MIT-IBM Watson AI Lab

Upcoming Events

Solve at MIT 2022

[Global innovators build partnerships and tackle global challenges](#)
May 5-7, all day ET

During this hybrid MIT flagship event, Solve at MIT brings together global innovators to build partnerships and tackle global challenges in real-time alongside the Solve community–Solver teams, MIT faculty, and social impact leaders from Solve Member organizations, such as General Motors, The Nature Conservatory, HP, The Bill & Melinda Gates Foundation, and many more. [Registration required to watch or attend.](#)

Ethics in AI Colloquium | The Age of AI

[How AI will impact employment on a global scale](#)
May 12, 5-6:15 p.m. BST (12 p.m. ET)

In a livestreamed event by the Institute for Ethics in AI, Daniel Huttenlocher, dean of the MIT Schwarzman College of Computing and Lab MIT co-chair, will present the keynote on ethical challenges posed by AI and speak with world-leading experts and users of AI in academia, business and government. [Watch here.](#)

The Thriving Stars of AI

[The social impact of AI](#)
May 13, 3-4:30 p.m. ET

During a hybrid event, brilliant young MIT researchers and accomplished leaders in the field -- including Lab members Aude Oliva, Anantha Chandrakasan, Daniel Huttenlocher, and Asu Ozdaglar -- will share their thoughts on AI regarding the implications for specific fields like healthcare and communications; broader concerns about fairness, impact, equity; and timely questions about the interface of computing and society. More information and register here.

AI Policy Forum Symposium

[Global leaders develop approaches to deal with the societal challenges posed by AI.](#)
May 19, 9 a.m.-4:00 p.m. ET

This live webcast from the MIT Schwarzman College of Computing will comprise of four panels: design questions for AI laws, auditing and monitoring AI systems at scale, data sharing and privacy in clinical AI, and realizing the benefits of autonomous vehicles. Each will bring together members of the public sector, private sector, and academia to discuss critical questions in AI policy, including Lab researchers David Sontag and Marzyeh Ghassemi, and Dean Dan Huttenlocher. [Register here.](#)

In the Lab
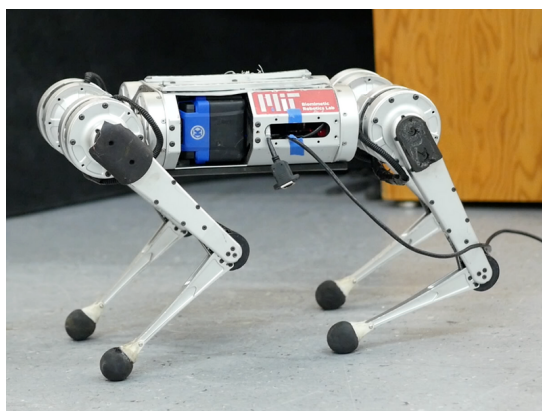
3 Questions: How the MIT mini cheetah learns to run

[Learning to run entirely by trial and error in simulation](#)

Lab-supported research out of Pulkit Agrawal's group uses a model-free reinforcement learning system, allowing the robotic mini cheetah to maximize its speed based on the terrain. With this capability, it has broken the record for the fastest run recorded.

Jacob Andreas

[Rethinking how we communicate with our machines](#)

Leading the Language and Intelligence Group at MIT, Lab researcher Jacob Andreas builds software systems that can communicate with people in natural language, the field of natural language processing. Not only is he trying to provide machines with the ability to understand text or human speech and respond in a way that is similar to humans, but also use it to train machine learning models and understand and interpret their decisions.

Break Through Tech AI

[New program strives to bridge the talent gap for underrepresented groups in the tech industry.](#)

Aimed at driving diversity and inclusion in AI, the MIT Stephen A. Schwarzman College of Computing is launching Break Through Tech AI, a new program to bridge the talent gap for women and underrepresented genders in AI positions in industry. It will provide skills-based training, industry-relevant portfolios, and mentoring, with industry projects overseen by the Lab's MIT director Aude Oliva.


How can we reduce the carbon footprint of global computing?

[Leaders from MIT and industry discussed current and potential innovations to lower energy cost.](#)

A workshop hosted by the Lab, MIT's Climate and Sustainability Consortium, and the MIT Stephen A. Schwarzman College of Computing highlighted how new approaches to computing can save energy and help the planet, such as specialized chip design, data center architecture, better algorithms, hardware modifications, and changes in consumer behavior. [Watch the sessions](#).
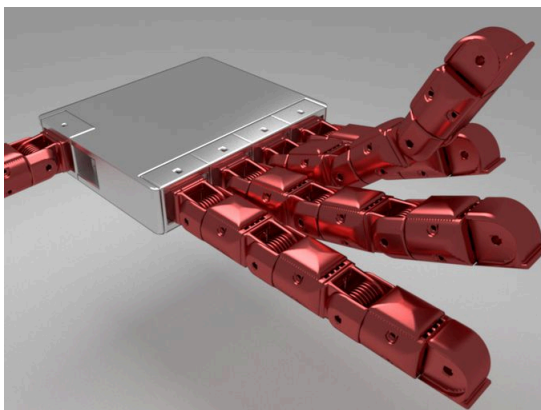
A one-up on motion capture

[Constructing a digital simulation twin of movement from a video source](#)

A new neural network approach from the Lab groups of Wojciech Matusik, Josh Tenenbaum, and Chuang Gan captures the characteristics of a physical system's dynamic motion from video, regardless of rendering configuration or image differences. The technique could allow people to understand and simulate action happening within real-world environments, like the metaverse.

