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A Message From Leadership

As the newly-appointed Director of the Artificial Intelligence & Technology Office, it's my honor to welcome you to the latest edition of AI@DOE newsletter.



I am humbled by the trust and confidence that Secretary Dan Brouillette and Under Secretary for Science Paul Dabbar have placed in me to lay the foundation of -- and to lead -- this important effort at this critical time... the dawn of the Age of AI.

Here at DOE, and across our 17 national labs, I'm blessed to work alongside the best and the brightest minds America has to offer. Our enterprise is uniquely positioned – and already hard at work – to lead in AI's application to our core missions. We have a proud legacy of accelerating technology and scientific discovery and we are driven by a passion to make a difference in people's lives.

My goal will be to build upon that legacy and to harness that passion for the benefit of our country -- and the world -- through the power of AI.

As Secretary Brouillette has stated, "We are in a race for AI supremacy... and this is a race that America MUST WIN."

But DOE cannot do it alone.

Our ability to foster effective partnerships with other agencies, private industry, our academic community and our allies abroad will be essential to our ability compete and lead in the development and adoption of AI.

Winning this race will not be easy. No race worth winning ever is. Our path will not always be clear. There will be struggles and setbacks, but there will also be an abiding sense of teamwork and higher purpose. And if we remain true to both, there will be enormous victories.

Together, we have the power and the obligation to shape the future of AI as a **force for good**, ensure that it reflects our values, preserves our respect for human rights and dignity, and secures our way of life for generations to come. We are at a pivotal moment in history... the dawn of the Age of AI. AI is a tremendous tool that has the ability to improve and save countless lives. How wisely we put this tool to use will make **all the difference** for our country and for the world.

I am eager to join you on this exciting journey – our odyssey of discovery – and experience the exhilaration of helping write the next chapter in human history while protecting all that we hold dear.

Cheryl Ingstad
Director, Artificial Intelligence & Technology Office
U.S. Department of Energy

This Month's Highlights

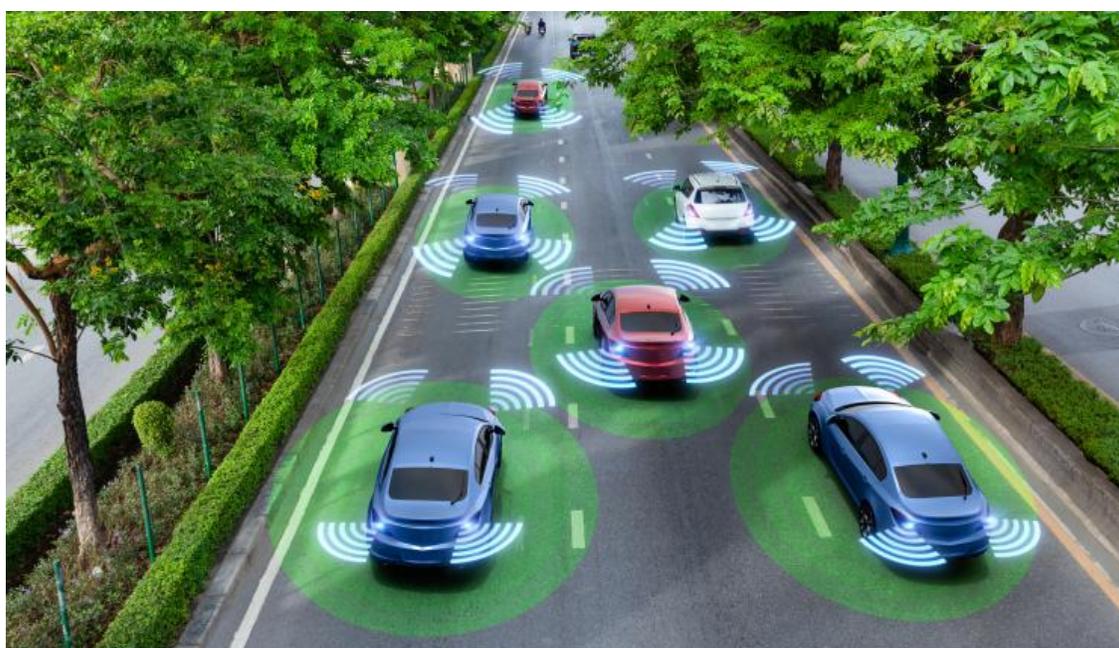


Cheryl Ingstad Sworn in as Director of DOE's Artificial Intelligence & Technology Office

On Tuesday, February 4, Cheryl Ingstad was sworn in by Under Secretary for Science Paul Dabbar as the Director of the Artificial Intelligence & Technology Office (AITO). AITO was created on September 5, 2019, to serve as the central body responsible for the development, coordination and application of Artificial Intelligence, building upon the Department of Energy's capabilities as a world-leading enterprise in scientific discovery and technological innovation.

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AI in the News



Deep Learning may Provide Solution for Efficient Charging, Driving of Autonomous Electric Vehicles

Computer scientists at Lawrence Livermore National Laboratory (LLNL) are preparing for the future by applying deep reinforcement learning — the same kind of goal-driven algorithms that have defeated video game experts and world champions in the strategy game Go — to determine the most efficient strategy for charging and driving electric vehicles used for ride-hailing services. The goal of the strategy is to maximize service while reducing carbon emissions and the impact to the electrical grid, with an emphasis on autonomous EVs capable of 24-hour service.

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Particle Physics Turns to Quantum Computing for Solutions to Tomorrow's Big-Data Problems

Giant-scale physics experiments are increasingly reliant on big data and complex algorithms fed into powerful computers, and managing this multiplying mass of data presents its own unique challenges. To better prepare for this data deluge posed by next-generation upgrades and new experiments, physicists are turning to the fledgling field of quantum computing to find faster ways to analyze the incoming info.

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U.S. Department of Energy's Argonne Leadership Computing Facility (ALCF) and HPE Expand High-Performance Computing (HPC) Storage Capacity for Exascale

Hewlett Packard Enterprise (HPE) and the Argonne Leadership Computing Facility (ALCF), a U.S. Department of Energy (DOE) Office of Science User Facility, today announced that ALCF will deploy the new Cray ClusterStor E1000, the most efficient parallel storage solution, as its newest storage system. The new collaboration supports ALCF's scientific research in areas such as earthquake seismic activity, aerospace turbulence and shock-waves, physical genomics and more.

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Hype and Hope: Artificial Intelligence's Role in the Power Sector

There is no argument about how profoundly electric power has changed our world. The advent of steam power to mechanize production propelled our world into the Industrial Age, triggering the first of several industrial revolutions. In the Second Industrial Revolution, the use of power enabled the era of mass

production, spurring groundbreaking advancements in transport, telecommunications, and manufacturing

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"I am humbled to serve as the first Director of DOE's Artificial Intelligence & Technology Office. It is an honor to be able to lay the foundation for this critical office with DOE's world-class AI experts. I look forward to working alongside America's best and brightest minds to ensure our efforts are focused on accelerating the wise adoption of this emerging technology."

CHERYL INGSTAD
Director of DOE's Artificial Intelligence & Technology Office

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