Join us for the 61st Annual ITC!

ITC 2026 Planning Guide

4-Day
In-Person Event!

ACCELERATING DEFENSE READINESS THROUGH INTELLIGENT TELEMETRY

October 26–29, 2026
Renaissance Phoenix Glendale | AZ

The world's most comprehensive telemetry event, featuring:

- **Education:** Dive deep with 19 specialized short courses and targeted, peer-reviewed technical sessions
- **Next-Gen Innovation:** Explore an expansive exhibit floor showcasing the latest advancements in radar and telemetry technology
- **Industry Leadership:** Gain critical insights from visionary keynote speakers and collaborative panel discussions shaping the future of Telemetry
- **Elite Networking:** Collaborate and share your technical expertise with the global telemetry community in a world-class venue.

Sponsored by the International Foundation for Telemetering

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www.telemetry.org

ITC: THE PREMIER TELEMETRY EDUCATION & TRAINING EVENT

Plan Your Time at ITC | 2026

No other venue provides the depth of telemetry industry coverage to be found at ITC 2026.

We are thrilled to welcome you to another dynamic week engineered for learning, collaboration, and driving the future of our industry. The excitement begins Monday evening with our signature Mix & Mingle Reception, the perfect opportunity to connect over great food, drinks, and entertainment before the technical program launches. On Tuesday morning, join us early for a continental breakfast and our Opening Session, where we will honor industry excellence with the ITC Best Paper Awards. Immediately following, Brigadier General Tyler Nick Hague, Assistant Deputy Chief of Space Operations for the U.S. Space Force, will deliver our opening keynote, exploring how telemetry is transforming into an "intelligent" strategic asset for space superiority. The momentum builds as we open our extensive exhibition displays across two halls, followed that afternoon by a provocative keynote from Paul Mann, Chief Technical Officer for the Golden Dome Strategic Alliance, on accelerating defense readiness. Wednesday morning brings another critical highlight with a keynote presentation from George Rumford, Director of the Test Resource Management Center (TRMC). To ensure everyone can participate, the exhibit halls will close for two hours on Wednesday afternoon for our annual Conference Luncheon. With robust technical sessions running Tuesday through Thursday, this week is designed to maximize your insights, expand your network, and showcase the cutting edge of telemetry technology.

EVENTS	DATE	TIME
Registration	Sunday, October 25	3:00pm–5:30pm
	Monday, October 26	8:00am–5:00pm
	Tuesday, October 27	8:00am–5:00pm
	Wednesday, October 28	8:00am–5:00pm
	Thursday, October 29	8:00am–2:00pm
Short Courses	Monday, October 25	9:00am–5:00pm
	Thursday, October 29	1:00pm–5:00pm
(See pages 7–9 for complete short course information)		*Half-Day Courses Available!!*
Exhibition Hours		
Exhibitor Setup	Sunday, October 25	8:00am–6:00pm
	Monday, October 26	8:00am–6:00pm
Exhibits Open	Tuesday, October 27	10:30am–5:00pm
Exhibits Open	Wednesday, October 28	9:00am–12:15pm / 2:00pm–5:00pm
Exhibits Open	Thursday, October 29	9:00am–12:00pm
Technical Sessions*	Tuesday, October 27	3:10pm–4:50pm
	Wednesday, October 28	10:15am–12:15pm / 3:30pm-5:30pm
**Times subject to change*	Thursday, October 29	9:00am–10:20am / 11:00am-12:00pm
Special Events		
Mix & Mingle	Monday, October 26	6:00pm–8:30pm
Opening Ceremony & Keynote Speaker	Tuesday, October 27	9:00am–10:30am
Workforce Development Panel	Tuesday, October 27	12:00pm–1:00pm
Keynote Speaker	Tuesday, October 27	2:00pm–3:00pm
Telemetry Demo	Tuesday, October 27	5:00pm–6:00pm
Keynote Speaker	Wednesday, October 28	9:00am–10:00am
Conference Luncheon Keynote & Student Paper Awards	Wednesday, October 28	12:30pm–2:00pm
Telemetry Demo	Wednesday, October 28	2:15pm–3:15pm

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Additional Events

See page 6 for more details

Talent Connect Hub

Best Source Selection Industry Day -
Friday, October 30
8:00am – 3:00pm

Spouse/Guest Program

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Calendar subject to modifications. Consult on-site program or ITC app for the latest information.

Important Info

Venue | Renaissance Phoenix Glendale Hotel

9495 W. Coyotes Blvd., Glendale, AZ 85305 | **Online Room Reservations**

ITC 2026 will be hosted at the Renaissance Phoenix Hotel & Conference Center. This hotel is located adjacent to the Westgate Entertainment District. Most ITC events, including short courses, technical sessions, and exhibits, will occur in or in close proximity to the Conference Center area of the hotel property.

Hotel Reservations

ITC 2026 encourages all attendees and exhibitors to stay at the host hotel. Doing so justifies our free use of convention space during the conference, which in turn allows us to offer a "regular" technical registration charge that is far lower than other major technical conferences. Take advantage of our exclusive room block rate of **$159 per night** by booking through the reservation link or using the reservation center number below.

