

31ST ANNUAL
**NATIONAL TEST & EVALUATION
CONFERENCE**

“THE FUTURE OF T&E: TECHNOLOGY EXCELLENCE AND INNOVATION”



MARCH 2 - 3, 2016
THE MITRE CORPORATION
MCLEAN, VA

EVENT #6910 ► WWW.NDIA.ORG/MEETINGS/6910

LOCATION

The MITRE Corporation
7515 Colshire Drive
McLean, VA 22102
(703) 986-6000

ATTIRE

Appropriate dress for the Conference is business for civilians and Class A uniform or uniform of the day for military personnel.

ID BADGE

During Conference registration and check-in, each Attendee will be issued an identification badge. Please be prepared to present a valid picture ID. Badges must be worn at all Conference functions.

SPEAKER DONATION

In lieu of Speaker gifts, a donation will be made to the Fisher House Foundation. For additional information, please visit: <http://www.fisherhouse.org>

WEDNESDAY, MARCH 2, 2016

- 7:00 AM - 6:30 PM** **Registration**
South Lobby
- 7:00 AM - 8:00 AM** **Continental Breakfast**
Atrium
- 8:00 AM - 8:15 AM** **Introduction & Opening Remarks**
Hayes Auditorium
▶ Joe Manas, Chief Systems Test Architect, Raytheon Company; Chairman, NDIA Test & Evaluation Division
- 8:15 AM - 9:15 AM** **Keynote Address**
Hayes Auditorium
▶ Dr. C. David Brown, Deputy Assistant Secretary of Defense, Developmental Test & Evaluation; Director, Test Resource Management Center
- 9:15 AM - 10:30 AM** **Networking Break**
Atrium
- 10:30 AM - 12:00 PM** **Featured Panel: DT&E Panel**
Hayes Auditorium
▶ David Jimenez, Executive Technical Director, U.S. Army Test and Evaluation Command
▶ Devin Cate, Director of Test and Evaluation, U.S. Air Force
▶ Rick Quade, Deputy for Test and Evaluation, U.S. Navy
▶ COL Benjamin Stinson, USMC, Commanding Officer, Marine Corps Tactical Systems Support Activity
- 12:00 PM - 1:30 PM** **Walter W. Hollis Award Luncheon: Presentation for Outstanding Lifetime Achievement in Defense Test & Evaluation**
Hayes Auditorium
- 1:30 PM - 3:00 PM** **Featured Panel: CDT Panel**
Hayes Auditorium
▶ Deirdre Sumpter, Technical Director, AEC (*invited*)
▶ Ed Rahme, USN, PEO Subs, PMS 450, VIRGINIA Class Program
▶ Tony Schmidt, Assistant PEO for T&E, Unmanned Aviation Systems, Naval Air Systems Command
- 3:00 PM - 3:20 PM** **Networking Break**
Atrium
- 3:20 PM - 5:00 PM** **BREAKOUTS: SESSIONS A-C**
Rooms 3H390, 1H300, 1H301
▶ For full Breakout Session schedule, see page 4
- 5:00 PM - 6:30 PM** **Networking Reception (HOSTED BEER & WINE)**
Atrium

