Joint partnership leads to successful swirl distortion testing

By Deidre Ortiz
AEDC Public Affairs

An AEDC test team and members of the U.S. Air Force Academy (USAFA) partnered together recently at the Academy’s F109 turbofan test facility to apply swirl distortion to determine engine response in terms of aeromechanics, operability and performance. Testing was performed July 2017 using a fully functional and automatic swirl generator prototype to determine the response of the F109 engine to swirl with and without pressure distortion.

At the inception of the F109 engine test project, the AEDC Technology Program was engaged in the development of a swirl distortion generator for use in direct-connect engine tests. The swirl generator development process culminated in the validation of a fully-functional prototype. During validation tests, the prototype demonstrated the ability to rapidly establish pre-determined swirl patterns. The ability to remotely set a large number of swirl patterns enabled the comprehensive 2017 F109 engine test.

In parallel, AEDC test teams also embarked on the application of a turbine engine numerical simulation capable of predicting the response to inlet distortion, known as the Parallel Compressor Simulation, Davis said.

At the Academy’s F109 test facility, testing included evaluating model swirl patterns to determine engine models under development, Davis said.

So far, the AEDC test team and members of the U.S. Air Force Academy (USAFA) have combined efforts in applying swirl distortion to determine engine response using the Academy’s F109 test facility. In recognition of this successful project, the F109 test team was awarded the General Gossick Team Award in July 2017. Pictured are AEDC test team members Dr. Milton Davis, Tom Tibbals, Eric Hansen, Josh Osborne, Sara Rhodes and Dave Beale with U.S. Air Force Academy staff Jerry Steemer, and Lt. Col. Devin O’Dowd.

See SUCCESSFUL, page 3

AFMC and AFTC commanders tour AEDC facilities at Arnold AFB

Gen. Ellen M. Pawlikowski, Air Force Materiel Command commander (center); Maj. Gen. Daniel Harris, Air Force Test Center commander (right); and Col. Scott Cain, Arnold Engineering Development Complex commander (left), receive a facility briefing and tour of the Propulsion Wind Tunnels by Lt. Col. David Hoffman (second from left), Flight Systems Combined Test Force director, Aug. 22. (U.S. Air Force photo/Rick Goodfriend) (This image was manipulated by obscuring badges for security purposes.)

See page 2 for additional photos.
AFMC and AFTC commanders tour AEDC facilities at Arnold AFB

Gen. Ellen E. Pawlikowski, Air Force Materiel Command commander (center), Maj. Gen. David Herr, Air Force Test Center commander (left of center); and Col. Scott Cain, Arnold Engineering Development Complex commander (right) receive a facility briefing and tour of the AEDC JS Rocket Motor Test Facility by AEDC staff members Aug. 22. (U.S. Air Force photo/Rick Goodfriend) (This image was manipulated by obscuring badges for security purposes.)

AEDC transitioning to improved mass notification system

By Brian Allen

Aftoc will become Air Force Materiel Command Emergency Mass Notification System on Sept. 11. It works within the command’s existing network to deliver alert messages to networked personal and devices. The alerts can be in the form of pop-ups on computers and laptops, e-mails sent to PDAs and cell phones, and text messages sent to designated cell phone numbers.

Aftoc will also integrate with the base’s Giant Voice public address and telephone system. Notifications can range from Force Protection Condition Changes and Active Shooter warnings to rumor alerts for approaching storms or other severe weather situations.

AEDC Commands are transitioning to this capability. The Aftoc Operations Center is the base owner of the system and can send base no- sitions or alerts and provide reports to the command as needed. The Aftoc Command Center will maintain operational global access and be able to alert all AEDC personnel if required.

The software has been deployed at Arnold. Personnel should update their contact information when they see the “purple globe” in their system tray (far bottom right on computer task bar). If you have not received the small purple globe in your system tray, please contact 454-6969.

For more information about Aftoc, please call 454-7036, 454-4212, or 454-7752.

To register in Aftoc, click on the Purple Globe in the ICON tray described above. A menu of choices will appear, choose “Update my profile.” If you were registered in Alert simpl the list of names, and make any updates that you need (old numbers, e-mail, etc.). If you are a new employee or were not registered in Alert, you will need to fill in the mandatory boxes with your name, an e-mail address, and phone number. The system was designed to preserve life and protect property so please take a few minutes and do the right thing.

Smoking Policy

1. The following revised Arnold AFB smoking policy is effective immediately and applies to all individuals on or off-base.

2. Tobacco products include but are not limited to: cigarettes, cigars, and pipes.

3. Smoking is permitted by a designated smoking area (DSA) identified by designated signage. No signage exists, smoking is not permitted in that area. The responsibility of all employees to keep DSA clean of cigarette supplies.

