

# NEWS

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Twelve public servants from a number of federal agencies will be honored at the 76th annual Arthur S. Flemming Awards. The winners are recognized for performing outstanding service in the fields of applied science and engineering, basic science, leadership and management, legal achievement, and social science, clinical trials, and translational research.

Exceptional employees with three to 15 years of federal service are nominated by their agencies and selected through a competitive judging process. The awards are presented by the Arthur S. Flemming Awards Commission, in partnership with the George Washington University Trachtenberg School of Public Policy and Public Administration (TSPPPA) and the National Academy of Public Administration (NAPA).

“Dedicated and inspiring career leaders who pursue the public interest for us all are more valuable than ever,” Kathryn Newcomer, president of the Arthur S. Flemming Awards Commission and a professor of public policy and public administration at GW, said. “It is an honor to celebrate these outstanding leaders in government.”

Established in 1948, the award is named after Arthur Sherwood Flemming, a distinguished government official who served seven presidential administrations of both parties, most notably as Secretary of Health, Education, and Welfare under President Dwight Eisenhower. He was a two-time recipient of the Presidential Medal of Freedom, first from President Eisenhower in 1957 and then from President Bill Clinton in 1994, two years before his death.

“The National Academy of Public Administration is honored to co-sponsor the Arthur S. Flemming Awards,” said James-Christian Blockwood, President and CEO of the Academy. “Each award recipient has a unique and compelling story—marked by excellence, service to others and enduring impact. It is a special distinction shared by only 12 people each year, and it’s important to recognize the outstanding contributions these individuals are making across our country.”

The Flemming induction ceremony will take place on Sunday, November 2, 2025, at the National Academy of Sciences Building in downtown Washington, D.C., as part of the National Academy of Public Administration’s Academy Fall Meeting.

**The 2024 Arthur S. Flemming Award recipients are:**

## *Applied Science and Engineering*

Dr. Amara Holder – U.S. Environmental Protection Agency

Thanks to Dr. Amara Holder, communities around the world are better prepared to face the challenges of unhealthy air due to wildfires and other critical emissions sources. Not content with using her position to contribute to incremental progress in emissions science, she has developed innovative, solution-driven technologies advancing the ability to measure hazardous air pollutants, including previously unquantifiable wildfire emissions. She created novel methods for a national network of low-cost sensors, improving their performance under extreme wildfire conditions. Her work with EPA's AirNow Fire and Smoke map resulted in national access to accurate, real-time air quality information during fire and smoke emergencies. Realizing that helping communities know when air quality was dangerous was only half the battle, she also developed low-cost indoor air cleaners to directly support communities and protect public health. Her research has established robust National Emissions Inventory estimates that feed into global air quality and climate models. Dr. Holder's research has improved air quality and public health worldwide, particularly in communities that have traditionally been neglected.

Dr. Julie Hess – U.S. Department of Agriculture, Agricultural Research Service

Ultra-processed foods (UPFs) have emerged as a potential area of concern for healthy diets with many scientific and consumer articles highlighting associations between UPF consumption and adverse health consequences. Dr. Julie Hess designed and led research studies evaluating the role of processing levels on healthy diets. Her research shows that increasing levels of processing does not necessarily diminish nutrient density or dietary quality. Additionally, less processed food does not guarantee healthy dietary patterns. Dr. Hess has developed a healthy diet plan that contains more than 90% energy from “ultra-processed” foods that aligns with recommendations from the 2020–2025 Dietary Guidelines for Americans. Dr. Hess's research focuses a critical lens on this understudied but important facet of nutrition, especially when considering access to affordable food products that are shelf stable. The clarity her work brings to this important topic is of immense value to a range of USDA stakeholders, the academic community, consumers, and the food industry.

Shannon Duff – National Institute of Standards & Technology

Shannon Duff is recognized for her outstanding federal service in establishing a program to produce sensor arrays for measurements of the cosmic microwave background. Under Ms. Duff's direct involvement and leadership, this program has increased the capabilities of individual sensors, size of arrays, and array production rate. Composed of thousands of

microfabricated superconducting sensors cooled to temperatures near absolute zero, these arrays image faint microwave signals from the earliest light. Ms. Duff's pioneering work enables instruments that measure the most fundamental properties of the universe, including its age, rate of expansion, and the densities of regular matter, dark matter, and dark energy. A recent key milestone was her delivery of over 70,000 sensors spread over forty silicon wafers for the most powerful observatory of its kind. These successes have prompted an even more expansive distributed observatory with multiple government agency stakeholders. The innovative processes developed by Ms. Duff's program have been applied to additional emerging applications, including circuits for quantum computing and infrared light detection.