THURSDAY, MARCH 3, 2016

- 7:00 AM - 4:00 PM** **Registration**
South Lobby
- 7:00 AM - 8:00 AM** **Continental Breakfast**
Atrium
- 8:00 AM - 8:15 AM** **Introduction & Opening Remarks**
Hayes Auditorium
▶ Joe Manas, Chief Systems Test Architect, Raytheon Company; Chairman, NDIA Test & Evaluation Division
- 8:15 AM - 9:15 AM** **Keynote Address**
Hayes Auditorium
▶ Dr. Michael Gilmore, Director of Operational Test and Evaluation, Office of the Secretary of Defense
- 9:15 AM - 10:00 AM** **Featured Presenter: "Oversight Has Resulted in Few Significant Disputes and Limited Program Cost and Schedule Increases"**
Hayes Auditorium
▶ Michael Sullivan, Director of Acquisition and Sourcing, U.S. Government Accountability Office
- 10:00 AM - 10:30 AM** **Networking Break**
Atrium
- 10:30 AM - 12:00 PM** **Featured Panel: OT&E Panel**
Hayes Auditorium
▶ MG Dan Karbler, USA, Commanding General, U.S. Army Test and Evaluation Command
▶ Bill Redmond, Executive Director, Air Force Operational Test and Evaluation Center
▶ Scott Craig, Deputy Director, Commander Operational Test & Evaluation Force
▶ Thomas McGowan, Deputy Director MCOTE, Marine Corps Operational Test and Evaluation
- Activity
- 12:00 PM - 1:20 PM** **Tester of the Year Awards Luncheon**
Hayes Auditorium
- 1:20 PM - 3:00 PM** **BREAKOUTS: SESSIONS D-F**
Rooms 3H390, 1H300, 1H301
▶ For full Breakout Session schedule, see page 5
- 3:00 PM - 3:20 PM** **Networking Break**
Atrium
- 3:20 PM - 5:35 PM** **BREAKOUTS: SESSIONS D-F**
Rooms 3H390, 1H300, 1H301
▶ For full Breakout Session schedule, see page 5

WEDNESDAY, MARCH 2, 2016 BREAKOUT SESSION SCHEDULE

SESSIONS D-F			
LOCATION SESSION TITLE	ROOM HAYES (1ST FLOOR) SESSION D: Automated Testing	ROOM 1H301 (1ST FLOOR) SESSION E: Cyber T&E	ROOM 1H300 (1ST FLOOR) SESSION F: STAT
SESSION CHAIRS	Martin Leek, Raytheon Company	Joe Manas, Raytheon Company	Dr. Neal Mackertich, Raytheon Company
3:20 PM - 3:50 PM	STEADY GRIP AND AGILE FOOTING – A BALANCED FOUNDATION FOR AUTOMATED SYSTEM TESTING ▶ Peter Fontana, Raytheon Integrated Defense Systems	CYBERSECURITY TEST AND EVALUATION AND THE NATIONAL CYBER RANGE ▶ Peter Christensen, Test Resource Management Center	STATISTICAL TEST OPTIMIZATION HIGH MATURITY PRACTICES ▶ Dr. Neal Mackertich, Raytheon Company
3:55 PM - 4:25 PM	SHIFT TEST LEFT – RESULTS FROM SI&T INVOLVEMENT IN EARLY ENGINEERING ▶ Peter Fontana, Raytheon Integrated Defense Systems	APPLYING CYBERSECURITY OPERATIONAL TEST LESSONS TO ACHIEVE GREATER CYBERSECURITY OF FUTURE DEFENSE CAPABILITIES ▶ Ryan Mayer, COMOPTEVFOR	THE DEVELOPMENTAL EVALUATION FRAMEWORK AND DESIGN OF EXPERIMENTS - HELPING DECISION MAKERS MAKE BETTER INFORMED DECISIONS ▶ Dr. Suzanne Beers, MITRE Corporation
4:30 PM - 5:00 PM	EFFECTIVE USE OF AUTOMATED GUI INTERACTIONS ON SYSTEM VERIFICATION ▶ LeRoy Dunn Jr., Raytheon Company ▶ Michael Mullins, Raytheon Company	OPEN SLOT	APPLICATION OF STATISTICAL PROCESS CONTROL METHODS TO FLIGHT TEST DATA ▶ Craig Cowell, Raytheon Missile Systems
5:00 PM	SESSIONS A-C CONCLUDE		

