Massachusetts Institute of Technology

Remembering Burgess Jamieson ’52

Postelection Philanthropy

Q&A: MIT as an International Model for Sustainability

# corridor

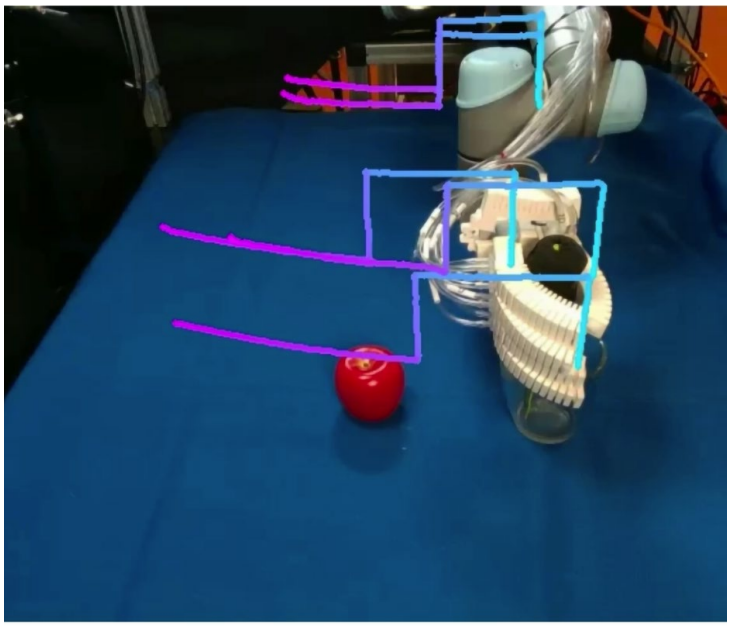
Spring 2025


## Pixel by pixel, MIT researchers are bringing AI-powered vision into the real world.

# Real-World Vision for AI

**MIT is leading the way in AI and decision-making – the systems that allow interaction with the external world through perception, communication, and action. Vincent Sitzmann, the J. Burgess Jamieson Career Development Professor of electrical engineering and computer science and head of the Scene Representation Group, is revolutionizing how AI "sees" and interacts with the objects around it. His endowed professorship was funded by Burgess Jamieson '52, whose prolific generosity takes the form of both outright gifts and a bequest.**

**Entering three dimensions.** Sitzmann has always been fascinated with vision and perception. "Neither animals nor humans need very much time to learn how our three-dimensional world works, how they can move through it, and how to interact with objects in it," says the assistant professor, who joined MIT's faculty in 2022 after completing his postdoctoral research here. Before AI-enabled machine learning, computer scientists tried to manually encode the rules of perception and physics into computer programs with complicated formulas. "With the emergence of deep learning, a data-driven algorithm can learn for itself what to look for in video and what it tells it about how the world works," he says.



One step on this path toward learning to understand our 3D world was "differentiable rendering"—algorithms that learn to create 3D reconstructions only from looking at 2D images. "My PhD research and work with fellow MIT researchers has pioneered techniques in computer graphics for generating photorealistic images of 3D scenes from a few image observations," he says. "This class of techniques is what generates realistic bird's-eye fly-throughs through Google Maps. You might soon see it in video games and movies, and you can already use it to record an interactive walk-through of your apartment."

**Democratizing robotic automation**. Turning 2D images into 3D scenes just by "seeing" with a camera has huge implications for robots that interact with the world around them in real time, without painstaking programming. "Right now, code for controlling robots is written for precision-manufactured, big, expensive machines. We can't use it for more affordable, mass-produced ones," he says. "We are working to make robotic automation more affordable and democratize it, whether robots are helping humans in their households or enabling small businesses to automate their processes, even in remote parts of the world."

For a recent paper, Sitzmann's group collaborated with a local startup and Daniela Rus, the Andrew and Erna Viterbi Professor of electrical engineering and computer science and director of the MIT Computer Science and Artificial Intelligence Laboratory, to create algorithms that can control cheap, 3D-printed robots that are more biologically inspired in their movements and functionality than their rigid metal predecessors.

**Above:** Lines indicate the motion of a biologically inspired 3D-printed robot. The robot learns which "muscles" lead to which motions simply by seeing itself, and can then be controlled to grasp an object in three dimensions from the 2D visual data produced by a camera pointed at it.

