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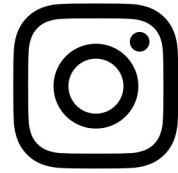
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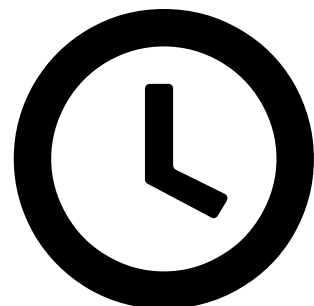


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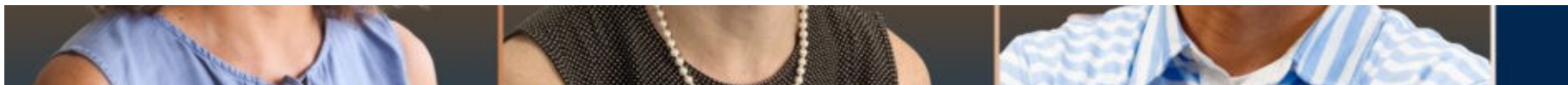




Apr 18, 2024

11 Faculty Members Elected Fellows of the American Association for the Advancement of Science





Top row, left to right: Hal Alper, Jaquelin Dudley, Anthony Dudo and Kristen Grauman. Middle row: Arlen Johnson, Daniel Leahy, Xiaoqin “Elaine” Li and Lizy Kurian John. Bottom row: Tanya Paull, Bridget Scanlon and Guihua Yu.

AUSTIN, Texas — Eleven faculty members at The University of Texas at Austin, including leading artificial intelligence and quantum research experts, have been elected fellows of the American Association for the Advancement of Science (AAAS), the world’s largest general scientific society.

The honor recognizes important contributions to the fields of science, technology, engineering and mathematics — including pioneering research, leadership within a given field, fostering collaborations, and advancing public understanding of science.

The new fellows join more than 53 colleagues at the University who have earned the lifetime distinction. Nationally, AAAS elected 502 new fellows this year.

This year’s AAAS fellows hail from the College of Natural Sciences, the Cockrell School of Engineering, the Jackson School of Geosciences and the Moody College of Communication.

Hal Alper holds the Kenneth A. Kobe Professorship in Chemical Engineering. His research focuses on engineering biology to produce organic molecules of interest such as biofuels, commodity and specialty chemicals, and protein pharmaceuticals. The goal is to alter cells and “hijack” the basic metabolism to “rewire” cellular systems into industrially relevant biochemical factories. He and his colleagues used artificial intelligence to [redesign a natural enzyme](#) to degrade widely used PET plastics in days rather than centuries.

Jaquelin Dudley is an associate director of the LaMontagne Center for Infectious Disease and a professor in the Department of Molecular Biosciences and the Department of Oncology. Her research focuses on a virus that causes cancer in mice, which could shed light on human diseases, including HIV/AIDS, cancer and neurodegeneration. She is also developing a gene therapy for breast cancer that could potentially be more specific and less toxic than existing treatments.

Anthony Dudo is an associate professor in the Stan Richards School of Advertising & Public Relations and the program director of science communication in the Moody College of Communication’s Center for Media Engagement. His research focuses on scientists’ public engagement activities, media representations of science and environmental issues, and the contributions of journalism and entertainment media to public perceptions of science. He is the faculty committee chair of UT’s cross-disciplinary minor in science communication and teaches courses focused on science communication and integrated brand promotion.

Kristen Grauman is a professor in the Department of Computer Science and head of the UT Computer Vision Group. She researches computer vision and machine learning, teaching artificial intelligence to autonomously perceive and recognize visual information. She studies navigation and exploration of three-dimensional spaces, audio-visual learning from video, image and video search and recognizing activity. She is a fellow of the Association for the Advancement of Artificial Intelligence, an Alfred P. Sloan Research fellow, and a recipient of the Presidential Early Career

Award for Scientists and Engineers.

Lizy Kurian John holds the Truchard Foundation Chair in Engineering in the Chandra Family Department of Electrical and Computer Engineering. Her research focuses on designing, evaluating and benchmarking circuits and systems for emerging workloads such as cloud computing and artificial intelligence. Over the years, her research has developed accelerators, memory architectures, power models for processors and systems, novel machine learning architectures for edge inference, FPGAs tailored for machine learning, and benchmarking methodologies. Her current research focuses on developing efficient intelligent systems from edge to the cloud, specifically using weightless neural networks and neuro-symbolic learning.