4. Tobacco use on the Arnold AFB Golf Course is permitted, but discouraged. The health hazards of tobacco use are not unimportant. Its smoking is permitted within 50 feet of golf course buildings.

5. Smoking in government-owned electric vehicles is strictly prohibited. Personnel are allowed outside in their personal primary areas of work. However, no smoking is allowed in any personal denied vehicles whether inside or outside.

6. For government employees, the fact that a person smokes has no bearing on the number of breaks personnel are entitled to during the current workday and personal vehicles that affect all employees the same break opportunities consistent with good work practices and accomplishments.

7. Tobacco products include but are not limited to: cigarettes, cigars, and pipes.

8. Electronic cigarettes (e-cigarettes) are considered to be equivalent to tobacco products. However, e-cigarettes are not restricted to DSA and are allowed to be used outside at a minimum distance of 25 feet from building entrances.

Action Line

Team AEDC

I have forwarded this e-mail communication with our Team AEDC employees, and that’s how we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest improvements, enter complaints or get other issues off their chests. They can access the Action Line via the AEDC intranet home page and calling 454-8000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation hasn’t made room, give us a chance.

Col. Scott Cain
AEDC Commander
Arnold AFB STEM gears up for FIRST® LEGO® League Program 2017

By Chris Warner
AEDC Public Affairs

It’s LEGO® time! With the beginning of the new school year, students begin to form and develop their teams (For Inspiration and Recognition of Science and Technology) LEGO League teams and prepare for competition. Each FLL® team will build a robot in accordance with their assigned theme and strategize how to move up through the competition.

The FIRST Program has four leagues: FIRST LEGO® League, FIRST Tech Challenge (FTC), and FIRST Robotics Competition (FRC). Each league is comprised of specific age groups, which allows children to progress into the other leagues as each year of competition goes by.

The 2017 themes are: FLL is In Awe Adventure, FTC is in Hydro Dynasty, and FRC is Storm Watch and a chance to participate.

The Arnold Air Force Base Science, Technology, Engineering, and Mathematics program is sponsoring an event for the FIRST Program teams from schools across the Middle Tennessee region.

Several AEDC team members are participating in the tournament along with a total of 36 players in nine, four-man teams. Mullins believes the tournament gives AEDC personnel an opportunity to gather socially while benefitting a deserving organization to be recognized.

“The performance of our team members and coaches are AEDC team members. The program isn’t just about building robots, it is about challenging students intellectually, developing leadership skills and inspiring creative and inspiration to pursue careers in science, technology, engineering, and mathematics,” Mullins said.

Many of the team’s think outside the box.

Several FLL team members display the $1,000 check representing funds raised for the St. Jude Children’s Research Hospital through the Lightning Classic Golf Tournament Aug. 4 at the Willowbrook Golf Club. AEDC team members pictured, with sponsor signs, are Bruce Prater, Shannan Tate, Stacy Parker, Roy Mullins, Steven Meeks, Colby Cox and Barry McWhorter.

By Raquel March
AEDC Public Affairs

When the Lightning Classic Golf Tournament was coordinated for Aug. 4 at the Willowbrook Golf Club in Manchester, St Jude Children’s Research Hospital was selected to receive the proceeds.

“This tournament was one of many that we’ve had it and involved effort from several people,” said Roy Mullins, AEDC truck driver and tournament director. “This is the first one that’s been held that benefited St Jude. The money is able to donate $1,000 dollars to St Jude.

Several AEDC team members participated in the tournament along with a total of 36 players in nine, four-man teams. Mullins believes the tournament gives AEDC personnel an opportunity to gather socially while benefitting an important cause.

“Several [players] were turned down due to overcrowding issues at the golf course,” Mullins said. “We’re hoping to get started earlier next year to give more people a chance to participate.”

Mullins is making plans for the 2018 tournament. A walk through St Jude Children’s Hospital is a life changing experience,” he said. “We want to think of a more deserving organization to be involved with. We’re hoping to have another tournament in 2018, and we are hoping to beat our 2017 dollar amount.

We have FUN! To create a team or register a team, contact the Arnold AFB STEM coordinator at (931) 454-7906. To learn more about FIRST LEGO League Competition® visit www.firstlegoleague.org.

Arnold AFB STEM team members display the $1,000 check representing funds raised for the St. Jude Children’s Research Hospital through the Lightning Classic Golf Tournament Aug. 4 at the Willowbrook Golf Club. AEDC team members pictured, with sponsor signs, are Bruce Prater, Shannon Tate, Stacy Parker, Roy Mullins, Steven Meeks, Colby Cox and Barry McWhorter. (Courtesy photo)
Implementing safety when working from elevated platforms

Air Force awards two contracts for a new intercontinental ballistic missile weapon system

By AEDC Safety

The Safety Condition Campaign topic for the month of September is Elevated Work Platforms.

