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AFIT Graduates Urged to Push DOD into Next 30 Years of Transformation

By Caroline Clauson
88th Air Base Wing Public Affairs

After years of study, research, late nights and long papers, over 200 graduates crossed the stage to receive their diplomas from the Air Force Institute of Technology’s Graduate School of Engineering and Management on March 24 at the National Museum of the U.S. Air Force.

“i’m so glad we are back in this place for our commencement activities,” said Walter Jones, AFIT’s director and chancellor. “it’s been a tough couple of years, but it’s great to be back, and this atmosphere is hard to beat. i am delighted that all of you could join us to recognize the achievements of our graduating students and wish them well in their next assignments.”

The graduating class included 163 Air Force officers and eight NCOs, 25 Space Force officers, five Army officers, three Marine Corps officers and 18 civilians. One international student from South Korea also received his degree.

Of the 223 degrees awarded, the Graduate School conferred 219 master’s degrees and four doctorate degrees in science, technology, engineering and math fields. Two graduates received dual degrees, while two master’s students and seven doctoral alumni who graduated earlier in the academic year returned to participate in the ceremony.


Secretary of the Air Force Frank Kendall, the ceremony’s guest speaker, charged graduates to expand their new expertise into influence and recognize themselves as the catalyst for swift and innovative change that can meet current threats.

“You as AFIT graduates have the knowledge to advise your services and your nation’s leaders,” Kendall said. “Don’t be the ‘yes’ person who changes when I change and nods when I nod. You have the education and experience to be the person who uses data and reason to advise senior leaders, even when your ideas might not be popular.

“You must use this education and your ability to be an adviser and mentor and speak truth to power when you know something needs to be fixed. You are now action officers of modernization and therefore of freedom and democracy.”

Others officials in attendance included Maj. Gen. William G. Holt II, commander of the Curtis E. LeMay Center for Doctrine Development and Education, as well as Air University vice commander; Heidi Ries, AFIT provost and chief academic officer; Col. Paul Harmer, Air University Detachment 1 commander; and Adedeji Badiru, dean of the Graduate School.

“We can prevail in this competition between democracy and autocracy, but we don’t have time to waste,” Kendall said. “We need your leadership and your academic background to push the Department of Defense into the next 30 years of transformation, of unbridled innovation, of capability development.

“I look to you and your generation to be the leaders we need. You will make history as those military and civilian professionals who ensure America and its allies prevail. Before you receive your graduation certificates tonight, I want you to remember that you must use this education that your service has given to you to be the voice who speaks up for the change we need. Work quickly to ensure you create or design what our services need.”
International Collaboration and Spring Graduation Highlight First Quarter Activities

This year has been exceptionally exciting so far. Coming on the heels of the well-received Hypersonics-themed December 2021 issue of the AFIT Engineer, we now bring you the 2022 March graduation issue, with coverage of Secretary of the Air Force Frank Kendall, as our March graduation guest speaker. As the front-page caption surmises, SEC AF Kendall, in his address, urged AFIT graduates to push DOD into the next thirty years of transformation. In this regard, transformation is expected to be multi-faceted, and not limited to technological transformation. Broadly speaking, AFIT is at the forefront of many transformation initiatives, including technical innovation, research advancement, teaching excellence, process improvement, and workforce development.

Rather that steal and echo the thunder and lightning (scrolling) through the pages to read it all yourself. You will be amazed by what our faculty, students, staff, and administrators are accomplishing locally, regionally, nationally, and internationally in teaching, research, and service.

I particularly call your attention to the international collaboration news on page nine. We are delighted to be hosting two exchange visitors from Germany, Dr. Nils Wagenknecht and Mr. Andreas Mertens, who are, respectively, on ESEP (Engineering and Science Exchange Program) and APEP (Administrative and Professional Exchange Program) from the German Ministry of Defense. Within just a few months, they have both made tremendous contributions to AFIT’s international and interdisciplinary research collaboration. They have presented a paper at a STEM conference, co-authored a forthcoming refereed journal article, and contributed to the manuscript for a handbook of AFIT’s technical publications. Based on this template of exchange success, we are looking forward to hosting additional exchange visitors from Germany and other allied countries in the coming months and years. Details and updates will be published in future issues of the AFIT Engineer.

Please join us in the intellectual journey and fellowship of the missions of AFIT. “Go AFIT!”