Arlen Johnson is a professor in the Department of Molecular Biosciences. His research focuses on how cells manufacture structures called ribosomes and ensure that they function correctly for decoding your genome and producing proteins. He uses yeast as a model eukaryotic organism and integrates tools from genetics, cell biology, molecular biology, biochemistry and structural biology.

Daniel Leahy is the Nancy Lee and Perry R. Bass Regents Chair in Molecular Biology and a professor in the Department of Molecular Biosciences. He studies the molecular mechanisms of signaling in the epidermal growth factor receptor and Hedgehog signaling pathways, areas relevant to cancer research and drug development. His research has influenced medical professionals' strategies to treat cancers of the lung, breast, colon and gastric system.

Xiaoqin "Elaine" Li holds the Jack S. Josey – Welch Foundation Chair in Science, is a professor in the Department of Physics, and is co-director of the [Texas Quantum Institute](#). Li researches ultrathin quantum materials that give rise to [exotic optical and magnetic effects](#) that hold promise for making quantum information devices smaller, more efficient and more secure. She is a recipient of the Peter O'Donnell Award from the Texas Academy of Medicine, Engineering, Science and Technology.

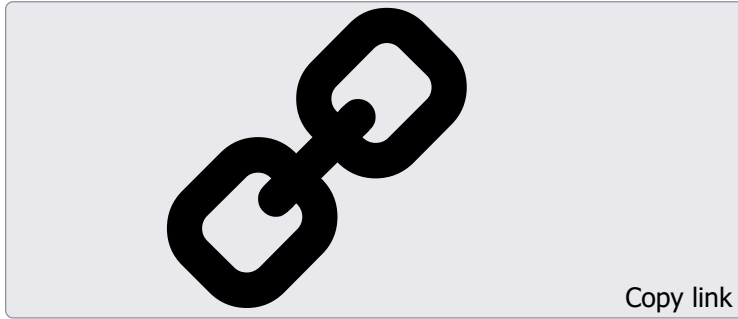
Tanya Paull is the Burl and Lorene Rogers Chair in Human Health and a professor in the Department of Molecular Biosciences and the Department of Oncology. Her research is focused on how mammalian cells repair DNA damage, which helps suppress tumors and maintain stable genomes. She also studies how cells respond to oxidative stress. This work is relevant to human cancer and neurodegeneration.

Bridget Scanlon is a research professor at the Jackson School of Geosciences and program director of the Center for Sustainable Water Resources at the school's Bureau of Economic Geology. She is a world-leading authority on water resources, including its usage, storage and conservation. Scanlon's wide-ranging water research is rooted in collecting data that can aid policymakers and water resource managers in making informed decisions about water quality and sustainable water use. She is also the host of the Water Resources Podcast, in which she interviews water experts from around the world about current challenges in water management and their potential solutions.

Guihua Yu is the Temple Foundation Endowed Professor of Materials Science and Mechanical Engineering in the Walker Department of Mechanical Engineering and Texas Materials Institute. He has created innovative nanomaterials to solve pressing environmental, energy and sustainability challenges, including fast-charging batteries and grid-scale storage system, efficient electrocatalysts, atmospheric water harvesting, solar seawater desalination, wastewater treatment, and sustainable agriculture.

The new fellows will be featured in the AAAS News & Notes section of the journal *Science* this month and will be honored at a ceremony in

Washington, D.C., in September.



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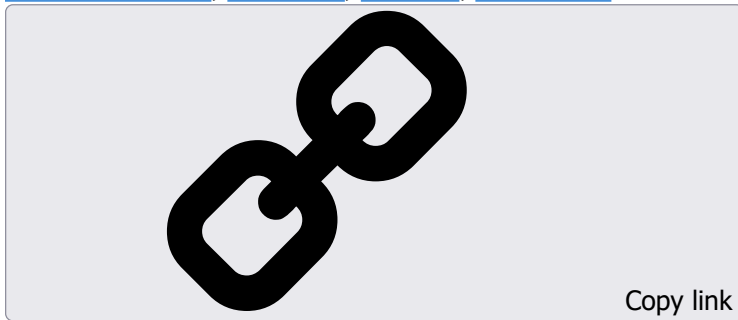


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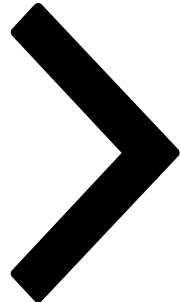


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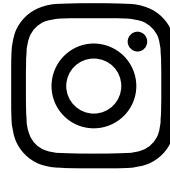
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