If you prefer to phone in your reservation, call the Reservation Center at **800-931-1595** and provide the group code **INT** to secure your room within the ITC block.

Room Block Cut-Off: September 28th

Reservations via Web: **www.telemetry.org** (click on **Attend** and select **Venue** to be directed to the hotel information page).

Parking: The fee for parking is $15 valet or overnight self parking and $10 daily. Parking in the west parking lot is complementary and is first come first serve.

Check in: Check-In time is 4:00pm and Check-Out time is 11:00am.

Cancellations: No Cancellations or early checkouts allowed. However, name substitutions will be permitted.

Important Details: *A minimum 4-night stay (Sunday-Thursday) is required to book at the Renaissance, and reservations will be charged in full. If you are unable to meet this requirement, alternative lodging is available. ITC has secured additional room blocks at nearby hotels. Please visit the* **Venue** *page on our website for booking links to those properties.*

Registration

**Provides access to all exhibit areas, technical sessions, and keynote speakers.*

Regular	Access to all exhibit areas, technical sessions and keynote speakers *	$325
Full-Day Short Course	Fee to attend one full-day short course of your choice	$700
Half-Day Short Course	Fee to attend one half-day short course of your choice	$550
Active Duty Military / Full-Time Student	For individuals on active military duty or full-time students *	$25
Author or Session Chair	For those whose technical paper has been published in ITC 2026 Technical Proceedings and/or those chairing a technical session.* Contact tech chair for discount code. 2 passes per presentation provided.	No Charge
Thursday Only Registration	Access to all exhibit areas, technical sessions, and keynote speakers *	No Charge
Exhibitor Booth Staff	For those working at their company's booth. 2 free registrations per 10x10. * **Price is for additional registrations.*	$325**

Register online at telemetry.org by October 23rd. Onsite registration begins October 25th.

Controlled Unclassified Information (CUI) Sessions

ITC will contain Controlled Unclassified Information (CUI) sessions. Those sessions are marked as such. In order to attend those sessions you must have "registered" on the TRMC Website. This includes anyone who holds an active clearance or have a CAC/PIV card. IDs will be verified at the session entrance against the cleared list. ***If your name is not on the list, you will be denied entry.*** Please visit telemetry.org for more information on CUI.

CUI Sessions slides are not included in the regular Proceedings but will be available in the secure CUI repository found on the TRMC website.

Event at a Glance

MONDAY, OCT 26

TIME	SHORT COURSES											HALLS
9:00 AM to 5:00 PM	Advanced Modulation & Demodulation Techniques	Basics of Aircraft Instrumentation	Fundamentals of Microwaves & RF in Aeronautical Telemetry Systems	Intro to Analyzing Ethernet Data	Half Day Intro to Satellite Communications and TM Standards	IRIG 106 Chapter 10/11 Digital Recording Standards	Signals and Modulation	TM Applications from JMETC followed by CHEETAS	Half Day Telemetry Fundamentals: A Journey from Sensor to Display	Telemetry over IP	TmNS Telemetry Networks	SETUP
6:00 PM to 8:30 PM	FREE! All Welcome!	**ITC Mix & Mingle** >Solana A-D							Mix & Mingle	Fun! Food! Friends!		CLOSED

TUESDAY, OCT 27

9:00 AM to 10:30 AM	**Opening Ceremony & Keynote Speaker** >Solana A-D ***The Space Force of Today and Tomorrow and the Importance of Readiness Through Intelligent Telemetry*** **Keynote:** Brigadier General Tyler Nick Hague, Assistant Deputy Chief of Space Operations, US Space Force						CLOSED
10:30 AM	**Talent Hub** 10:30am–12:00pm	Exhibits Are Open from 10:30 AM to 5:00 PM					OPEN 10:30 AM to 5:00 PM
12:00 PM to 1:00 PM	**Workforce Development Panel:** ***Building the Next-Generation Telemetry Workforce*** >Solana A-D **Panelists:** Farhad Daghigh, VP Sales & Business Dev. for Flight Test Instrumentation at Curtiss-Wright Defense Solutions; Juliet Correnti, CEO of Radeus Labs, Inc.; and Joyce Heilman of the Test Resource Management Center Intern Program						
2:00 PM to 3:00 PM	***Speed Matters! A Lifelong Journey Bolstering Defense Readiness Outcomes*** >Solana A-D **Keynote:** Paul Mann, Chief Technical Officer for the Golden Dome Strategic Alliance, AE Industrial						
3:10 PM to 4:50 PM	**Technical Sessions:**	**1.** Communication Systems I	**2.** Networks, Protocols, & Real-Time Telemetry Links	**3.** TM for Aeronautical & Automotive Applications	**4.** Telemetry Data *CUI SESSION		
	TM Demo 5:00–6:00pm						