Adeejé B. Badiru, Ph.D., PE, PMP
Dean, Graduate School of Engineering and Management

Secretary of the Air Force Tours AFIT Prior to Keynote Address at Graduation

Secretary of the Air Force Frank Kendall visited the Air Force Institute of Technology campus on 24 March prior to his keynote address at the Graduate School of Engineering and Management’s commencement ceremony that evening. During his visit, Kendall learned about the defense-focused research the faculty and students accomplish as part of their degree programs. He also toured world-class AFIT centers hearing firsthand from students about their cutting-edge research.

Capt. Tyler Brown, an electrical engineering major’s student, discussed his thesis research on autonomous aircraft via deep reinforcement learning with Kendall during a stop at the Autonomy and Navigation Technology Center. The AFIT center focuses on three research thrusts: autonomous and cooperative systems, non-global positioning system precision navigation, and robust GPS navigation/navigational warfare.

Applied physics major’s student Capt. Benjamin Rinaldi explained his efforts to characterize the effects small nano-sized aerosols can have on lasers and their effectiveness in future military operations with Kendall. Such nano-aerosols are common to both outdoor atmospheric as well as indoor laboratory settings such as found in AFIT’s High Energy Laser (HEL) Lab. Rinaldi’s research advanced a unique method to quantify ambient aerosol optical properties and their effects on HELs in laboratories or in the field, and has implications for both future military capabilities and civil climate assessment studies.

Dr. Steven Fiorino, professor of atmospheric physics and director of the Center for Directed Energy, discussed the Multi-Spectral Targeting System (MTS) flown on USAF Reaper aircraft. The MTS will be used to profile atmospheric properties so that students can research and develop methods to enhance both future laser capabilities and reconnaissance/surveillance sensor systems.

Fiorino also demonstrated new miniaturized optical turbulence sensors integrated on AFIT’s small unmanned aircraft system (SUAS). With the aid of SUAS pilots students can profile atmospheric effects at any point along a laser’s path in the lower atmosphere.

Additional tour stops provided Kendall with a broad introduction to the applied and experimental research conducted by AFIT students and faculty. The tours emphasized how AFIT prepares students with the skills required to maintain the world’s best Air and Space Force with the recognition of research as a critical element in quality graduate education.
The AFIT chancellor is authorized to designate no more than 10 percent of each graduating class as Distinguished Graduates. The criteria for identifying DG achievement encompasses academic scores, the “whole person” concept based on professional qualities, and the recommendation of the department heads to ensure the students are deserving of the honor associated with DG. The DGs for the class of 2022 were:

- Capt. Patrick Assef (M.S. Systems Engineering)
- Capt. Tyler Brown (M.S. Electrical Engineering)
- Capt. Charles Carr (M.S. Astronautical Engineering)
- Capt. Zachary Cleveland (M.S. Atmospheric Science)
- Capt. Jacob Hatzinger (M.S. Systems Engineering)
- Capt. Mark Kurtz (M.S. Space Systems)
- Capt. Jedidiah Langlois (M.S. Engineering Management)
- 2nd Lt. Austin Logan (M.S. Operations Research)
- Capt. Kaiana Miller (M.S. Cost Analysis)
- Capt. Zachary Moer (M.S. Engineering Management)
- 2nd Lt. David Mottooe (M.S. Operations Research)
- Capt. Niko Petrocelli (M.S. Computer Engineering)
- 1st Lt. Guillermo Salcido (M.S. Electrical Engineering)
- Capt. Brady Weaver (M.S. Acquisition and Program Management)

Dean’s Award Winners
The Dean’s Award recognizes the most exceptional master’s thesis by a graduating student within each academic department. Award determination is based on the master’s thesis reflecting the most exceptional contribution to scientific, management, or engineering knowledge. Each individual was competitively selected by their respective academic department.

