

**Instrumentation in a
Constrained Environment**

**May 22 – 25, 2023**Tuscany Suites & Conference Center | Las Vegas, NV

***The Premier Global Association for Test and Evaluation Professionals***

* Full-day and Half-day Pre-Workshop Tutorials: *Earn Continuing Professional Education Credits (CPEs)*
* Keynote Speaker & Panel Discussions:  *Select Senior Military, Civilian and Private Industry Leaders will present current and developing concepts in instrumentation and future needs.*
* Technical Sessions: *Sessions addressing Cyber, Digital Engineering, AI/ML, Electronic Warfare and more!*
* Exhibits: *Increase your visibility, network with key players, and show your support and commitment to the industry and community!*
* Networking: *Make professional connections to grow your business network and seek out partnerships*
* *New Hands On Lab concept will be showcased to bring instrumentation concepts closeup and personal.*

**THANK YOU TO OUR SPONSORS!**

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### **Platinum**



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**Schedule**

**EVENTS DATE TIME**

**Registration**  Monday, May 22 10:00am–5:00pm

Tuesday - Thursday 7:00am–5:00pm

**Tutorials** Monday, May 22 1:00pm–5:00pm Tuesday, May 23 8:00am–12:00pm and

 8:00am–5:00pm

*(See next page for descriptions)*

**Exhibit Hours** Wednesday, May 24 9:00am–5:00pm

Thursday, May 25 9:00am–4:00pm

**Technical Sessions**  Wednesday, May 24 10:30am–12:30pm

Thursday, May 25 10:30am–12:30pm/

 1:30pm–3:30pm

**Special Events**

Hands on Lab Tuesday, May 23 1:00pm–5:00pm

Opening Ceremony & Keynote Wednesday, May 24 8:00am–10:00am

Panel: Digital Engineering in T&E Wednesday, May 24 3:30pm–5:00pm

Reception in the Exhibit Hall Wednesday, May 24 5:00pm–6:30pm

Hands on Lab Wednesday, May 24 1:30pm–3:30pm

Hands on Lab Thursday, May 25 10:00am–12:30pm

Featured Speakers Thursday, May 25 8:00am–10:00am/

 4:00pm–5:30pm

 **Hands on Lab Experience**

The Hands on Lab (HOL) is a holistic journey through the entire flight test process. HOL represents seven different phases of flight test. Each of the phases is supported by a government Subject Matter Expert (SME) and partnering industry vendors. The SME provides an educational overview and the partnering industry vendors share a Hands-On experience with technical insight related to the specific phase they are representing. This experience was designed to allow attendees an opportunity to follow the flight test process through visualization of the signals, sampling of the data, interaction with the processes, understanding how changes in the test article translate to results in the test data, and how system formats are designed to be standardized for improved test interoperability, providing the integration of different vendors to achieve Development Test & Evaluation (DT&E) success.

**Pre-Workshop Tutorials**

Tutorials are a separate fee from the workshop. The fee to attend a tutorial is $300 for one 4-hour tutorial,  $500 for two 1/2 days, $500 for one FULL day or $700  for 1 full day & 1/2 day.

## Monday, May 22 – Afternoon Tutorials 1:00 p.m. to 5:00 p.m.

**5G NR Specification and System Engineering Aspects***Achilles Kogiantis, PhD, and Ankur Sharma, Peraton Labs*

5G wireless cellular networks, based on the 3GPP standard, are being widely deployed in the United States and the rest of the world. 5G is expected to increasingly dominate the worldwide cellular communication market due to its flexibility, wide adoption, and an ever-expanding supplier global ecosystem. The flexible 5G architecture allows multiple networks widely differing in physical, reliability and power characteristics to be supported over a common infrastructure. This flexibility will be particularly useful to Testing Ranges where subnetworks simultaneously supporting high-bandwidth terrestrial communications, low-power sensors and broadband airborne telemetry systems can be flexibly implemented over a common 5G platform. This tutorial is intended to familiarize the Testing Range professionals with a) the key features of the 5G standards specifications – the basic vision, network architecture, the physical and MAC-layer characteristics of the air-interface, and b) the 5G system engineering aspects of deploying a new private network, dimensioning and planning, and its performance assessment. The first half of the tutorial will discuss the 5G standards specifications, while the second half will cover the 5G systems engineering aspects.