WEDNESDAY, OCT 28

9:00 AM to 10:00 AM	***Test Resource Management Center*** >Solana A-D **Keynote:** George Rumford, Director of the Department of War (DoW), Test Resource Management Center (TRMC)						CLOSED
9:00 AM	**Talent Hub** 11:00am–12:00pm	Exhibits Are Open from 9:00 AM to 12:15 PM / 2:00 PM to 5:00 PM					OPEN 9:00 AM to 12:15 PM and 2:00 PM to 5:00 PM
10:15 AM to 12:15 PM	**Technical Sessions:**	**5.** Cybersecurity for Telemetry Systems	**6.** Ground Systems Architectures & Range Automation	**7.** Data Acquisition I	**8.** Receivers, Antennas, Modulation & Coding Techniques I		
12:30 PM to 2:00 PM	**Conference Luncheon** >Solana A-D ***The Zero Trust Imperative – Securing the Data Stream*** **Keynote:** Derrick Hinton, Sector Vice President, Research and Test & Evaluation for the Advanced Technology Solutions (ATS) Division of Scientific Research Corporation (SRC)						
3:30 PM to 5:30 PM	**Technical Sessions:**	**9.** Machine Learning for Telemetry Data	**10.** Data Acquisition II	**11.** AI-Driven Sensor Fusion, Compression & Processing I	**12.** Telemetry Systems *CUI SESSION		
	TM Demo 2:15–3:15pm						

THURSDAY, OCT 29

9:00 AM to 10:20 AM	**Technical Sessions:**	**13.** Software Systems & Tools I	**14.** Communication Systems II	**15.** Receivers, Antennas, Modulation, & Coding Techniques II	**16.** Range Systems						OPEN 9:00 AM to 12:00 PM
11:00 AM to 12:00 PM	**Technical Sessions:**	**17.** Software Systems & Tools II	**18.** AI-Driven Sensor Fusion, Compression & Processing II	**19.** Simulation, Virtual Test Environments & Digital Twin Integration	**20.** Special Topics in Telemetry						
1:00 PM to 5:00 PM	**Half-Day Short Courses:**	Fundamentals of Aeronautical Ground TM Systems	Introduction to Analyzing Ethernet Data	Overview of Machine Learning & Data Analytics Applications Using Python	Introduction to Satellite Communications & TM Standards	IRIG Chapter 7 Packet TM Downlink Basis & Implementation Fundamentals	New Course! Phased Array Antennas	New Course! Serial Streaming Telemetry Encryption	Telemetry over IP		

Times and locations subject to change. Consult on-site program for latest information.

Special Events

Monday, October 26th

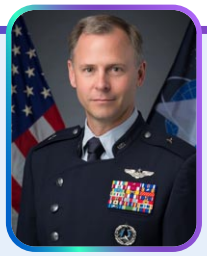
Mix & Mingle

>6:00pm–8:30pm | Solana A-D

FREE! All Welcome!

Don't miss the all-hands ITC Welcome Reception on Monday night! It's the perfect way to start your week with great food, drinks, and entertainment. Stop by to mingle with fellow attendees, explore upcoming highlights with our speakers and exhibitors, and plug back into the vibrant telemetry community in a completely casual atmosphere.

Tuesday, October 27th



Opening Ceremony & Keynote Speaker

>9:00am–10:30am | Solana A-D

Start your day with a continental breakfast followed by a thought-provoking keynote from Brigadier General Tyler Nick Hague as he presents, ***"The Space Force of Today and Tomorrow and the Importance of Readiness Through Intelligent Telemetry."*** During the Opening Ceremony, we will also recognize excellence in our field with the presentation of the John Jensen Best Conference Paper Award, the Lawrence Rauch Award for Standards, and the Myron Nichols Award for Telemetry Spectrum. Doors open for breakfast at 8:30 AM.

Best Paper Awards

Join us at Tuesday's Opening Ceremony for the presentation of awards for:

- John Jensen Best Conference Paper
- Lawrence Rauch Award for Standards
- Myron Nichols Award for Telemetry Spectrum

Workforce Development Panel

>12:00pm–1:00pm | Solana A-D

Join us for ***"Building the Next Generation Telemetry Workforce,"*** an insightful panel discussion on overcoming industry talent challenges, exploring emerging skill requirements, and shaping recruitment and student preparation strategies to strengthen the telemetry workforce pipeline! While primarily tailored for undergraduate and graduate students preparing for their future careers, all conference attendees are welcome to join. This featured panel includes Farhad Daghigh, VP of Sales and Business Development for Flight Test Instrumentation at Curtiss-Wright Defense Solutions; Juliet Correnti, CEO of Radeus Labs, Inc.; and Joyce Heilman of the Test Resource Management Center Intern Program.

Speed Matters! A Lifelong Journey Bolstering Defense Readiness Outcomes

>2:00pm–3:00pm | Solana A-D

Join Paul Mann, Chief Technical Officer for the Golden Dome Strategic Alliance, AE Industrial, for a provocative exploration of telemetry systems past, present, and especially future in securing National Security imperatives. This keynote presentation features a special focus on the demand for intelligent telemetry feedback to capability stakeholders throughout operational employment and readiness sustainment, highlighting the critical importance of learning and adapting at operationally relevant speed!

Telemetry Demo

>5:00pm–6:00pm | Cira A/B

Experience the complete telemetry pipeline live at ITC! Hosted by the 412th Test Wing / Edwards AFB, this demo presents the exact end-to-end journey—sensor to screen—that defines modern flight test and telemetry operations.