**Cover**: A variety of images illustrating an algorithm based on differentiable rendering, pioneered by Sitzmann and collaborators, that converts 2D images to 3D renderings. For each pixel in a 2D image, the algorithm makes predictions about that object's 3D presence and its semantic class, represented with vibrant colors in this grid.

"Our work shows what we can do without precision-engineered joints and precise sensors embedded in the robot itself. Instead, you point a camera at the robot, and the robot learns to move from vision alone," he says. "It can look at itself in the same way you look at your own hand. What's more, our algorithm can control robots that can be manufactured for much, much cheaper than existing ones."

**Research for the long run.** "In my work as a professor, I want to work on ideas that are fundamental to the field," Sitzmann says. "I'm thinking far out into the future." Support like the Jamieson professorship, he says, is critical to maintaining the independence to do that curiosity-driven research. Jamieson created the professorship with an outright gift, then worked with the Office of Gift Planning to continue to support the fund with his bequest. "Since the funding is not coupled to any particular research direction, it enables me to take risks—to spend more time on research and less on fundraising. This is extraordinary."

He also notes that flexible funding for social events like group dinners for all members, from participants in the Undergraduate Research Opportunities Program to postdoctoral researchers, plays a bigger role than one might think. "One reason, of course, is for overall mental health," Sitzmann says, "but gathering in a social context is incredibly important for productivity—we're all scientists, after all, and end up talking about our work in new ways."

It's that community that inspired him to become a professor in the first place. "The most brilliant students in the world apply to MIT," he says. "Together, we can tackle the most difficult and challenging problems of our time." ●

**TAKE ACTION**

Contact the MIT Office of Gift Planning at **giftplanning@mit.edu** to find out how your bequest or other type of planned gift can support AI research that is laying the foundation for cross-disciplinary innovation.

## Remembering
# Burgess Jamieson '52
## 1930–2023

An electrical engineer, a veteran of the Korean War, and a pioneer of the venture capital industry, Burge Jamieson was committed to the development and nurturing of MIT undergraduates and faculty members through his generous philanthropy. A scholarship brought him to MIT – an educational award that he never forgot – and his planned and outright gifts to the Institute have been transformational for students and faculty members.

Burge met his wife, Elizabeth "Libby" Agate, then a Pine Manor College student, at an MIT dance that he helped organize. Married for 70 years, the Jamiesons raised their three children outside of Boston before relocating to the San Francisco and Silicon Valley area. They became ardent philanthropic supporters of the San Francisco Opera, the San Francisco Museum of Fine Arts, and the local San Mateo Historical Association. In September 2023, the newly renovated Innovators Gallery at the history museum was dedicated and named as a lasting legacy to honor his venture capital accomplishments.

At MIT, the Jamieson Endowment Fund continues to support undergraduate scholarships, the Undergraduate Research Opportunities Program, two named professorships in the Department of Electrical Engineering and Computer Science (EECS), and the Jamieson Prize for Excellence in Teaching Awards in EECS and the MIT Sloan School of Management.

When reflecting on the impact of MIT in his life, Burge summarized his commitment to the Institute in three words: people, teaching, and entrepreneurship. "It is a gratifying pleasure to be in a position to give back by helping to support men and women become promising MIT students, as well as to encourage and reward superior attention to teaching for deserving faculty."

**Above:** Jamieson visiting Building 10 in 1990.

# Spring Webinar Explores Postelection Philanthropy

The MIT Office of Gift Planning's twice-yearly webinar series aims to illuminate the opportunities around timely topics and engages top experts to answer your big questions about how your finances may be affected. In 2025, many questions loom around how new congressional trends may affect philanthropic giving.

The speakers in the webinar that took place on March 26, 2025, titled "Planning Your Postelection Philanthropy," tackled these questions head-on, both in their presentations and in a live Q&A session with attendee-submitted questions.

Michelle Hanlon, the Howard W. Johnson Professor, professor of accounting, and deputy dean for faculty and research at the MIT Sloan School of Management, and Brad Bedingfield, partner at Hemenway & Barnes LLP, presented on the current legislative environment in Washington, DC, and how potential changes to tax law could impact philanthropic giving for donors. Topics included:

- **Background and context of current activities of Congress related to potential changes to estate and gift tax laws**
- **Strategy for financial goals based on potential scenarios, especially related to the estate tax and to charitable giving**
- **Potential philanthropic strategies based on possible changes to interest rates**

To learn more, email **ogpwebinar2025@mit.edu** to request a recording of this webinar. Invitations to future webinars will be emailed to all *Corridor* recipients.