**Electro-Optics/InfraRed Fundamentals***Vu Hoang, 775TS/ENVD*

This tutorial is designed to provide an overview of the general concepts and principles of electro-optics and infrared (EO/IR) technology. The tutorial will cover essential topics that are relevant for flight test applications, including electromagnetic waves, optics and optical concepts, resolution, detecting/sampling light, human eye, image processing, pointing, tracking, control and electronics, lasers, and radar vs. EO/IR comparison.

The tutorial will begin with an introduction to EO/IR and its significance in flight test applications before delving into the other topics mentioned above. By the end of the tutorial, the learners will have a broad understanding of EO/IR technology and its relevance in flight test applications. They will also gain insight into the different components and principles that are involved in EO/IR systems, enabling them to make informed decisions when working with such systems.

**Fundamentals of Aeronautical Telemetry Ground Stations**

*Mark McWhorter, V.P. of Sales & Marketing, Lumistar Inc.*

This short-course is designed to provide a fundamental high-level overview of aeronautical flight telemetry ground stations, followed by a brief presentation of actual ground station hardware. The student will see how ground stations are set up to operate in real time, including the many basic parameters required to successfully receiver telemetry data at the ground station. Ideas related to Mission Planning and techniques for insuring System Maintenance and Readiness will be offered.

**IRIG 106-17 Chapter 7 Packet Telemetry Downlink Basis and Implementation Fundamentals***Johnny Pappas, Safran Data Systems, Inc.*

This course will focus on presenting information to establish a basic understanding of the 2017 release of the IRIG 106, Chapter 7, Packet Telemetry Downlink Standard. It will also focus on the implementation of airborne and ground system hardware and methods to handle IRIG 106, Chapter 7, Packet Telemetry data. The presentation will address the implementation of special features necessary to support legacy RF Transmission, data recording, RF Receiving, Ground Reproduction, and Chapter 10 data processing methods.

**Laser System Test & Evaluation Atmospheric Challenges**

*Douglas H. Nelson, Senior Combat Systems Engineer, Teknicare, Inc.
& Mark Stevens, Systems Engineering Department, NPS*

An introduction to the challenges of testing and evaluating Laser Systems in various atmospheric conditions. An overview of the basic physics and terminology of these systems is included. The unique effects of Laser Systems are also discussed to provide a foundation for test objectives. Test and evaluation needs for Laser Systems including required diagnostic beam propagation and atmospheric measurements are briefly examined.

**Phased Array Systems for Telemetry Applications***Jerrett Eastburg, Raven Defense*

This short course will cover modern phased array design concepts and trades as they relate to telemetry systems and other applications. This course will cover the basics of array design along with the specific performance parameters associated with phased arrays. With a focus on applications and design concepts, the course will cover analog beamforming, digital beamforming, and true time delay along with the associated pros and cons for each technique. This course will include a design example in which design trades and their implications will be discussed in detail. At the conclusion of the course, the student will be equipped with an understanding of this technology and how it can be applied to meet future communication and telemetry needs. The course is intended to spark excitement and intrigue for entry-level to mid-level engineering students and professionals.

**Troubleshooting Ethernet Data with Wireshark**

*Paul Ferrill, ATAC*

The “Troubleshooting Ethernet Data with Wireshark” tutorial will use real-world aircraft data to demonstrate how to use the open source program Wireshark to both view data and troubleshoot problems. The class will include presentation and hands-on usage of Wireshark to look at data as if you were connected to the Ethernet network on an airplane and if you were connected to an IRIG 106 Chapter 10 recorder broadcasting data over UDP. We’ll start out with a brief overview of Ethernet fundamentals and then get right on to using Wireshark.

## Tuesday, May 23 – Full Day Tutorials 8:00 a.m. to 5:00 p.m.

**Basics of Aircraft Instrumentation Systems**

*Jim Alich, 812 Aircraft Instrumentation Test Squadron (AITS) 412th TW*

This course provides an introduction to the full measurement chain, from sensor to graphic display. It also covers modern airborne data acquisition, recording, RF telemetry, and data reduction/processing systems. This course is intended for scientists, engineers, special instrumentation technicians, and anyone whose work depends on the output from measurement systems to support their mission.

