhibitors
3:30 PM – 5:00 PM	Featured Speaker
	Ryan Norman, Chief Data Officer and Executive Manager, Joint Mission Environments, Test Resource Management Center Test Resource Management Center
	Modernization and Extension of Test Ranges and a Summary of the Technical Sessions
5:00 PM	Program Concludes