# The Benefits of an IRA Gift

Giving from an IRA has grown in popularity in recent years, and for good reason – the tax benefits applied to the required minimum distribution credit make it a great way for you to support MIT. If you are interested in making a contribution from your IRA, please consider the following details:

- **A donor must be at least 70½ years of age at the time of the transfer.**
- **The funds must pass directly from the donor's IRA custodian to MIT.**
- **The gift – up to $108K for calendar year 2025 – may count toward a donor's IRA required minimum distribution for the year. (Since the amount of the qualified charitable distribution can be excluded from the donor's gross income, there is no federal income tax deduction available for such gifts.)**
- **The SECURE Act 2.0 makes it possible to fund charitable gift annuities and charitable remainder trusts with an IRA. This presents a unique opportunity to support MIT without compromising retirement income needs.**
- **If you are in a reunion year, an IRA gift can count toward your reunion gift. Other planned gifts may be eligible for reunion gifts as well.**

*This information is up to date as of March 2025. Information in the* Corridor *newsletter should not be considered legal or financial advice. We encourage you to discuss these options with your advisor.*

# A Legacy of Student Support

"I spent 10 years at MIT, earning four degrees in electrical engineering and computer science," says Arvola Chan '74, SM '76, EE '78, PhD '80. "I was a beneficiary of scholarships through my undergraduate years and research assistantships through my graduate years, so I'm forever grateful."

As planned giving chair for the Class of 1974 50th Reunion Gift Committee, Chan invited classmates to join him in making a planned gift benefiting MIT. His own bequest will support graduate student fellowships. Meanwhile, he and wife Ginn-Shian Hua MAA '81, have established the Albert Tzong-Jyh Chan Memorial Scholarship in honor of their late son. The first awards of the scholarship were made in fall 2024.

**"Supporting MIT is my way of expressing deep gratitude to the Institute, which was instrumental in my academic and professional development."**

Arvola Chan at his home in Los Altos Hills, California.

**On his vision for the Chan Memorial Scholarship:**
"This fund aims to support deserving students who have the potential to make significant contributions to the world. I hope this gesture inspires others to consider how their legacy can impact future generations and perpetuate the spirit of giving and excellence at MIT."

**On his IRA giving:**
"As part of my 50th Reunion gift, I pledged to make qualified charitable distributions (QCDs) from my IRA for each year between 2024 and 2028. I do not foresee my need to use these funds for my own living expenses in the next few years, so it is a tax-efficient way to support a good cause. All of these donations will be going to the scholarship fund in memory of my son."

**On his planned-giving pitch to classmates:**
"I want to set an example for my friends to plan their legacy and inspire people to make gifts while they're still living."

**On why MIT is worth supporting:**
"MIT is world renowned for doing good work in science and technology. Supporting MIT is my way of expressing deep gratitude to the Institute, which was instrumental in my academic and professional development. My contributions are a way to ensure that future students can benefit as I did." ●

**TAKE ACTION**

Visit **giving.mit.edu/ira** to learn more about how IRA QCDs may factor into your philanthropic plans, or contact **giftplanning@mit.edu** for more information.

# Q&A: MIT as an International Model for Sustainability

## Julie Newman, PhD, Director of Sustainability

**Fast Forward: MIT's Climate Action Plan for the Decade, which launched in May 2021, charged MIT to eliminate its direct carbon emissions by 2050 with an interim goal of net-zero emissions by 2026. The MIT Office of Sustainability (MITOS) is central to this goal in its mission to transform MIT into a replicable model for responding to the unprecedented challenges of a changing planet. Julie Newman, founding director of MITOS, came to MIT in 2013 after founding a similar office at Yale University, and also serves as a lecturer in the Department of Urban Studies and Planning.**

**Climate is one of MIT's top priorities. How does MITOS fit into that landscape?**

MITOS is a catalyzer of the climate work happening on campus and the organizational leader for MIT's campus climate commitments. Engaging with faculty and staff, we take a collaborative, systems-based approach to ensure the resiliency of MIT, positioning the entire campus as a test bed for sustainability and climate solutions. We consider the role of the individual to the campus, to the city, to the state, to the nation, to the globe. All of our work around sustainability and climate runs through those lenses, as we facilitate the implementation of solutions and measure impact.