THURSDAY, MARCH 3, 2016 BREAKOUT SESSION SCHEDULE

SESSIONS G-I			
LOCATION SESSION TITLE	ROOM HAYES (1ST FLOOR) SESSION G: Autonomous T&E	ROOM 1H300 (1ST FLOOR) SESSION H: Shift Left - Early T&E Involvement	ROOM 1H301 (1ST FLOOR) SESSION I: Mission Based T&E
SESSION CHAIRS	Reed Young, JHU/APL	Mike Rabens, NGC	Jeff Bilco, The Boeing Company
1:20 PM - 1:50 PM	UNMANNED AIRCRAFT SYSTEMS DESIGN & TEST - HOW TO TEST YOUR DRONE ▶ CDR Josh Dittmar, U.S. Navy	WORKFORCE SHIFT –BUILDING AUTOMATED TESTING COMPETENCE ACROSS AN ORGANIZATION ▶ Matthew Thomann, Raytheon Integrated Defense Systems	SLOGAN-BASED T&E: WORDS HAVE MEANING ▶ Christopher Wilcox, U.S. Army Test and Evaluation Command
1:55 PM - 2:25 PM	CHALLENGES AND OPPORTUNITIES FOR TESTING OF AUTONOMOUS SYSTEMS ▶ Christopher Eaton, U.S. Air Force, 412 Test Engineering Group	TEST & EVALUATION’S ROLE IN BREAKING THE DEVELOPMENT COST CURVE ▶ Terry Tomeny, The Boeing Company	FOCUSING ON THE FUTURE WITHOUT LOSING MOMENTUM ▶ Marty Arnwine, Test Resource Management Center
2:30 PM - 3:00 PM	A HOLISTIC LOOK AT TESTING AUTONOMOUS SYSTEMS ▶ Dave Scheidt, Johns Hopkins University Applied Physics Laboratory SELECTION AND TRAINING OF TEST EVENT DIRECTORS FOR ADVANCED UNMANNED AIRCRAFT ▶ Michael McDaniel, Naval Air Warfare Center, Aircraft Division	ROBUST INTEGRATED TEST AND EVALUATION FRAMEWORK ▶ Douglas Moshier, Raytheon Company	RAYTHEON TEST ARCHITECT – COMPETENCY & CERTIFICATION ▶ Joe Manas, Raytheon Company
3:00 PM	NETWORKING BREAK		
3:20 PM - 3:50 PM	OT AND AUTONOMY ▶ Dr. Robert Holcomb, Institute for Defense Analyses	OPEN SLOT	OPEN SLOT
3:55 PM - 4:25 PM	AUTONOMY COI TEST & EVALUATION AND VERIFICATION & VALIDATION WORKING GROUP ▶ Stuart Young, Army Research Laboratory	OPEN SLOT	OPEN SLOT
4:30 PM - 5:00 PM	VERIFICATION OF AUTONOMOUS SYSTEMS ▶ Dr. Alessandro Pinto, United Technologies Research Center	OPEN SLOT	OPEN SLOT
5:05 PM - 5:35 PM	TEST AND EVALUATION OF AUTONOMOUS SYSTEMS IN A MODEL BASED ENGINEERING CONTEXT ▶ Michael Nolan, Raytheon Company	OPEN SLOT	OPEN SLOT

ADVERTISING

Advertise in *National Defense* magazine and increase your organization's exposure. *National Defense* will be distributed to Attendees of this Conference as well as other NDIA events. For more information, contact Mr. Dino Pignotti, VP Advertising, at (703) 247-2541 or dpignotti@ndia.org.

PROCEEDINGS

Proceedings will be available on the web through the Defense Technical Information Center (DTIC) two weeks after the Conference. All registered Attendees will receive an email notification once the proceedings are available.

SURVEY

A survey will be e-mailed to you after the Conference. We would appreciate your time in completing the survey to help make our event even more successful in the future.