- Mathematics and Statistics Department
  Capt. Alexander Contarino (M.S. Applied Mathematics)

- Electrical and Computer Engineering Department
  Capt. Andrew Dittrich, USSF (M.S. Electrical Engineering)

- Engineering Physics Department
  Capt. Tyler Dolezal (M.S. Applied Physics)

- Operational Sciences Department
  2nd Lt. Andrew Mango (M.S. Operations Research)

- Systems Engineering and Management Department
  2nd Lt. Owen Sedej (M.S. Environmental Engineering and Science)

- Aeronautics and Astronautics Department
  Capt. Charles Carr (M.S. Astronautical Engineering)

Chancellor’s Award Winner
From the collection of Dean’s Award recipients, one overall winner is chosen to receive the Chancellor’s Award. The Chancellor’s Award is presented to the graduating student who produced the most exceptional master’s thesis. The 2022 Chancellor’s Award and Russ Prize, sponsored by the AFIT Foundation, went to Capt. Andrew Dittrich, USSF (M.S. Electrical Engineering).
AFIT Supports Student and Faculty Excellence with New Center

The Center for Innovation in Education at the Air Force Institute of Technology supports excellence in teaching, learning, and research by facilitating collaboration, showcasing best practices and technologies, and supporting writing and publication. Specific services offered by the CIE include writing assistance, support with accessing and using educational technology, workshops, and a quarterly book club.

“The nature of education has changed so rapidly over the last two decades that we really needed a place where faculty, students, and staff can come to learn about new innovations in education technology, and receive help with communication skills, writing, and presentations,” said Dr. Alice Grimes, CIE lead and director of faculty development within AFIT’s Graduate School of Engineering and Management.

The CIE team conducted focus groups to facilitate the development of programs and services in writing and educational technology. Since opening in the fall of 2021, the CIE team has conducted workshops on faculty learning communities, writing and educational technology, workshops on faculty learning communities, and those getting geared up to start their thesis or dissertation, and then also with students, faculty, and staff.

“I am grateful having had the opportunity to be involved in the creation of this writing lab and work with me,” said Stoermer. “Traditionally, I think writing centers at universities just have that student focus, but here we’re also able to bring some of those resources to faculty as well, both for their own research and publication, or as they work with students on their thesis or dissertation, and then also with staff who are working on their own reporting or business writing,” said Carolyn Stoermer, CIE writing and communications specialist.

The impetus for creating the CIE came from activities surrounding AFIT’s reaccreditation process completed in 2021. AFIT followed the Higher Learning Commission’s Open Pathway option for reaccreditation which focuses on quality assurance and institutional improvement through the development of a Quality Initiative Proposal. The purpose of AFIT’s CIE is to identify ways to improve the learning experience for students and the teaching environment for all instructional personnel. Faculty and staff from across AFIT’s schools serve on CIE committees and one of the recommendations was to develop a teaching and learning center.

Located in the D’Azzo Research Library, the CIE offers space for collaboration, team meetings, and individual work stations. In-person or virtual consultation and collaboration appointments are also offered to students, faculty, and staff.

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AFIT International and Interdisciplinary Research Collaboration Focuses on Systems Integration

Dr. Adeleji Badinu, dean of the Air Force Institute of Technology’s Graduate School of Engineering and Management, collaborated on a research paper with Dr. Nils Wagenknecht and Andreas Mertens, two German exchange officers at AFIT. The paper titled “Mathematical and Graphical Representation of Systems Integration in DEJI Systems Model” was also co-presented at the 47th Dayton-Cincinnati Aerospace Sciences Symposium on 8 March at the Sinclair Pointz Conference Center in Dayton.

“In these days of global collaboration, it is essential to incorporate the diverse technical opinions of our international colleagues,” said Badinu. “I am delighted to have our German colleagues, Dr. Wagenknecht and Mr. Mertens, collaborating with AFIT on this important topic.”

The paper addresses the use of the design, evaluation, justification, and integration systems model as an avenue through which systems modeling research can be conducted to develop quantitative metrics for assessing the existence or value of systems integration beyond qualitative rhetoric.

Badinu is the developer of the trademarked DEJI Systems Model and is an expert in the areas of mathematical modeling, project modeling and analysis, economic analysis, systems engineering models, and efficiency/productivity analysis and improvement. Mertens brought an extensive expertise of cost benefit analysis to the project while Wagenknecht addressed legal norms and merits of systems integration.

“I am grateful having had the opportunity to be involved in the creation as well as the co-presentation of the research paper. The fascinating variety and applicability of the integrative approach of the DEJI Systems Representation of Systems Integration in DEJI Systems Model” was also co-presented at the 47th Dayton-Cincinnati Aerospace Sciences Symposium on 8 March at the Sinclair Pointz Conference Center in Dayton.

Dr. Robert “Daw” Fass, AFIT Assistant Professor of Cost Analysis and System Integration, received the 2022 Educator of the Year award from the Dayton Chapter of the International Cost Estimating & Analysis Association (ICEAA). The award is given to an individual who has made significant education and training contributions in cost estimation and analysis. Specifically, recipients of this award have demonstrated excellence in their contributions disseminating knowledge and building proficiency of the next generation of successful cost estimators and analysts.