**Test Foundations for Flight Test***Jessica Peterson, Technical Director 412th Operations Group/
Assistant Professor USAF TPS*

The Test Foundations curriculum is designed to equip students with an introduction to the knowledge and skills necessary to be successful flight testers. The curriculum introduces the basic “vocabulary” of the various phases of a flight test program, from program initiation through final reporting. The curriculum begins with a basic Systems Engineering problem decomposition approach applied to various flight test programs. Next the various stages of the lifecycle of a normal test program are decomposed into the subparts of Planning, Execution, Analysis, and Reporting (PEAR). Planning: the basic development strategy for test planning with specific and achievable objectives and the concepts of hazard and risk identification in safety planning will be introduced. Execution: the fundamentals of flight test control and conduct will be presented with an emphasis on the elements required for safe and efficient test control and conduct. Consideration for test execution will include required personnel, mission preparation, test card generation, communications plans, execution techniques, and post-test debrief. Finally, basic analysis methods and approaches to presenting technical results will be presented. The course will culminate with an in-class exercise to apply the Test Foundations content to test vignettes based on real-world scenarios.

## Tuesday, May 23 – Morning Tutorials 8:00 a.m. to 12:00 p.m.

**Basic Overview of Telemetry***Gary Thom, Delta Information Systems, Inc.*

This course provides a very high level introduction of basic telemetry concepts and components. The course begins with onboard vehicle under test discussing sensors, signal conditioning, commutation, modulation and transmission. It continues on the ground with receivers, data distribution, decommutation, processing and display. The course includes additional concepts like IRIG 106 Chapter 10 and 11 recording and distribution formats as well as IRIG 106 Chapter 7 packet data over PCM.

**TRMC Solutions for Test and Training***Gene Hudgins, TRMC JMETC/TENA*

The Test and Training Enabling Architecture (TENA) was developed as a DoD CTEIP project to enable interoperability among ranges, facilities, and simulations in a timely and cost-efficient manner, as well as to foster reuse of range assets and future software systems. TENA provides for real-time software system interoperability, as well as interfaces to existing range assets, C4ISR systems, and simulations. TENA, selected for use in JMETC events, is well designed for its role in prototyping demonstrations and distributed testing.

Established in 2006 under the TRMC, JMETC provides readily-available connectivity to the Services’ distributed test capabilities and simulations. JMETC also provides connectivity for testing resources in the Defense industry and incorporation of distributed testing and leveraging of JMETC-provided capabilities by programs and users has repeatedly proven to reduce risk, cost, and schedule. JMETC is a distributed LVC testing capability developed to support the acquisition community during program development, developmental testing, operational testing, and interoperability certification, and to demonstrate Net-Ready Key Performance Parameters (KPP) requirements in a customer-specific Joint Mission Environment.

JMETC is the T&E enterprise network solution for secret testing, and uses a hybrid network architecture – the JMETC Secret Network (JSN), based on the SDREN. The JMETC MILS Network (JMN) is the T&E enterprise network solution for all classifications and cyber testing. JMETC provides readily available connectivity to the Services' distributed test capabilities and simulations, as well as industry test resources. JMETC is also aligned with JNTC integration solutions to foster test, training, and experimental collaboration.

TRMC Enterprise Big Data Analytics (BDA) and Knowledge Management (BDKM) has the capacity to improve acquisition efficiency, keep up with the rapid pace of acquisition technological advancement, ensure that effective weapon systems are delivered to warfighters at the speed of relevance, and enable T&E analysts across the acquisition lifecycle to make better and faster decisions using data that was previously inaccessible, or unusable. BDA is the application of advanced tools and techniques to help quickly process, visualize, understand, and report on data. JMETC has demonstrated that applying enterprise-distributed BDA tools and techniques to T&E leads to faster and more informed decision-making that reduces overall program cost and risk.

TRMC has been working with Joint Staff and Air Force JADC2 Cross-Functional Teams (CFTs) regarding JADC2 and Multi-Domain Operations (MDO), to inform them on TENA/JMETC and other TRMC capabilities that could be leveraged to support the emerging Joint Staff Joint Domain Environment (JDE). Additionally, TRMC has been engaged with Army Futures Command (AFC) throughout the year in a number of areas including assessing TENA/JMETC Support coupled with Big Data Analytics (BDA), expanding OSD TRMC collaboration and cooperation to other mission areas including, but not limited to, Cyber, BDA, Knowledge Management (KM), Machine Learning (ML), and Artificial Intelligence (AI).