Walk through four interactive stations:

1. Airborne Instrumentation: Sensor-to-digital data capture
2. RF Systems: Wireless transmission and signal reception
3. Data Transport: Synchronous serial to TMoIP routing
4. Decommutation & Display: Real-time mission-control-room visualization

Note: No technical presentations or plenaries are scheduled during these times so that all attendees have the opportunity to participate.

Events continue on next page >

Special Events, cont.

Wednesday, October 28th

Keynote: Test Resource Management Center

>9:00am–10:00am | Solana A-D

Join us for an insightful keynote presentation featuring George Rumford, Director of the Department of War (DoW), Test Resource Management Center (TRMC). As the leader of a vital field activity reporting to the Under Secretary of Defense for Research and Engineering, Mr. Rumford oversees the readiness and modernization of the nation's essential test and evaluation (T&E) infrastructure.

Conference Luncheon / Keynote Speaker

>12:30pm–2:00pm | Solana A-D

Featuring a special keynote presentation titled ***"The Zero Trust Imperative – Securing the Data Stream"*** by Derrick Hinton, Sector Vice President of Research and Test & Evaluation for the Advanced Technology Solutions Division at Scientific Research Corporation.

As Department of War (DoW) weapon systems advance into hypersonics, AI autonomous systems, and next-generation SATCOM, transmitting massive T&E data volumes creates severe security risks—compounded by tightening RF spectrum availability. Protecting this sensitive data against advancing peer adversaries requires moving beyond perimeter security and embedding a Zero Trust Architecture across the Major Range and Test Facility Base. Drawing on experience across the Test Resource Management Center and private sector, Hinton will outline a strategic roadmap for continuous authentication, AI threat detection, and range modernization. Tailored to inspire both seasoned professionals and emerging talent, this talk delivers essential industry insights.

Awards to be presented at Wednesday's luncheon:

- Cliff Aggen Award for Undergraduate Student Paper
- Cliff Aggen Award for Graduate Student Paper

The luncheon will also feature the presentation of the prestigious Cliff Aggen Award, recognizing outstanding student papers. Please note that the exhibit halls will close and technical sessions will pause for two hours to ensure all attendees and exhibitors can participate in this special event. Don't miss this premier opportunity to enjoy a great meal, gain valuable industry insights, and honor exceptional student achievements. ***Advance Purchase: $25.00 online through October 23rd.***

Telemetry Demo

>2:15pm–3:15pm | Cira A/B

If you missed Wednesday's showcase, join us today to see cutting-edge telemetry solutions, hardware, and displays in action.

Talent Connect Hub — *a place where students and mentors can meet!*

>Tuesday | 10:30am–12:00pm and Wednesday | 11:00am–12:00pm | Media Center

Each year, ITC brings together top undergraduate and graduate engineering and technology students who represent the future of the telemetry industry. Through our Talent Connect Initiative, our goal is to bridge the gap between these talented emerging professionals and leading organizations across our community.

>>If your organization currently has... or anticipates having entry-level positions, Internships or Co-ops, we want to hear from you! Please contact staff@telemetry.org.

Best Source Selection Industry Day >Friday, Oct. 30 | 8:00am–3:00pm | Cira A

The RF Vendors Working Group (RFVWG) will host a **Best Source Selector (BSS) Industry Day** on Friday, following ITC. This targeted event brings together BSS equipment manufacturers, telemetry professionals, and government representatives for a hands-on evaluation and performance comparison of Best Source Selector systems under a common set of test conditions. Participating BSS systems will be exercised with DQE/DQM telemetry data across various operating conditions, giving attendees a unique opportunity to compare performance, discuss implementation strategies, and provide direct industry feedback.

Results and lessons learned from the session will help inform the development of IRIG 118 BSS test procedures while advancing overall interoperability across the telemetry community. For more information, contact the RFVWG at info@rfvwg.org.

Spouse/Guest Program

The program is designed to provide interactive activities for Guests and Spouses of conference attendees. Spouse/Guest Registration will be available onsite and is only available to individuals not employed in the telemetry industry or staffing an exhibit booth.

Spouse/Guest attendees must accompany an individual with full registration for the conference. For more information or a look into the activities for the week, please contact cthom@delta-info.com.