Assistant Professor Named 2022 Dayton Chapter ICEAA Educator of the Year

Dr. Robert Fass was nominated by his students for the award. Students commended his course design, preparedness, and commitment to their success. Additionally, they praised the teaching and technological adjustments Fass made for the COVID pandemic. They enjoyed taking part in an original experiment he designed and conducted related to training subject matter experts (SMEs) to better understand probability theory.

While teaching courses in managerial economics, decision analysis, risk analysis, engineering economics, and cost analysis, Fass collaborates with his students on DoD acquisition system related research. His research interests are wide and often cross-disciplinary, with his most recent research projects related to SME elicitation, engineering change orders, the costs and benefits of preventative medicine for Air Force fighter pilots, and Monte Carlo simulation based estimation methods.

The 2020 National Defense Authorization Act (NDAA) mandated that acquisition career fields realign their certification requirements based on the nationally-recognized standards of an accredited third party. Fass holds a current Certified Cost Estimator/Analyst (CCEA®) designation from ICEAA, and actively teaches the CCEA® Exam, which is the only US-based accredited certification in the field of cost engineering. Fass is also an active member of the newly formed Certified Estimating & Analysis (CEBa®) designation from ICEAA, and actively teaches the CCEA® Exam, which is the only US-based accredited certification in the field of cost engineering.
AFIT Team Partners with Army to Gather Nuclear Forensics Data

If a radiological dispersal device, sometimes called a dirty bomb, were to detonate in the United States, soldiers would deploy alongside the Federal Bureau of Investigation, Air Force Technical Applications Center, and the Department of Energy to collect nuclear forensic samples used to determine the type and source of the bomb. Because the samples could be evidentiary, the FBI maintains a chain of custody. Due to the mission’s logistical constraints, it could take days before the samples reach a national lab for analysis.

To address this issue, Army Lt. Col. Christita Dugan, assistant professor of nuclear engineering and the deputy director of the Nuclear Expertise for Advancing Technologies Center at the Air Force Institute of Technology, received a research grant through AFIT’s Scientific Test and Analysis Techniques Center of Excellence from the Department of Homeland Security to determine if samples collected by soldiers could be hosted on site to identify nuclear signatures that may have decayed to a daughter isotope prior to national laboratory analysis.

That data collection process is something Dugan is very familiar with having served as the nuclear disablement team chief for the 20th Chemical Biological Radiological Nuclear Explosives Command. Her relationship enabled her and two students to partner with the 20th CBRNE Nuclear Command’s Disablement Team Three on a training mission at the Nevada National Security Site in October 2021. Army Maj. Christopher Sutphin, a nuclear engineering major’s student, is working with 1st Lt. Ashwin Rao, an AFIT doctoral student, to complete the data analytics on the samples.

“I have been using these portable devices for my research over the last three and a half years, but never had the opportunity to evaluate them in an operational setting,” said Rao. “It was amazing to finally be able to apply these analytical devices in the field on real nuclear debris at these historic test sites. As students, being able to translate research to a practical military environment helps bridge the gap between academia and the operational world.”

AETC Chief Learning Officer Looking Forward to AFIT Collaboration

Air Education and Training Command’s new chief learning officer, Dr. Wendy Walsh, visited Wright-Patterson AFB in February to develop awareness of the learning requirements, capabilities and capacities at the Air Force Institute of Technology, Air Force Research Laboratory, Air Force Materiel Command, and the National Air and Space Intelligence Center.

“Starting at Wright-Patterson, you can see the Air Force is doing so much with artificial intelligence, big data, cybersecurity,” said Walsh. “If the Air Force continues to lead in that space, the Air Force is going to have a very bright future.”

During her time at AETC, Walsh toured research centers and met with faculty and students to understand how AFIT’s graduate and professional continuing education enables the execution of the Department of the Air Force’s mission.

“Dr. Walsh learned about the new major command, AFRL’s initiative to study hypersonics, and the university’s research into alternative fuel engines,” said AFIT provost and chief academic officer, Dr. Heidi Ries, AFIT provost and chief academic officer. “I look forward to both new and strengthened collaborations as a result.”