This tutorial addresses using the well-established TENA and JMETC tools and capabilities combined with BDA tools and techniques to reduce risk in an often-uncertain environment; regularly saving ranges time and money in the process.

**Join us for the Hands on Lab today from 1:00-5:00pm**

The Hands on Lab (HOL) is a holistic journey through the entire flight test process. HOL represents seven different phases of flight test. Each of the phases is supported by a government Subject Matter Expert (SME) and partnering industry vendors. The SME provides an educational overview and the partnering industry vendors share a Hands-On experience with technical insight related to the specific phase they are representing. This experience was designed to allow attendees an opportunity to follow the flight test process through visualization of the signals, sampling of the data, interaction with the processes, understanding how changes in the test article translate to results in the test data, and how system formats are designed to be standardized for improved test interoperability, providing the integration of different vendors to achieve Development Test & Evaluation (DT&E) success.

## Wednesday, May 24 – Plenary Sessions, Technical Sessions, HOL & Exhibits

8:00 a.m. Opening Ceremony:

Presentation of Colors
National Anthem

Mr. Tim Morey – ITEA Chairman

8:15 a.m. Welcome:

Charles Garcia, ITEA Ambassador

8:30 a.m. Ms. Vernita Harris (SES) – Director, Electromagnetic Spectrum Enterprise Policy & Programs, Department of Defense Chief Information Officer

9:15 a.m. Mr. George Rumford (SES) – Director, Test Resource Management Center (TRMC)

**10:00 a.m. BREAK IN THE EXHIBIT HALL**

10:30 a.m. Technical Track Sessions

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| **Chair** | **Time** | **Title** | **Presenter(s)** |
| **Session 1: Cybersecurity** |
| **Command Post Technologies** | 10:30  | *Endpoint Cyber Tool Considerations in Constrained Environments* | Jeff Kalibjian, Peraton Labs |
| 11:00 | *Cybersecurity and the Rise of AI: Risks and Opportunities* | Jason Schalow, 412th Communications Squadron, Edwards AFB |
| 11:30  | *Technical Edge as a Tool for Cyber* | TBD |
| 12:00  | *Automated Cybersecurity Risk Management Framework (RMF) for DoD* | Steve Seiden, President, Acquired Data Solutions, Inc. |
| **Session 2: Leveraging Data Analytics/Machine Learning to Gain Efficiencies in T&E** |
| **Robert Poulson, 812 TSS** | 10:30  | *Predicting Flight Loads with a Deep Neural Network* | James Brownlow, 812 TSS/ENTR |
| 11:00 | *TBD* | TBD |
| 11:30  | *TBD* | TBD |
| 12:00  | *TBD* | TBD |
| **Session 3: Spectrum Limitations** |
| **TBD** | 10:30  | *5G Cellular Airborne Transceiver for AMT: Integration and Deployment Update* | Achilles Kogiantis, Peraton Labs |
| 11:00 | *Spectrum Sharing in Aeronautical Mobile Telemetry* | Mark Wigent, Laulima Systems |
| 11:30  | *Updated Status on the Ground Based Phased Array Telemetry Antenna (gPATMA) System* | Scott Kujiraoka, GBL Systems |
| 12:00  | *Spectrum Management and Geolocation in Complex RF Environments* | Jade Long & Jim Wargo, CRFS, Inc. |
| **Session 4: Aircraft Instrumentation** |
| **Larry (Joe) Dale, Director, 812th AITS/ENI** | 10:30  | *Network Telemetry Development at Edwards Air Force Base* | Mike Delaney, 812th AITS/ENIE |
| 11:00 | *TmNS Rascal Pod* | Grecia Roman and Clinton Mazone, 812th AITS/ENIE |
| 11:30  | *Packet Telemetry at Edwards AFB with IRIG 106 Chapter 7* | Mike Delaney, 812th AITS/ENIE |
| 12:00  | *Using TmNS to Request Recorded Data That Was Not Telemetered* | Rocco Docimo & Ben Kupferschmidt, Curtiss-Wright |

**12:30 p.m. LUNCH IN THE EXHIBIT HALL**

1:30 p.m.Hands on Lab

3:30 p.m. Digital Engineering in T&E moderated by Policarpio Soberanis, Engineering Manager, Northrop Grumman