**How does MITOS work with students and MIT researchers?**

MITOS presents a well of opportunity for students, from engineers to entrepreneurs, to work on real-time issues in an educational environment. We're the connective tissue that pairs researchers to the appropriate operational groups to implement their work on campus. Our Sustainability DataPool—the first of its kind—puts MIT-specific data in the hands of our community to help them better understand and recognize the value proposition of local data in catalyzing innovative thinking and solution development. We also employ a student research cohort each semester and have made grants from our Campus Sustainability Incubator Fund, which funds the innovative projects of MIT community members.

**What are some examples of MITOS's work at a local and global level?**

Climate resiliency efforts led by our staff with Campus Planning, Facilities, and student researchers have informed our decarbonization plans that are in design and, when finalized and financed, will seek to be implemented between now and through 2050. The climate resiliency student and operational research work we've completed has led to many interventions on campus. In the new MIT Stephen A. Schwarzman College of Computing building and other new construction, our work has informed numerous efforts, such as additional flood protections and sustainably sourced building materials. Last year, our work led to the installation of new solar panels on four MIT buildings. Even our office space in Building E38 is a living lab for innovative design and sustainable materials that are then applied to future design across campus. These interventions translate to our goal of transforming MIT into a replicable model for sustainability for other institutions across the United States and around the world. I've consulted with universities on almost every continent, and in recent years, MITOS has regularly invited scholars to apply to spend two weeks learning from us and exchanging ideas so we can learn from each other. That exchange has been remarkable.

**What role does philanthropy play at MITOS, particularly with planned gifts?**

When we think about how to plan for and meet our climate and sustainability goals over the next 100 years, we are considering long-term investments. A donor's commitment through a bequest or other type of planned gift is fundamental to our ability to study, design, and implement solutions. Simultaneously, there is an urgent need for outright gifts to support our work on campus, where we have access to the relationships, expertise, and capability to try new approaches. We see this work as our responsibility to our students, and are fortunate to have an opportunity to think locally to understand those implications at the global level. ●

**LEARN MORE**

Learn more about MITOS, the Campus Sustainability Incubator Fund, and the role planned giving donors play at **betterworld.mit.edu/mitos**.

**"When I consider the work of our MIT community–the amazing students, brilliant faculty, and dedicated staff–I see it as an astounding investment in the future of our planet. Similarly, when I think about the foresight and generosity of those who have included MIT in their will, named MIT as a beneficiary of their accounts, or created a life income gift, I am honored, inspired, and most of all, grateful. Thank you for your commitment to MIT."**

**Julie A. Lucas**
Vice President for Resource Development

# Sample Bequest Language

Below is suggested language to share with your advisor if you would like to include MIT in your will or estate plan. Contact us if you prefer your gift to be designated for a specific purpose so we can help personalize your bequest.

*I give [all of the residue of my estate OR an amount equal to X percent of the residue of my estate / thereof OR $ _____ ] to the Massachusetts Institute of Technology (MIT), a Massachusetts nonprofit corporation, for its general educational and charitable purposes.*

All information in this newsletter should not be considered legal or financial advice. We encourage you to discuss these options with your advisor.

# Contact Us

## Learn more about how making a planned gift to MIT can help you to:

- meet your financial goals
- achieve your charitable aspirations
- support students, faculty, and research
- provide income to you and/or your beneficiaries

## Ready to start the conversation?

Scan the QR code with your smartphone to contact the Office of Gift Planning for a confidential conversation, or call 617.253.4082.

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From the MIT Office of Gift Planning

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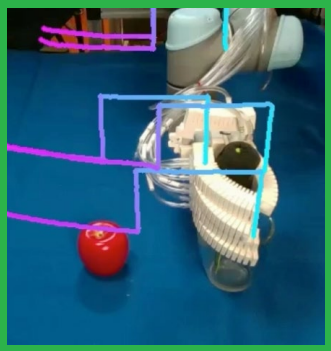

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