Full-Day Short Courses

>Monday, October 26, 2026 | 9:00am–5:00pm

Short Course	Description	Instructor
Advanced Modulation and Demodulation Techniques	Explores modulation and demodulation techniques currently employed or proposed for telemetry. Material covers the legacy PCM/FM waveform, SOQPSK, Multi-h CPM, as well as a preview of new modulations being developed. Receive-side techniques for these waveforms are also addressed with discussions on trellis demodulation, adaptive equalization, synchronization, LDPC forward error correction, data quality metric (DQM), data quality encapsulation (DQE), best source selection (BSS), and space-time coding (STC).	Terry Hill, Quasonix, Inc.
Basics of Aircraft Instrumentation	This course will cover a wide variety of topics related to Aircraft Instrumentation. Data, Acquisition, Telemetry, Instrumentation System Block Diagram, Standards, Data Requirements, Transducers Specifications, Video, Avionics Busses (e.g. 1553, ARINC-429, Ethernet etc.), Using Requirements to Configure an Analog Data Channel, Creating a PCM Map to Obtain a Sample Rate, Telemetry Bandwidth, Record Time, GPS, Audio, Telemetry Attributes Transfer Standard (TMATS), and Measurement Uncertainty - Interpreting the Results. This is great introduction for new hires or a refresher for current employees.	David Hodack, Naval Air Warfare Center Aircraft Division
Fundamentals of Microwaves and RF in Aeronautical Telemetry Systems	This course begins with an overview of electromagnetic theory and the many common uses of RF microwaves today. Concepts such as the frequency spectrum, basic physics of electro-magnetic wave reflection and propagation, standing waves, power density, phase and polarity are discussed. The second section discusses RF microwave components typically found in telemetry systems, touching on design and applications. Consideration of antennas, transmissions lines, couplers/splitters/combiners, hybrids, RF amplifiers, VCOs, isolators, attenuators, modulators, etc. is given. Concepts such as intermodulation, dynamic range and linearity are introduced. The final section of the course addresses the application of an end-to-end digital telemetry transceiving system. A typical airborne to ground station radio link is presented with emphasis placed on RF-centric issues impacting radio link performance.	Mark McWhorter, Lumistar
Introduction to Analyzing Ethernet Data	With the proliferation of Ethernet as a data transport on multiple commercial and military aircraft and weapon systems it is becoming even more important to get a basic understanding of how to analyze Ethernet data. This course will start with an introduction to the OSI model and lay out the basics that make up Ethernet traffic. Then we'll look at the open source Wireshark program and go through a crash course in using it to examine different types of Ethernet traffic. We'll also examine wireless traffic and how it differs from traditional wired Ethernet. Finally we'll look at using the Python programming language along with several libraries to actually analyze and decode data embedded in Ethernet traffic.	Paul Ferrill, Avionics Test & Analysis Corporation
Introduction to Satellite Communications and Telemetry Standards *(half-day class, 1:00 to 5:00pm)*	The Introduction to Satellite Communications short course provides an overview of the theories and international standards for various means of space communications. It includes descriptions of practical applications for high-latency and error-prone links, describes the RF link characteristics, modulation schemes, various forms of error detection, correction and compression, practical mechanisms for data networking in space, considerations for IP, concerns over security, new applications of short and medium distance links, and interoperability interests between civil and defense systems. Questions related to new standards proposed for user interfaces are also explored. Optical communications and the new proposed Unified Space Link Protocols will also be introduced as the path forward for the international standards body, CCSDS (the Consultative Committee for Space Data Systems).	Robert Ritter, IMI Technology
IRIG 106 Chapter 10/11 Digital Recording Standards	This course will present an in-depth look at the latest IRIG 106 Chapter 10/11 Digital Recording Standards. Each section within the standard will be covered along with implementation, compliancy, interoperability, data processing and validation methods. Lessons learned and insight into development and applications of recorders/reproducers, test equipment and processing software throughout the test and operational communities will also be presented. A review of emerging implementations and the next release of the standard will also be conducted.	Mark Buckley, Telspan Data and Alfredo Berard, 96 RANSS/RNRE
Signals and Modulation	This course is directed towards personnel with limited experience in digital communications and modulation schemes. The course examines the relationships between the elements engineers use to send data from its source to its destination over a radio link. The class begins with how designers represent and sample the signals. Next, we will examine how the modulation and demodulation techniques preserve the signal's integrity, including signal bandwidth representations, system noise estimations, and data link imperfections that will affect the end-to-end link performance. Finally, we will look at RF safety and systems-level concerns for the designer to address data system requirements, transmission regulations and constraints, and end-to-end analysis and planning.	Dr. Stephen Horan, New Mexico State University
TmNS Telemetry Networks	This course introduces participants to telemetric networks to gain an understanding of telemetric networking principles, applicable networking technologies, trade-offs in applying networks to telemetry, and end-to-end telemetric applications. Specifically, the RCC Telemetry Network Standard (TmNS) and its application will be presented illustrating the test article network, radio access network, range operations network, mission control network, system management operations, and telemetric applications. Sprinkled throughout the course are selected networking technology topics to help aid in the networking discussions. This course is intended for anyone who needs an introduction to TmNS technologies and system capabilities. It will be useful for participants to have a basic knowledge of networking concepts. This short course is particularly beneficial for persons responsible for or involved in flight test instrumentation and telemetry systems.	Thomas Grace, NAVAIR Patuxent River & Todd Newton, SwRI

more courses next page >

Full-Day Short Courses, cont.