Instructions for using elevated platforms can be found in the AEDC Safety, Health and Environmental (SHE) Standard 66 on Aerial Work Platforms. This standard outlines the minimum requirements for the safe use, inspection, and operation of aerial work platforms (AWPs). This standard is applicable to all AEDC employees, contractors, and sub-contractors. Operator training and certification requirements are specified.

Aerial work platforms range from complex articulating devices to manually propelled vertical ladders. Regardless of complexity, they are typically used to provide the worker a safe, elevated platform from which to work. Improper use and operation can result in injury or property damage.

Only trained and certified operators shall operate an AWP on AEDC. Operators shall be certified by the employer and must have valid documentation available. Operators must have read and be familiar with the operating and safety manual, control functions, safety devices, placards, and warnings specific to each AWP operated.

Prior to operation, inspect the work area for hazards such as: overhead and ground level obstructions, electrical hazards, overhead crane operations, other AWPs and vehicles, conflicting work operations, pedestrian and vehicular traffic, slopes, grades, porosity, unstable surfaces, and foul weather including wind speeds above manufacturer limits (do not operate above 30 mph where other instructions are not specified). Select the appropriate type and size of AWP based on the intended use.

Total hazards include: structural failure due to overloading, overturning due to improper operation (i.e., operation on an incline or unstable surface, driving over obstructions or potholes, lifting large (or irregular shaped objects uncontained inside the platform, etc.), electrocution via contact with energized electrical lines, collision with objects, vehicles or pedestrians, or lack of maintenance.

Each year several fatalities and hundreds of injuries result from

September 4, 2017
This month in AEDC history

F-22 Raptor first took flight 20 years ago

The F-22 Raptor took its first flight 20 years ago on Sept. 7, 1997. The jet’s airframe and engines were extensively tested by AEDC test teams at Arnold Air Force Base. Pictured here is the F-22 Raptor engine undergoing Accelerated Mission Testing in the Sea Level 2 engine test facility. (U.S. Air Force photo/Rick Goodfriend)

Pratt & Whitney 4084 arrives at Arnold for initial testing

The Pratt & Whitney 4084 first arrived at Arnold Air Force Base to undergo testing 25 years ago. In the fall of 1992, the engine was the first in a series of high-thrust PW4000 growth engines to undergo development testing at AEDC. The testing led to the certification of the engine the now powers the Boeing 777. (AEDC file photo)

CADDMAS development begins at Arnold

In September 1992, AEDC team members began developing a new parallel processing systems – the Computer Assisted Dynamic Data Monitoring and Analysis System (CADDMAS) – to analyze online and real-time data gathered during turbine engine testing, which allows engineers to make decisions in a changing environment without halting or delaying testing. Pictured is a technician watching as a program engineer completes a systems checkout of the AEDC CADDMAS program in 1995. (AEDC file photo)

Friendly skies

Qatari special operations personnel conduct a military free-fall friendship jump during a static-line and military free-fall parachute training exercise over Qatar, Aug. 21. This marked the first event of its kind conducted between the U.S. and Qatar, allowing the enhanced interoperability between special forces personnel from both nations. (U.S. Air Force photo/Staff Sgt. Trevor T. McBride)

To advertise in the High Mach, call (931) 465-4545
Air Force wide that he considers squad
revitalization. He informed personnel
his number one focus area – squadron
Staff Gen. David L. Goldfein outlined
alone, so I believe in trusting and em
too large for any one person to handle
key to effective leadership-follower
based on the foundation of trust.
warfare, information systems and auto
roles in the fields of cyber, electronic
operations officer who took command of
ously.”
and we take that responsibility very seri
largest sensor network in the Air Force,
to execute their job with
analysis are the best in the business,
figure out what we can do to eliminate
administrators, help desk technicians,
problems. Lack of access can
serious challenges to AFTAC,” Gorski
done tremendous work in providing
continuous, secure communications for
CYCS's shining moments are defined
demand on our customers and
delivered securely and without degrada-
That’s the bottom line.”
loco- tionary, an operational object that
can be transmitted back to the U.S. so ana
data is collected, the information must be
nation the data comes from or how the
data to correctly determine what we can
using hackers or from combative nation-
whether that disruption comes from vari-
simple non-malicious, attention-seek-
it, whether that disruption comes from
threats from those who want to disrupt
AFTAC's nuclear treaty monitoring
by providing mission ass-
AFTAC's global enterprise.
Other teams, AFTAC's treaty moni-
tioning cannot be effectively accomplished
without access to cyber-
space.
"My squadron supports all informa-
tion that AFTAC needs to achieve opera-
tional success," said Maj. Nathan Loyd, the CYCS
"AFTAC is a high-speed, enormously
AFTAC answer that call without fail –
monitoring nuclear treaty compliance is
AFTAC's global enterprise. In other words, AFTAC's treaty moni-
tor cannot be executed without access to cyber-
space.
"Mission Defense Team, focusing on
cybersecurity defensive operations to our
mission critical systems. This pathfinder
initiative takes aim at protecting the mis-
tion's crown jewels. It is an important
shift in posture to ensure AFTAC is able
to execute its treaty monitoring mission
across air, sea, space and cyberspace."