WALTER W. HOLLIS AWARD

for Lifetime Achievement in Defense Test & Evaluation is presented to

DR. C. DAVID BROWN

Dr. C. David Brown truly embodies the meaning of what this award is intended for, "Lifetime, Dedication and Achievements in T&E." Currently Dr. Brown is the Deputy Assistant Secretary of Defense for Developmental Test & Evaluation (DASD(DT&E)) and Director, Test Resource Management Center (TRMC) - one of the most influential positions in the domain of Test & Evaluation – and it's hard to imagine a more qualified or better suited individual to perform this important leadership duty. Dr. Brown has a rich history and career in T&E that started over 41 years ago as a Test Instrumentation Engineer at the Aberdeen Proving Ground in the Material Test Directorate where he gained hands on experience and caught the test bug while working on the progenitor of the M1 tank, the XM1. This first experience as a Test Engineer drove him to achieve greatness in this domain. Over the years, he has been a game changer in T&E. Dr. Brown was the focal point for the Army's application of modeling and simulation techniques to T&E including the development of the Virtual Proving Ground. He was the Director for Test and Technology for the Army Developmental Test Command where he focused his efforts on ensuring test professionals had access to the critical capabilities they needed to help program managers and key decision makers. He served as the Director of the Combined Test Organization and Executive Director for Test for the Army Future Combat Systems (FCS) program where he was responsible for planning and overseeing the T&E for this multi-billion dollar revolutionary development program. Many of those innovative T&E ideas and T&E leadership paradigms that were pioneered during FCS are being used successfully today on our programs you know them as System of Systems Integration Labs, Live Virtual Constructive and the Chief Developmental Tester. Over the years, Dr. Brown has consistently given back to the community with teaching, mentoring and speaking engagements. He continues to teach graduate courses in Systems Engineering at Johns Hopkins University. In the last 2 years, Dr. Brown has raised the technical bar for the T&E discipline by strengthening the importance of solid systems engineering applied to test and evaluation. He has also raised the level of professionalism by spear heading the qualification board for Key Leadership Positions at DoD-the first of which being the Chief Developmental Tester. Dave holds three patents, and has authored numerous technical papers. In addition he's a retired Army Reserve Colonel and has a PhD in Electrical Engineering from the University of Delaware, is a licensed Professional Engineer, and Certified Test and Evaluation Professional.

With these accomplishments in mind, the National Defense Industrial Association has selected Dr. C. David Brown as the 2016 recipient of the Walter W. Hollis Award for Lifetime Achievement in Defense Test and Evaluation.

TESTER OF THE YEAR AWARDS

*for outstanding achievement
in Test & Evaluation
in 2015*

The Tester of the Year Awards are presented to outstanding individuals in the field of Test & Evaluation for acknowledgment of their accomplishments as a Civilian Tester, Military Tester, or a Contractor Tester. Each Tester of the Year was nominated by their organization and selected by the Office of the Secretary of Defense or one of the Military Service Test & Evaluation Departments in light of their achievements.

CONGRATULATIONS TO ALL WHO ARE BEING AWARDED ON THE MERIT OF THEIR 2015 ACCOMPLISHMENTS

UNITED STATES AIR FORCE

- ▶ Military: Maj Matthew D. Collins, USAF
- ▶ Civilian: Mr. Robert W. Mann
- ▶ Contractor: Mr. David W. Sams

UNITED STATES MARINE CORPS

- ▶ Military: Maj Robert E. Wicker, USMC
- ▶ Civilian: Mr. Timothy D. McLean
- ▶ Contractor: Mr. Peter Wilson

UNITED STATES ARMY

- ▶ Military: CPT Georgiana L. White, USA
- ▶ Civilian: Mr. Juan F. Elizarraras
- ▶ Contractor: Mr. Robert Forstrom

UNITED STATES NAVY

- ▶ Military: LT Barry F. Carmody, USN
- ▶ Civilian: Mr. David A. Morton
- ▶ Contractor: Mr. Lawrence A. Wells

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Raytheon

Raytheon Company (NYSE: RTN), with 2014 sales of \$23 billion and 61,000 employees worldwide, is a technology and innovation leader specializing in defense, security and civil markets throughout the world. Raytheon is headquartered in Waltham, Mass.

**THANK YOU FOR ATTENDING &
WE HOPE TO SEE YOU AT A
FUTURE EVENT!**



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