Walsh also met with the leaders of AFIT’s new Center for Innovation in Technology and AFRL’s director of the Center for Autonomous Systems and Technology to discuss opportunities for continued collaboration to advance force development through learning, technology, and innovation, Walsh said. "I look forward to continued collaboration to advance force development through learning, technology, and innovation," Walsh said.

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“My time at Wright-Patterson has been impressive and inspiring,” said Walsh. “AFIT shared a broad view of the Air Force learning network in action. The interconnection and synergy between AETC, AFIT, AFRL, AFMC, NASP, the 711th Human Performance Wing and the National Museum of the U.S. Air Force are incredible assets for enterprise learning.”

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“Dr. Walsh’s valuable insights and enthusiastic engagement during her visit will advance AFIT’s educational partnerships internal to the DAF, with other federal agencies and with civilian institutions,” said Dr. Heidi Ries, AFIT provost and chief academic officer. “I look forward to both new and strengthened collaborations as a result.”

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AY 2020-2021 POST-GRADUATION STUDENT ASSIGNMENTS

The post-graduation student assignments chart below details MS and PhD graduates’ assignments immediately following graduation. Percentages reflect the percent of the graduating class who were placed into the specified organization. This data was gathered from 336 AFIT alumni from academic year 2020-2021.

Source: AFIT Alumni Affairs and Institutional Advancement Office
Dr. Darryl Ahner, dean for research within the Air Force Institute of Technology’s Graduate School of Engineering and Management, received the Office of the Secretary of Defense Medal for Exceptional Civilian Service for his leadership, commitment, and professional expertise as the director of AFIT’s Scientific Test and Analysis Techniques Center of Excellence. The Office of the Secretary of Defense Medal for Exceptional Civilian Service is the OSD’s highest level career milestone award.

The STT COE consists of an interdisciplinary group of test and evaluation professionals dedicated to improving the planning, execution, and assessment of test and evaluation methodologies. Ahner served as STT COE director from its inception in 2012 until his promotion to dean for research in 2021. He was presented the award virtually by Christopher Collins, SES, director of Developmental Test, Evaluation, and Assessments within the Office of the Under Secretary of Defense for Research and Engineering.

Ahner was recognized for creating and leading a center of 45 highly-educated experts dedicated to modernizing the Department of Defense’s culture of test and evaluation. His efforts culminated in managing a $17 million yearly budget while enabling defense and homeland security test and evaluation interests across nine lines of effort supporting the objectives of the 2018 National Defense Strategy. He created a unique systems engineering and test hybrid process that improved rigor and effectiveness for 65 major defense acquisition programs, generating more than $294 million in cost savings.

“While this is an individual award, I share it with the great professionals within the STT COE and the office of Developmental Test, Evaluation, and Assessments,” said Ahner. “It’s a testament to surrounding yourself with great professionals and staying out of their way.”

A registered professional engineer and professor of operations research, Ahner has written over $17 million in annual budget and $204 million in cost savings to DoD.

70 technical articles, over 100 technical presentations, and has led several technical working groups. He is an active member of the Military Operations Research Society, Institute for Operations Research and the Management Sciences, International Test and Evaluation Association, and the American Society for Engineering Education.

AHNER’S ACCOMPLISHMENTS

Dr. Willie Harper, AFIT Professor of Environmental Science, received the 2022 Association of Environmental Engineering and Science Professors (AEESP) Distinguished Service Award. The AEESP is composed of professors who engage in scholarship in the sciences and technologies related to environmental quality. The Distinguished Service Award is given to the individual who exhibits excellence while fulfilling a three-year term of service on the AEESP Board of Directors.

Since being elected to the Board in 2019, Harper has made a number of significant contributions. He developed AEESP’s statement of core values, which includes its commitment to diversity and professional ethics. Harper expanded efforts to prevent sexual assault by disseminating policies and best practices related to personal conduct in the workplace. He also revised the bylaws for the AEESP Foundation, designed membership surveys, reviewed grant applications, and participated in long-term strategic planning. Harper also provided oversight for several AEESP subcommittees. Harper’s participation on the Board has had a positive impact on AFIT outreach efforts. More people learned about AFIT, its military-focused mission, and the research opportunities that exists with the DoD. For example, Harper informed AEESP members about the AFRL Summer Faculty Fellowship program (SFFP) and opportunities to collaborate with AFIT. As a result, junior faculty from California State University, Fullerton and Marshall University will be participating in the 2022 SFFP.