*Panelists:*

* Jonathan Curry, Northrop Grumman
* Tamara Hambrick, Boeing - invited
* Hans Miller, Project Leader, OSD Programs, The MITRE Corporation
* James Sabino, Raytheon
* Dr. Armond Sinclair, L3 Harris

 **5:00 p.m. RECEPTION IN THE EXHIBIT HALL**

## Thursday, May 25 – Plenary Sessions, Technical Sessions, & Exhibits

8:00 a.m. Welcome and overview of the day’s events by Policarpio Soberanis – Workshop Chair

8:05 a.m. Dr. Eileen A. Bjorkman (SES) –  Executive Director, Air Force Test Center (AFTC)

8:45 a.m. Rick Quade (SES) – Deputy for Test and Evaluation, Assistant Secretary of the Navy and acting CHENG

9:25 a.m. Bradley Thomason – Director, Threat Systems Management Office (TSMO)

**10:00 a.m. BREAK IN THE EXHIBIT HALL**

10:00 a.m. Hands-On Lab. Last chance for this interactive journey. Lab will be open until 12:30pm.

10:30 a.m. Technical Track Sessions

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| **Chair** | **Time** | **Title** | **Presenter(s)** |
| **Session 5: Range Instrumentation** |
| **Doug Nelson, Teknicare** | 10:30  | *Eos - A New Approach to Telemetry Decommutation* |  Pearson Wade, 96 Range Control Squadron |
| 11:00 | *NetAcquire Advanced Correlating Source Selector (A-CSS) - A New Approach toBest Source Selection* | Madalyn Danielak, 96 Range Control Squadron/RNCEE |
| 11:30  | *Miniature High-Accuracy Time Space Position Information (TSPI) Data Acquisition* |  Ben Kupferschmidt, Curtiss-Wright |
| 12:00  | *Electronically Steerable Arrays for Range Applications* | Tres Thurston, Haigh-Farr |
| **Session 6: Electronic Warfare** |
| **Jeff Weisz, Global Power Fighters Combined Test Force** | 10:30  | *Improving the Capabilities of Cognitive Radar and EW Systems* | Bill Kardine, Rohde and Schwarz |
| 11:00 | *TBD* | TBD |
| 11:30  | *TBD* | TBD |
| 12:00  | *TBD* | TBD |
| **Session 7: Hypersonics** |
| **Ben Tomlinson, NASA** | 10:30  | *Pursuing the Digital Transformation of Large Scale Thermal Testing* | Winter Jackson, NASA |
| 11:00 | *Development of a Low SWaP Non-Contact Temperature Measurement System* | TBD, NASA |
| 11:30  | *Unique Requirements for a Hypersonic Telemetry System* | Paul Cook, Curtiss-Wright |
| 12:00  | *Sensors with Hypersonic Purposes or Aerial Remote Sensing* | TBD |
| **Session 8: Wireless Airborne Instrumentation** |
| **Chris Stewart, 896 TSS, Eglin AFB** | 10:30  | *Wireless Instrumentation System for Aircraft Testing* | Shiv Joshi, NextGen Aeronautics |
| 11:00 | *Airborne Instrumentation in a Time Constrained Environment* | Paul Cast, 896 TSS, USAF |
| 11:30  | *Wireless Airborne Instrumentation* | Benjamin Baird, 896 TSS, USAF |
| 12:00  | *Wireless Hub for Wireless Sensors* | Wendy Yang, NASA |