"In today's world, cyber threats pose
critical threats to execute its treaty monitoring mission
across air, sea, space and cyberspace.
"In today's world, cyber threats pose serious challenges to AFTAC,” Gorski
done tremendous work in providing
continuous, secure communications for AFTAC.
missions are balanced without access to cyber-
space.
"Our biggest obstacle is balancing
cybersecurity posture with the need
to protect our cyberspace missions. As a rela-
tively new member of the AFTAC team,
AFTAC's Cyber Capabilities Squad-
rons to be the basic building block of the
force and are most essential team, and
squadron commanders have the most
proficient and longest impact on Airman
and families.
It’s a change Loyd has taken to heart.
"The Air Force is focusing heavily
on reinvigorating the role of squadrons
based on feedback received from vari-
ous climate surveys and strategic plan-
ning meetings," said Loyd. "The chief
staff wants to empower squadrons to
have more authority to make decisions
at the lowest possible level. As a rela-
"Like many organizations through-
out the Air Force, our people-to-people
ratio is not quite right," he said. "I’m
working with my officers, civilian and
senior enlisted leaders within the squad-
on to define where our limitations are,
figuring out what we can do to eliminate
extraneous workloads, and determine
how we can operate more efficiently
with scarce resources.”

Today’s cyber landscape is ever-
evolving and one that sees increasing
threats from those who want to disrupt
the center's nuclear treaty monitoring
mission. "In the world today, cyber threats pose serious challenges to AFTAC,” Gorski
said. "Here at AFTAC, access to net-
works play a powerful role in our dai-
ly responsibilities. Lack of access can
significantly impact the effectiveness
of our organization, and that’s why hav-
ing the best people on board – leaders
like Maj. Loyd and his incredibly tal-
ented Airman who form his cyber team
– is crucial to our worldwide mission.
"Countering cyber threats is all about risk manage-
ment, and Maj. Loyd's squadron
deliberately universalizes that threat and takes
every step possible to keep our systems
and networks safe.”

AFTAC mission going strong. (U.S. Air Force photo/Susan A. Romano)
File photo/Tommie Horton)
Five team members inducted as American Society of Military Comptrollers officers

By LaQuisha Highsmith
Arnold AFB Financial Management & Comptroller Division

On Aug. 17, Steve Pas- saro administered the oath of office inducing 2017-2019 American Society of Military Comptrollers - Middle Tennessee Chapter officers. The inductees were Darrell Day, president; Rhonda Ward, 1st vice president; LaQuisha Highsmith, 2nd vice president; Alvada Gaines, secretary; and Angela Teesdale, treasurer.

ASMC is a globally recognized defense resource management organization offering members professional development through education and training with networking opportunities. Active membership brings with it leadership roles and many following sectors: acquiring and financing, career enhancement features. Membership is open to all military, civilian and contractors in the below career enhancement features.

The new board will now develop to develop plans for the upcoming year. For more details on ASMC membership and related opportunities, call 1-800-544-9595 or (931) 454-5905.

Arnold AFB Milestones

By Airman 1st Class Anthony Nin Lactrec

232 Air Base Wing

Public Affairs

JOINT BASE LANGLEY-EUSTIS, Va. (AFNS) – Air Force Airmen prepare to deploy across the globe in support of national objectives every day. To make this possible, installation deployment readiness cells and the unit deployment managers prepare and process members for deployment to unified combatant commands.

If you ask me who bears responsibility for the success of an event, it’s all of us, said Master Sgt. David Southerland, the 1st Maintenance Group UDM, explaining that UDMs guide deployments and requirements, the IDRC covers logistics and oversees planning, and ultimately the deployer has to use the guidance set forth.

Where it all starts

The deployment readiness process starts with the IDRC, which identifies UDMs and control for all deployments at an installation.

New 2017-2019 American Society of Military Comptrollers - Middle Tennessee Chapter officers (left to right) – Angela Teesdale, treasurer; Alvada Gaines, secretary; Darrell Day, president; LaQuisha Highsmith, 2nd vice president; Rhonda Ward, 1st vice president. Air Force photo/Rick Goodfriend

Tammy Taylor, NSD
Kathy Swanson, AF
Danita Marsh, NAS
Michael Glennon, AF
Kathleen Gemma, NAS
Joseph Bowman, NAS
Michael Yockey, nLogic
Benjamin Loveless, NAS

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