Harper will receive a plaque for the Distinguished Service Award in June 2022 at the AEESP Research and Education Conference in St. Louis, Missouri.

Awards & Recognition

Graduate School Professor Wins 2022 AEESP Distinguished Service Award

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AHNER’S ACCOMPLISHMENTS
AFIT-USFA Data Science Cooperative Team Excels at CogPilot Datathon Challenge


The Challenge was created to leverage innovative AI research from Airmen, Guardians and the public to optimize USAF pilot training. The objective was to explore how quantitative performance measurements and multimodal physiological data can provide more individualized and accurate assessment of a student pilot’s cognitive state than current subjective, one-size-fits-all approaches. The additional level of cognitive state estimation can then be used to refine an individual’s training curriculum and improve the pilot training process.

The Challenge consisted of using multimodal sensor data (e.g., heart rate and eye-tracking) to predict a flight’s difficulty and regress pilot error. The AFIT-USFA team won five of the 10 awards for which it competed. The team awards included: • Flight Difficulty Prediction (Best Model) • Pilot Error Regression (Runner Up) • Most Innovative Approach • Most Interpretable Model • Best Pitch

In addition to these team awards, Capt. Matthew Grimm, a 2019 M.S. Computer Engineering AFIT alum, won two separate awards: Most Elegant Solution and Best Model for Pilot Error Regression.

AFIT-USFA alum, Dr. Robert “Bob” Pugh (Ph.D. Applied Physics, 1993), an Air Force Research Laboratory Space Vehicles Directorate expert, was presented the prestigious Peter Haas award at the 2022 Hardened Electronics and Radiation Technology (HEART) Conference.

The Peter Haas award is given annually and is the highest level of recognition the HEART Society offers. The award is for demonstrating “outstanding and innovative technical contributions or leadership in the successful development of U.S. hardened military and space systems.” The HEART Conference is a U.S.-only restricted/classified conference focused on mitigating the effects of nuclear-weapon radiation on defense systems. Pugh was recognized for his life-long contributions in developing advanced radiation-hardened electronics for defense-space and missile systems, and for his service to the HEART community. He has held several society and conference positions, including leading the preparation of two classified HEART short courses on weapons effects and mitigation.

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AFIT Alum Named Editor-in-Chief of Military Ops Research Journal

Dr. Edward Pohl has been named editor-in-chief of the Military Operations Research Journal.

Dr. Pohl received his Ph.D. in systems and industrial engineering from the University of Arizona. He holds an M.S. in systems engineering from the Air Force Institute of Technology, an M.S. in reliability engineering from the University of Arizona, an M.S. in engineering management from the University of Dayton and a B.S. in electrical engineering from Boston University.

His primary research interests are in risk, reliability, engineering optimization, health care and supply chain risk analysis, decision making and quality. Pohl is a certified professional engineering manager. He is a Fellow of IEEE, ASEM and SPIE. He is a Senior Member of IEEE and ASQ, a Diplomate in the Society of Health Systems, and a member of INCOSE, INFORMS and IAHMM.

New Director of Las Vegas Parks and Recreation

Lt. Col. (Ret) Steven Ford (M.S. Engineering & Environmental Management, 1993) was selected as the new Las Vegas Parks and Recreation director.

Most recently, Ford served as the acting director of Parks and Recreation, and as the city engineer. During his short tenure with Parks and Recreation, Ford has overseen more than 20 capital improvement projects, advocated for competitive rates for hard-to-fill hourly positions and balanced the department’s budget.

SOURCE: Director of Communications, City of Las Vegas, NV

Honey Confirmed as Deputy Under Secretary of Defense for Research and Engineering

Dr. David Honey (M.S. Engineering Physics, 1989), was recently confirmed as the DoD Deputy Undersecretary for Research and Engineering. In this role, he assists the Under Secretary and Chief Technology Officer in managing research, development, and prototyping activities across the Department of Defense (DoD) enterprise. He also helps oversee the activities of the Defense Advanced Research Projects Agency (DARPA), the Missile Defense Agency (MDA), the Defense Innovation Unit (DIU), the Space Development Agency (SDA), the DoD Laboratory and Engineering Center enterprise, and the Under Secretary’s staff focused on developing advanced technology and capability for the U.S. military.

Dr. Honey is a retired U.S. Air Force Lieutenant Colonel who began his military career as a pilot in the B-52D and its model bombers and the FB-111 fighter bomber, and later transitioned into managing a wide variety of R&D programs.