>Monday, October 26, 2026 | 9:00am–5:00pm

Short Course	Description	Instructor
Telemetry Applications from the TRMCS Joint Mission Environment Testing Capability (JMETC) Portfolio Followed by CHEETAS for Beginners	Telemetry operations often require personnel to be on-site with receive systems or at remote consoles, leading to increased travel demands and potential operator shortages. The integration of remote-control capabilities and centralized data collection can significantly reduce operational costs while enhancing real-time system insights. The Test and Training Enabling Architecture (TENA) and the Joint Mission Environment Test Capability (JMETC), combined with Big Data tools and techniques, enable more efficient use of current and future telemetry range resources. These technologies facilitate range resource integration, which is essential for validating system performance in a cost-effective manner. This session will explore the current and future impact of TENA, JMETC, and Big Data Analytics on the test and evaluation (T&E) community, as well as their benefits to range operations and the warfighter. Following this discussion, the course will transition to CHEETAS for Beginners, introducing attendees to the Cloud Hybrid Edge-to-Enterprise Evaluation & Test Analysis Suite (CHEETAS) framework. CHEETAS provides a vendor- and hardware-agnostic tool suite for building evaluation infrastructure across diverse acquisition portfolios. Offered at no cost by the Test Resource Management Center (TRMC), CHEETAS supports time-series data ingestion in formats such as IRIG 106 Chapter 10, DarV3, and CSV, while also enabling live data streaming from TENA. This beginner-friendly session will cover fundamental CHEETAS functionalities, including: • Navigating the CHEETAS Dashboard and Entity Editor • Importing, viewing, and editing Interface Control Documents (ICDs) • Processing and querying telemetry data • Managing entities and parameter sets • Playing back data and video for analysis • Installing and updating UI modules By attending this combined session, participants will gain a comprehensive understanding of how JMETC portfolio tools, including TENA, Big Data Analytics, and CHEETAS, are shaping the future of telemetry operations. Whether you're looking to optimize range resource management or get started with CHEETAS, this course will provide valuable insights and hands-on knowledge.	Gene Hudgins, KBR, TENA/JMETC & Douglas Audirsch, KBR, CHEETAS User Support
Telemetry over IP	This course begins by introducing the capability of transporting PCM telemetry over an IP network (TMoIP), including discussion of the benefits and limitations of this technology. Essential network topics are covered including the OSI network model and associated TMoIP network protocols. The three key RCC IRIG standards for TMoIP are described: IRIG 218, IRIG 106 Chapter 10 over UDP, and TmNS. Interactive and scripted setup, configuration, status, and diagnostics approaches are presented. Advanced topics include minimizing latency, handling poor-quality WAN networks, inter-vendor interoperability, reliability and redundancy, one-to-many and mesh networks, configurable quality-of-service,and time/data correlation. The course ends with an overview of current and future trends in IP convergence and cloud-based architectures.	Mark Roseberry, NetAcquire Corporation
Telemetry Fundamentals: A Journey from Sensor to Display *(half-day class, 1:00 to 5:00pm)*	Dive into the fascinating world of telemetry with this introductory course. Gain a high-level understanding of key concepts and components, starting with onboard vehicle systems such as sensors, signal conditioning, modulation, and transmission. Transition to ground-based operations, exploring receivers, data distribution, decommutation, processing, and display. Discover additional topics like IRIG 106 Ch 10 and 11 recording and distribution formats, along with IRIG 106 Chapter 7 packet data over PCM. Get ready to unlock the secrets of telemetry.	Gary Thom, Delta Information Systems, Inc.

ITC 2026 Technical Sessions

Tuesday, October 27

Session 1. Communication Systems I
Chair. Thomas Grace, NAVAIR

Session 2. Networks, Protocols, & Real-Time Telemetry Links
Chair. Todd Newton, SwRI

Session 3. Telemetry for Aeronautical & Automotive Applications
Chair. Doug O'Cull, Quasonix, Inc.

Session 4. *Telemetry Data
Chair. Michael Diehl, U.S. Army Yuma Proving Ground (YPG)

*CUI SESSION 1

Wednesday, October 28

Session 5. Cybersecurity for Telemetry Systems
Chair. Richard Dean, Morgan State University

Session 6. Ground Systems Architectures & Range Automation
Chair. Tim Chalfant, Int'l Consortium for TM Spectrum

Session 7. Data Acquisition I
Chair. Jim Falasco, AeroGear

Session 8. Receivers, Antennas, Modulation, & Coding Techniques I
Chair. David Mitchell, New Mexico State University (NMSU)

Session 9. ML for Telemetry Data
Chair. Hovannes Kulhandjian, Calif. State University, Fresno

Session 10. Data Acquisition II
Chair. David Hodack, NAWCAD

Session 11. AI-Driven Sensor Fusion, Compression, & Processing I
Chair. Yogananda Isukapalli, Univ. of Calif., Santa Barbara

Session 12. *Telemetry Systems
Chair. Jacob Lopez, U.S. Army YPG

*CUI SESSION 2

Thursday, October 29

Session 13. Software Systems & Tools I
Chair. Laura Boucheron, NMSU

Session 14. Communication Systems II
Chair. Oluwatobi Busari, Morgan State Univ.

Session 15. Receivers, Antennas, Modulation, & Coding Techniques II
Chair. Erik Perrins, University of Kansas

Session 16. Range Systems
Chair. Mark McWhorter, Lumistar

Session 17. Software Systems & Tools II
Chair. Nelson Leite, Brazilian Flight Test Inst.