Dario Gil is inaugural Advanced Degree Ceremony Speaker at MIT

[Directing innovation strategies](#)

Dario Gil PhD '03, Lab co-chair, Senior Vice President and Director of Research at IBM, and MIT alumnus will return to campus on May 26 to speak to the School of Engineering and Schwarzman College of Computing 2022 Advanced Degree recipients.
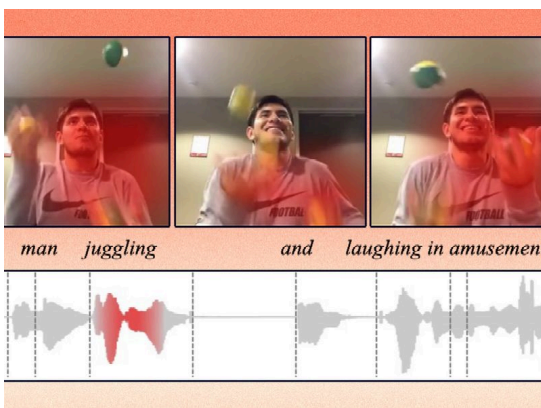
AI system learns concepts shared across video, audio, and text

[A machine-learning model can identify the action in a video clip and label it, without human help.](#)

The Lab groups of Aude Oliva and Jim Glass have developed a machine learning technique that learns to represent data in a way that captures concepts which are shared between visual and audio modalities. This method could someday help robots learn about concepts in the world through perception, more like the way humans do.

In the Media

Machine learning and health need better values

[Developing AI for a sociotechnical environment](#)

In a *Nature digital medicine comment*, co-author and Lab researcher Marzyeh Ghassemi discusses how misalignment of values and judgements in healthcare and machine learning influences research topics, collaborations, and methodologies; assessments of scientific and technical correctness; product development; and policies.
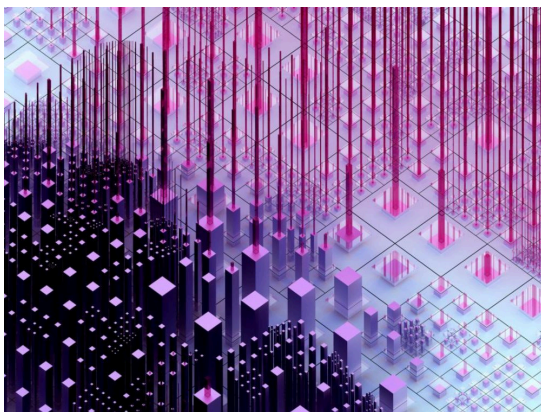
Quantum-centric supercomputers

[Dario Gil on how IBM could help create a national quantum plan in India](#)

During a visit to India, Dario Gil, Lab co-chair, senior VP and director of IBM Research, discussed the progress of the country's growing computation capabilities and a roadmap for implementing technologies, like a hybrid cloud and edge computing. "We are most definitely going to see quantum-centric supercomputers," says Gil in *TechCircle*.
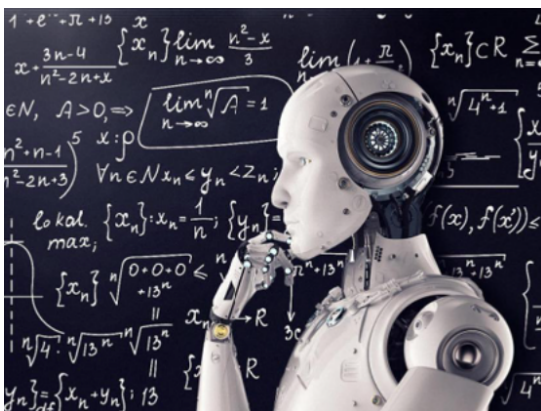
AutoAI could make data scientists a lot more productive

[Shortening the machine learning pipeline creation timeline](#)

Lisa Amini, Lab steering committee member, an IBM Distinguished Engineer, and the Director of IBM Research Cambridge, shares with *Forbes* how IBM's automated AI (AutoAI) can be used expedite the AI model design and building process.

Watch Our Recent Event

[Data Efficient Graph Grammar for Molecule Generation](#)
In a recent "What's Next?" webinar, Jie Chen of the Lab and IBM Research, and guest speaker Thomas Asche, R&D Digitalization lead at Evonik Industries, discussed a graph-based approach that uses grammar to efficiently generate synthesizable molecules.

Lab Highlights

MIT professor and Lab researchers Dina Katabi and Regina Barzilay elected to the [American Academy of Arts and Sciences](#), one of the nation's most prestigious honor societies.

MIT professor and Lab researcher Joshua Tenenbaum is presenting a [keynote speech](#) at the IEEE International Conference on Robotics and Automation (ICRA).

Ju Li, Lab member and MIT professor in the Department of Nuclear Science and Engineering, received the [Minerals, Metals and Materials Society Fellow Award](#).

MIT professor Connor Coley won the NSF Career Award and received the [2021 Bayer Early Excellence in Science Award for Chemistry](#).

MIT professor and Lab member Luca Daniel was named a [2022 IEEE Fellow](#) "for contributions to modeling and simulation of electronic systems."