### ***Basic Science***

Dr. Benjamin D. Prince – United States Air Force, Air Force Research Laboratory, Space Vehicles Directorate

Dr. Benjamin D. Price distinguished himself as a Senior Research Chemist at the Space Vehicles Directorate, Air Force Research Laboratory, Air Force Materiel Command, Kirtland Air Force Base, New Mexico, from 1 January 2024 to 31 December 2024. During this period, Dr. Prince served as the leading scientific authority for electric propulsion technologies, space weather-induced satellite anomalies, and optical sensing of thruster plumes. His work transformed the field of electric propulsion with his groundbreaking insights into Hall effect thrusters, fundamentally reshaping how we model and simulate plasma plumes. Dr. Prince pioneered advancements in remote sensing through optical emission spectroscopy, while also revolutionizing military spacecraft station-keeping activities. To accelerate his research into operations, he would initiate and lead flight experiments to test out and demonstrate new cutting-edge capabilities. These efforts provided critical flight heritage and on-orbit validation of these novel technologies. As a result, Dr. Prince's work has had a profound and lasting impact upon national security. The distinctive accomplishments of Dr. Prince reflect great credit upon himself and the Department of the Air Force.

Dr. Laura Sinclair – National Institute of Standards & Technology

Dr. Laura Sinclair has pioneered femtosecond free-space optical time-transfer, enabling unprecedented precision in timekeeping. Over her 12 years at NIST, she has authored nearly all foundational research in this field, and currently leads teams that continuously shatter the limitations of the then-state-of-the-art technology. Her innovations demonstrated a thousand-fold improvement over GPS-based time-transfer and established the groundwork for vital ground-to-satellite links. Her work is critical for adopting optical clock-based timekeeping, the future redefinition of the second, and advancing applications such as distributed black hole imaging,

quantum networks, advanced navigation, and chronometric geodesy. Traditional time-transfer methods are constrained by picosecond-level performance, insufficient to support state-of-the-art optical clocks. Dr. Sinclair's unique integration of fast digital signal processing and Nobel Prize-winning laser frequency comb technology has enabled her team to achieve attosecond control of light fields, breaking the picosecond barrier while operating at ultra-low power. These breakthroughs will facilitate global femtosecond-level timing networks with accuracies on the order of one second in 32 million years and numerous exciting measurement capabilities based on those networks.

### ***Leadership and Management***

Dr. Michelle Stephens – National Institute of Standards & Technology

Dr. Michelle Stephens, of the Applied Physics Division in PML, is being recognized in the Leadership-Management category for advancing the accurate measurement of infrared and optical radiation required for defense and fundamental science, such as determining the output of high-power lasers, accurately measuring the Earth's radiation budget from space, and detecting and counting single photons of light. Her team developed space-based radiometers to accurately measure essential space-based radiometric variables. In a matter of years, her team provided CubeSat instruments that are ten times more sensitive and one-tenth the cost of legacy instruments. Her leadership in this technology is critical to the NASA Libera program, which will ensure the accuracy and continuity of key radiometric quantities for modeling and predicting Earth's energy balance. Her leadership is also central to programs in fundamental science seeking more sensitive and accurate measurements of gravitational waves. Dr. Stephens additionally leads the creation of the world's first measurement service to calibrate detector efficiency at the faintest light levels—single photons of critical importance to the nascent quantum industry.

Dr. Supriyo De – National Institutes of Health, National Institute on Aging

Dr. Supriyo De's leadership and vision have materialized in the establishment of a thriving genomics and data science program with a major training component at the National Institute on Aging, NIH. He has been the primary force in establishing state-of-the-art high-throughput omics tools and data analysis infrastructure, including on-premises cloud computing at NIA-IRP. These efforts have paved the way for important discoveries in the fields of aging and age-related pathologies including Alzheimer's Disease. He has been instrumental in establishing robust communication and collaboration with the NIH Bethesda campus; this direct line of scientific exchange has been appropriately termed the "Baltimore-Bethesda Bridge over Interstate-95".

Finding a solution for healthy aging and a cure for Alzheimer's Disease are priorities for Americans and societies all over the world. Dr. De has established the infrastructure to move this priority research a major step forward. Throughout his journey as a federal employee and leader, he has recruited trainees and staff with a wide range of expertise and has encouraged cutting-edge interdisciplinary scientific research.