Session 18. AI-Driven Sensor Fusion, Compression, & Processing II
Chair. Michael Marcellin, University of Arizona

Session 19. Simulation, Virtual Test Environments, & Digital Twin Integration
Chair. Shawn Perry, NAWCAD

Session 20. Special Topics in Telemetry
Chair. Richard Simeon, University of Kansas

Half-Day Short Courses

>Thursday, October 29, 2026 | 1:00pm–5:00pm

Short Course	Description	Instructor
Fundamentals of Aeronautical Ground Telemetry Systems	This course will present a high-level overview of the fundamental design of a typical range telemetry data ground system. Topics to be discussed will include the major sub-systems and components used, such as auto-track antenna, multicoupler, receiver/combiner, demodulation, bit synchronization, data recording and playback, time, decommutation and simulation, and real-time displays of telemetered parameters. The student will be exposed to a few mathematical exercises, such as "link analysis" calculations to help determine the "sensitivity" of the ground station and resultant system tradeoffs. A section on system calibration and periodic maintenance will be presented. After having completed the course, the student will have a better understanding of concepts related to RF and data processing of flight telemetry on the ground side.	Mark McWhorter, Lumistar
Introduction to Analyzing Ethernet Data	With the proliferation of Ethernet as a data transport on multiple commercial and military aircraft and weapon systems it is becoming even more important to get a basic understanding of how to analyze Ethernet data. This course will start with an introduction to the OSI model and lay out the basics that make up Ethernet traffic. Then we'll look at the open source Wireshark program and go through a crash course in using it to examine different types of Ethernet traffic. We'll also examine wireless traffic and how it differs from traditional wired Ethernet. Finally, we'll look at using the Python programming language along with several libraries to actually analyze and decode data embedded in Ethernet traffic.	Paul Ferrill, Avionics Test & Analysis Corporation
Introduction to Satellite Communications and Telemetry Standards	The Introduction to Satellite Communications short course provides an overview of the theories and international standards for various means of space communications. It includes descriptions of practical applications for high-latency and error-prone links, describes the RF link characteristics, modulation schemes, various forms of error detection, correction and compression, practical mechanisms for data networking in space, considerations for IP, concerns over security, new applications of short and medium distance links, and interoperability interests between civil and defense systems. Questions related to new standards proposed for user interfaces are also explored. Optical communications and the new proposed Unified Space Link Protocols will also be introduced as the path forward for the international standards body, CCSDS (the Consultative Committee for Space Data Systems).	Robert Ritter, IMI Technology
IRIG Chapter 7 Packet Telemetry Downlink Basis and Implementation Fundamentals	This course will focus on presenting information to establish a basic understanding of IRIG 106, Chapter 7, Packet Telemetry Downlink Standard. It will focus on the implementation of airborne and ground system hardware, what to consider for use cases using Chapter 7 Packet TM and methods to handle Chapter 7, Packet Telemetry data on the ground. The class will address how to multiplex packet telemetry into your existing IRIG Chapter 4 legacy PCM stream. Other subjects such as latency, compatibility with Test Range Instrumentation System compatibility such as RF Transmission, data recording, RF Receiving, Ground Reproduction, and Chapter 10 data processing methods.	Dan Green, Safran Defense & Space, Inc.
Overview of Machine Learning and Data Analytics Applications Using Python	Machine learning has become an indispensable tool for processing the large and complex data structures being collected by modern sensor and data acquisition systems at every Test Range. This course will cover the fundamentals of data manipulation, visualization, and machine learning with open source tool python in the context of typical time series data acquisition applications and provide an overview of intermediate and advanced modeling. Public data sets will be used for illustration and demonstration activity. Basic knowledge of programming in any language is assumed, but not necessarily advanced knowledge of python. No previous experience with machine learning is assumed.	William (Bill) Schneider, Dell EMC
New Course! **Phased Array Antennas**	This course is designed for entry-level engineers, technical managers, or students with a basic electrical engineering background seeking to understand how multiple antenna elements collaborate to steer a beam electronically without physical movement. We begin with an introduction to phased array systems through the lens of ray-optics principles, followed by a comparative analysis of the benefits and trade-offs between dish antennas and various phased array designs. We will then explore array fundamentals, specifically focusing on how element and array factors contribute to the overall antenna pattern. This section delves into beam steering approaches across different geometric configurations and addresses critical design consequences such as sidelobes, grating lobes, beam squint, and inter-element mutual coupling. The course then examines modern design approaches by highlighting the distinctions between active and passive arrays, alongside the advantages and complexities of analog, digital, hybrid, and optimal beamforming techniques. Moving into practical applications, the session covers instrumentation and implementation details specifically for telemetry, emphasizing the role of modeling and simulation during the design phase. To ensure a comprehensive understanding. Calibration and testing techniques for verifying the underlying assumptions of the design are explored. The program concludes with a challenging real-world case study and solution, followed by a summary and a Q&A session.	Anand Kelkar, CDSI, Inc.
New Course! **Serial Streaming TM Encryption**	This course will present a high-level overview of the fundamental concepts behind classical and modern secure telecommunication encryption systems. It is intended for a student looking to grasp a basic understanding of a highly complex but ubiquitous technology. The course will be limited to commercial encryption. The specific emphasis will be on implementations of the Advanced Encryption Standard (AES) with IRIG106 Chapter 4 serial streaming telemetry.	Albert Gabaldon & Jaron Guisa, NAWCWPNS
Telemetry over IP	This course begins by introducing the capability of transporting PCM telemetry over an IP network (TMoIP), including discussion of the benefits and limitations of this technology. The three key RCC IRIG standards for TMoIP are described: IRIG 218, IRIG 106 Chapter 10 over UDP, and TmNS. Interactive and scripted setup, configuration, status, and diagnostics approaches are presented. Advanced topics include minimizing latency, handling poor-quality WAN networks, inter-vendor interoperability, one-to-many and mesh networks, configurable quality-of-service, and time/data correlation. The course ends with an overview of current and future trends in IP convergence and cloud-based architectures. Familiarity with basic networking and serial PCM telemetry concepts is presumed.	Mark Roseberry, NetAcquire

About ITC 2026

An acclaimed international technical symposium for 61 years running, ITC remains the world's most comprehensive telemetry event. With everything from in-depth technical short courses and technical briefs presented by real-world experts to world-class speakers and cutting-edge exhibits, this show has something for everyone in the industry. Don't miss out!