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Read the NASA Marshall Star News: https://e.afit.edu/93201

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Alum Named Editor-in-Chief of Military Ops Research Journal

By Tamara O. Ellenbecker

Ed Pohl, professor and head of the Industrial Engineering Department, was recently announced as the editor-in-chief of the Military Operations Research Society Journal. The journal publishes articles that describe operations research methodologies and theories used in key military and national security applications.

Pohl joined the University of Arkansas in 2004. Before coming to Arkansas, he spent 21 years in the United States Air Force, where he served in a variety of engineering, operations analysis and academic positions. Previous assignments include the deputy director of the Operations Research Center at the United States Military Academy, operations analyst in the Office of the Secretary of Defense, where he performed independent cost schedule, performance and risk assessments on major acquisition programs; and as a munitions logistics manager at the Air Force Operational Test Center.

Pohl received his Ph.D. in systems and industrial engineering from the University of Arizona. He holds an M.S. in systems engineering from the Air Force Institute of Technology, an M.S. in reliability engineering from the University of Arizona, an M.S. in engineering management from the University of Dayton and a B.S. in electrical engineering from Boston University.

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Many of the Graduate School of Engineering and Management’s theses and research projects completed under faculty supervision are funded in part by other Department of the Air Force, DoD and government units and agencies. Often, this funding results from collaboration between faculty and thesis sponsors and occurs when the research project can be leveraged by the purchase of equipment or services not otherwise available. The table directly below summarizes external funding awards for FY21 while the bar chart at the top of the next page shows new funding received per fiscal year from FY09-FY21. The pie charts at the bottom of the next page show the breakdown of FY21 external awards by sponsor with a more specific breakdown by AFRL Technology Directorates.

### FY21 External Funding Awards

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<tr>
<th>DEPARTMENTS</th>
<th>Total FY21 Newly Awarded Projects</th>
<th>Total FY21 Research Expenditures</th>
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<tbody>
<tr>
<td>Mathematics &amp; Statistics (ENC)</td>
<td>4</td>
<td>124 196</td>
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<tr>
<td>Electrical &amp; Computer Engineering (ENG)</td>
<td>54</td>
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<tr>
<td>Engineering Physics (ENP)</td>
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<tr>
<td>Operational Sciences (ENS)</td>
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<tr>
<td>Systems Engineering &amp; Management (ENV)</td>
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<td>1,380 1,025</td>
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<tr>
<td>Aeronautics &amp; Astronautics (ENY)</td>
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<td>4,439 3,938</td>
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<td><strong>TOTAL</strong></td>
<td><strong>242</strong></td>
<td><strong>29,906 27,016</strong></td>
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<th>RESEARCH CENTERS</th>
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<tr>
<td>Autonomy and Navigation Technology (ANT)</td>
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<td>Center for Cyberspace Research (CCR)</td>
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<td>Center for Directed Energy (CDE)</td>
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<td>Center for Operational Analysis (COA)</td>
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<td>Center for Space Research and Assuranc (CSRA)</td>
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<tr>
<td>Center for Technical Intel Studies &amp; Research (CTISR)</td>
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<td>2,267</td>
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<tr>
<td>Nuclear Expertise for Advancing Technologies (NEAT)</td>
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<td>2,027</td>
<td>983</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>122</strong></td>
<td><strong>15,197</strong></td>
<td><strong>14,191</strong></td>
</tr>
</tbody>
</table>

*AFRL is AFIT’s largest single sponsor: $9.2 Million from multiple components*
MISSION
To produce outstanding technical leaders in the Department of Defense by providing superior graduate education built on defense-focused research.

VISION
To be internationally recognized as the school of choice in engineering and applied science for defense-focused and research-based graduate education.

APRIL 2022
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Dayton, OH  I  26-28 Apr 2022

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AFIT Graduate School Summer Quarter Registration Begins
AFIT Campus, WPAFB, OH  I  02 May 2022

JUNE 2022
AFIT Graduate School Spring Quarter Classes End
AFIT Campus, WPAFB, OH  I  03 Jun 2022

AFIT Graduate School Spring Graduation (No Ceremony)
AFIT Campus, WPAFB, OH  I  16 Jun 2022

AFIT Graduate School Summer Quarter Classes Begin
AFIT Campus, WPAFB, OH  I  27 Jun 2022

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