Dr. David C. Goff, Jr. – National Institutes of Health, National Heart, Lung, and Blood Institute

Dr. David C. Goff, Jr. superbly guides a \$2.1 billion cardiovascular research portfolio, spanning basic through clinical research across the lifespan. He has played a critical role in setting the nation's cardiovascular research agenda, while being an exemplary leader of his Division (Division of Cardiovascular Sciences, National, Heart, Lung, and Blood Institute). Dr. Goff led the Division's Strategic Vision Implementation Plan, providing a roadmap of gaps and opportunities for researchers worldwide. Additionally, he has expertly led NHLBI-wide Data Science efforts to optimize and democratize the use of NHLBI-funded research datasets and biospecimens by the scientific community at large. He brought his extraordinary scientific acumen and leadership skills to launch major, nationwide research initiatives, including ENRICH, a trans-HHS program to improve the health of at-risk mothers and babies; MOSAIC, a unique study of health challenges in Asian American, Native Hawaiian and Pacific Islander communities; and HeartShare, a novel public-private collaboration to advance precision treatment of heart failure. In parallel, Dr. Goff has also energized the Division through an unwavering focus on positive workplace culture and inclusive excellence.

Lt. Cmdr. Melissa de Vera – Indian Health Service

Lt. Cmdr. Melissa de Vera, a licensed Professional Engineer and Assistant Director of Management Operations for the Indian Health Service, Office of Environmental Health and Engineering, Division of Sanitation Facilities Construction, has demonstrated exceptional achievements in cross boundary leadership and human capital management. Her work to forge new partnerships with the American Indian Science and Engineering Society, the Department of Energy, and the United States Public Health Service Commissioned Corps' Commissioned Officer Student Training and Extern Program is a testament to the value of collaboration. These partnerships significantly increased the division's human capital to enable the provision of \$3.5B in sanitation projects as part of the Indian Health Service's responsibilities to tribal nations under the 2021 Bipartisan Infrastructure Law. These projects enhanced access to safe drinking water and sanitary waste disposal infrastructure, thereby improving environmental health conditions for American Indian and Alaska Native nations. Her work not only advances equity of access to

public health infrastructure and tribal self-determination but also underscores the importance of working together to make a difference in underserved communities.

### ***Legal Achievement***

Heidi Nielson – U.S. Government Accountability Office

Heidi Nielson serves as a Senior Attorney in the U.S. Government Accountability Office. She has demonstrated outstanding leadership on a unique body of work, resulting in compensation for victims of international state-sponsored terrorism, including victims of the 9/11 terrorist attacks. Ms. Nielson was instrumental in GAO's work designing a framework for and estimating lump-sum payments for previously uncompensated victims of the 9/11 attacks, including their spouses and dependents. Congress responded to the development of that framework with the Fairness for 9/11 Families Act, which provided \$3 billion in payments to those individuals and directed payments be made in the amounts estimated by GAO. Congressional confidence in this groundbreaking work was also reflected in the Act's provision for GAO to estimate payments for additional victims of state-sponsored terrorism—victims of the 1983 Beirut barracks and 1996 Khobar Towers bombings. Ms. Nielson's work has resulted in significant remedial legislation that benefits individuals directly affected by notorious acts of terrorism.

Nick McDaniel – U.S. Department of Justice, Environment and Natural Resources  
Division

Nick McDaniel has distinguished himself both as a prized litigator and a skilled negotiator who, in his ten years with the DOJ's Environmental Enforcement Section, has contributed beyond the call of duty to the Division's many environmental successes. Emblematic of his outstanding legal ability is the landmark settlement in Cummins, achieving the highest ever Clean Air Act penalty of \$1.675 billion, as well as projects to mitigate environmental harm caused by illegal emissions in disadvantaged communities. All told, the court-approved settlement will require more than \$2 billion in penalties and projects, and the recall and repairs of more than 630,000 trucks. The Cummins settlement is just the latest example of a career characterized by excellent strategic insight, collaborative relationship-building with team members and stakeholders, and deep empathy for communities impacted by pollution. Beyond that, Mr. McDaniel is an outstanding colleague who regularly volunteers to support colleagues in need of assistance.

### ***Social Science, Clinical Trials, and Translational Research***

Dr. Sung-Yun Pai – National Institutes of Health, National Cancer Institute

Dr. Sung-Yun Pai, an internationally known pediatric hematologist/oncologist and physician-scientist, has made seminal contributions in the field of inborn errors of immunity and its treatment with allogeneic stem cell transplant and gene therapy. Her work in these ultra-rare diseases, leading trials of up to 50 sites, has transformed the therapeutic approach in these diseases from a one-size-fits-all to personalized gene-specific medicine. At the same time, her investigations have yielded important insights into disease pathogenesis and the impact of specific variants on clinical manifestations and treatment response. She leads a new branch at NCI, deemed Outstanding at its first Board of Scientific Counselors review. While at the intramural NIH, she has further parlayed her prodigious leadership skills into restructuring the transplant and gene therapy community. She reorganized the program into disease and age-focused clinical services, created a program-wide scientific review process, and instituted safety and quality reviews. The additional duties she took on as Medical Director have benefited the entire NIH transplant community, exceeding the expectations of the job for which she was hired.