**12:30 p.m. LUNCH IN THE EXHIBIT HALL**

1:30 p.m. Technical Track Sessions

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| **Chair** | **Time** | **Title** | **Presenter(s)** |
| **Session 9: Instrumentation under PEO STRI** |
| **TBD** | 1:30  | *TBD* |  TBD |
| 2:00  | *TBD* | TBD |
| 2:30  | *TBD* | TBD |
| 3:00  | *TBD* | TBD  |
| **Session 10: Current /Future Secure Telemetry Directions \*\*CUI: US Citizen/CAC Required\*\*** |
| **Ron Pozmantier, 812 AITS/ENI** | 1:30  | *TBD* | TBD |
| 2:00  | *TBD* | TBD |
| 2:30  | *TBD* | TBD |
| 3:00  | *TBD* | TBD |
| **Session 11: Data Analytics** |
| **Jenny Green, KBR** | 1:30  | *Advances in Developing a Unified Post-Flight Data Analysis System*  | Dale Jones, Curtiss-Wright |
| 2:00  | *Optimizing PCM Telemetry Bandwidth by Performing Onboard FFTs* | Pat Quinn, Curtiss-Wright |
| 2:30  | *Providing Real Time Inter-Range Data Portability using a Unified Data Library* | Dr. Seth Harvey, Bluestaq, LLC & Rob Patterson, One Dev, LLC |
| 3:00  | *TBD* | TBD |
| **Session 12: Digital Engineering** |
| **Larry (Joe) Dale, Director, 812th Aircraft Instrumentation Test Squadron** | 1:30  | *Comparative Vacuum Monitoring Sensors as an introduction to Condition Based Maintenance Plus for the KC-46* | *Thomas A. O’Brien, 2d Lt USAF, Georgia Tech Research Institute* |
| 2:00  | *Digital Engineering 3D Scanned Models for Airborne Instrumentation* | *Joseph Lopez, 812th Airborne Instrumentation Test Squadron* |
| 2:30  | *Digital Engineering Innovation Approach for Airborne Instrumentation* | *Mike McAlister, 896TSS/RNMEF* |
| 3:00  | *Digital Twinning Process for T&E Telemetry Applications* | *Frank Cruz, 412th RANS/Applied Spectrum Technology Research Office (ASTRO)* |

**3:30 p.m. BREAK IN THE EXHIBIT HALL**

4:00 p.m. Charles Garcia – ITEA Ambassador

4:10 p.m. George Rumford – Director, Test Resource Management Center

5:30 p.m. Workshop Concludes

**Tuscany Suites & Conference Center**

***Event Location***

All events including tutorials, technical sessions, and exhibits, will occur on the hotel property. All events, including the opening ceremony and reception, will be clearly marked with signs. The Tuscany Suites is located at 255 East Flamingo Rd., Las Vegas, NV 89169.
Tel. 702-893-8933 / 1-877-887-2261

***Hotel Reservations***

****ITEA is pleased to offer a special below government per diem rate of $89 per night per night for Monday – Thursday. *Please specify that you will be attending the ITEA workshop when booking your reservation.*

**Room Block Cut-Off:** April 25, 2023

**Reservations via Web:** **Tuscany Reservation Link**

**Cancellations:** The hotel requires a 72-hour cancellation

notice prior to the reservation date. Late cancellations will

result in the first night’s stay being billed to your credit

card.

**Check-In/Check-Out:** Check-In time is 3:00pm and Check-out time is 11:00am.

**Internet:** Free WiFi throughout the hotel (includes conference space and sleeping rooms).

**Parking:** Free

**Extras:** Waived Resort Fee

**Registration Information**

**Registration includes two lunches, breaks, & Networking Reception.**

**\*\*** J**oin as a member and receive $150 off registration.**

**NOTE: Pre-Workshop Tutorials require a separate fee from the Workshop.**

**Regular Registration ends April 24**$745 - Regular Registration\*\*
$595 - ITEA Member / Government Employee / Active Duty Military

**Late Registration after April 24**$845 - Regular Registration\*\*$695 - ITEA Member / Government Employee / Active Duty Military

**Pre-Workshop Tutorials (requires a separate fee from the Workshop)**One ½ day – $300, Two ½ days – $500, One full day $500,  or one full day &  ½ day -$700

**Special Registrations**

* $180 – Plenary Speaker, Panel Chair, Session/Track Chair
* $395 – Panelist, Technical Session Presenter
* $395 – Early T&E Career Professional (less than 5 years of T&E experience) [**Download verification form here**](https://itea.org/wp-content/uploads/2021/04/Early-TE-Career-Professional-REG-verification-Form_NEW.pdf)
* $200 – Exhibitor booth staff (no access to technical program)
* $400 – One day only
* $50 – Full-Time Student (must present college ID at check-in)

[**REGISTER NOW**](https://itea.memberclicks.net/event-reg-tiw23)

SUBSTITUTION AND CANCELLATION POLICY: Substitutions are permitted. Refunds are not available within ten (10) days prior to the start of the event. Requests for cancellation submitted between ten (10) to 45 days prior to start date of the event will be subject to a $250 cancellation fee. Requests for cancellation greater than 45 days prior to the start date of the event will be subject to a $100 cancellation fee.