Background

ITC is an annual forum and technical exhibition sponsored by the International Foundation for Telemetering (IFT), a non-profit corporation dedicated to serving the technical and professional interests of the telemetering community, including the establishment and support of scholastic telemetry programs at six universities. The 4-day event consists of technical presentations, tutorials, and short courses arranged in concurrent sessions and complemented by a technical exhibition area that features latest-technology product demos and displays from the top industry suppliers.

The unique relationship between the manufacturing community and users in both government and industry has produced yearly event that have led to continued advancements of the telemetering and instrumentation systems/equipment we rely on today, as well as the continuing education of telemetering professionals worldwide.

Who Should Attend?

If you are involved with any kind of aerospace, vehicular, biomedical, meteorological, or industrial telemetry applications, then you belong at ITC 2026. This premier forum brings together customers, suppliers, academics, and the engineering community to discuss how technology is revolutionizing the field.

Why Attend?

- Unprecedented opportunity to network with the industry's leading experts and innovators
- Robust technical program covering the latest policies, trends, constraints, and breakthroughs shaping the industry
- Expert commentary from keynote speakers
- Wide selection of short courses to keep you on top of technology developments
- Attain Continuing Learning Points (CLPs) to further your professional development

Why Exhibit?

- Extremely affordable way to reach the telemetry industry's movers and shakers
- Captive audience of over 1,000 telemetry engineers, scientists, and management personnel
- Outstanding opportunity to stay abreast of the competition and get new ideas to expand your product base
- Highly targeted direct mail opportunities to attendees

ITC 2026 Exhibitor List (as of August)

Company Name	Booth
AeroVironment (AV)	516
Airborne Instrumentation Systems Dept. (AISD)	1010
AIT	310
Apogee Labs, Inc..	1107
AstroNova, Inc...	1115
ATAC	226
ATCi	916
Compunetix	307
Corvid Technologies	1117
Creative Digital Systems Integration (CDSI)	227
Curtiss-Wright	710
Dell Technologies	220
Delta Information Systems	822
DEWESoft	306
Diversified Technical Systems (DTS)	1016
Fisica	323
Geil Marketing Associates, Inc. (GMA)	324
Great River Technology	707
Haigh-Farr	715
HENSOLDT Nexeya France	1008
Honeywell Aerospace	1012
Ironwave Technologies	419
JDA Systems, LLC	128
JT4, LLC	325
L3Harris Technologies	610
Lumistar	709
Meinberg USA, Inc.	320
Microchip Technology Inc.	910
Microwave Innovations	1015

Company Name	Booth
Mide Technology Corp / A Hutchinson Company	305
MJS Designs	908
NetAcquire Corporation	112
Nomad GCS	1118
ONTIME NETWORKS, LLC	228
Ophir RF, Inc.	327
ORCA Technologies	326
Parraid, LLC	816
Precise Time and Frequency, LLC	608
Pulse Research Lab	222
Quasonix, Inc.	622
Rotating Precision Mechanisms, Inc.	321
Rugged Science, LLC	224
Safran	122
SEMCO	106
Summation Research, Inc.	918
Telspan Data	314
Trenton Systems	206
TUALCOM USA, LLC	312
Universal Switching Corporation	1121
ViaLite Communications	208
VITEC, Inc.	1011
WV Communications, Inc.	912

Mobile App

The ITC 2026 mobile app will be ready for download in September.

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Looking to show off your cutting-edge technology, network with industry leaders, and gain valuable exposure for your business? Don't miss out on this incredible opportunity to showcase your business to a global audience of telemetry enthusiasts. Register as an exhibitor today! Visit the ITC Exhibitor Information page at telemetry.org for more details.

Exhibit space starts at $5,250 for a 10-ft. x 10-ft. booth.

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See You at ITC 2026!

Planning Checklist

- ☐ Register for ITC 2026
- ☐ Book your hotel at **Renaissance** at discounted rate
- ☐ Download the ITC mobile app in September
- ☐ Review agenda and highlight sessions
- ☐ Schedule meetings with exhibitors or colleagues
- ☐ Pack business cards (make sure to update your LinkedIn)
- ☐ Prepare your conference attire (layers recommended!)
- ☐ Follow #ITC2026 on LinkedIn for updates
- ☐ Check shuttle times or parking info (if applicable)
- ☐ Review past notes or goals if you're a returning attendee
- ☐ Bring any needed chargers, adapters, or tech accessories
- ☐ Come ready to learn, network, and celebrate at ITC!