Abelson, Hal [CS, AI+D] (hal@mit.edu) [*on leave Fall 2025*]
[MAS] Class of 1922 Professor

Artificial intelligence, educational computing, machine learning and education, Internet policy.

Adalsteinsson, Elfar [EE, AI+D] (elfar@mit.edu) [*on leave Spring 2025*]
[EECS] Eaton-Peabody Professor

Medical imaging with MRI. Computation in imaging for data acquisition, image reconstruction and image analysis for quantification of markers of health and disease. Methods for existing MRI platforms and for novel hardware. Applications in neuroimaging and imaging in pregnancy. Collaborations with Massachusetts General Hospital Martinos Center and Boston Children's Hospital.

Adib, Fadel [CS, EE, AI+D] (fadel@mit.edu)
[EECS] Associate Professor

Wireless, sensing, Internet-of-Things (IoT), communications, computer networks, software-hardware systems, mobile computing, signal processing, low-power & battery-free computing, RF, acoustics, robotics, augmented reality, oceans, edge AI/ML, climate, underwater imaging.

Agrawal, Pulkit [AI+D, CS] (pulkitag@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Learning for Decision Making from raw sensory observations such as vision, haptics and audio (i.e., sensorimotor learning); special impetus on robot learning; deep reinforcement learning; deep learning; object manipulation; robotic locomotion; navigation; model- based control; imitation learning; inverse reinforcement learning; design of robotic hands; soft robotics; integrating common sense knowledge into machine learning systems using natural language; self-supervised learning; computer vision; multimodal representation learning from vision, touch and audio; understanding human activities; human-robot interaction; applications of machine learning in healthcare; human cognition; computational neuroscience. The overall research goal is to build mechanisms that allow agents/robots to continuously keep learning about their world by exploring and conducting experiments. One application area is robots in households, but not limited to it.

Akinwande, Akintunde Ibitayo [EE] (akinwand@mtl.mit.edu)
[EECS] Thomas and Gerd Perkins Professor of EECS

Display devices, vacuum microelectronics, devices based on nano- scale charged particle beams. Applications to nano-fabrication, imaging, sensors & actuators, and harsh environments.

Alizadeh, Mohammad [CS, AI+D] (alizadeh@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Computer networks and systems, programmable networks, learning- based networked systems, datacenter networks, cloud computing, modeling and analysis of computer systems.

Amarasinghe, Saman [CS] (samana@mit.edu)
[EECS] Professor

Domain specific languages, program analysis and optimizing compilers. Performance engineering and high-performance computing. Machine learning for compilers and compilers for machine learning. Computer architecture.

Andreas, Jacob [AI+D] (jda@mit.edu)
[EECS] Associate Professor

Language and machine learning: language as a supervisory signal and explanatory tool across application domains; sample-efficient language learning; computational models of semantics and pragmatics.

Balakrishnan, Hari [CS, AI+D] (hari@csail.mit.edu)
[EECS] Fujitsu Professor in EECS

Networked systems: mobile and sensor computing, network architecture and protocols, scalable distributed systems, data management.

Baldo, Marc [EE] (baldo@mit.edu)
[VPRES_DEPTHD] Dugald C. Jackson Professor

Molecular electronics and spintronics.

Barzilay, Regina [AI+D] (regina@csail.mit.edu)
[EECS] SoE Distingushed Professor of AI and Health

ML for drug discovery and clinical AI.

Bates, Stephen [AI+D] (stephenbates@mit.edu)
[EECS] Assistant Professor

Statistical inference, uncertainty quantification for AI systems, inference and decision-making with strategic agents, distribution shift, and applications in life science and sustainability.

Beery, Sara [AI+D] (beery@mit.edu)
[EECS] Assistant Professor

Computer Vision for the Environment, Biodiversity, Conservation, and Sustainability. Methods for heterogeneously sampled spatiotemporal and multimodal environmental monitoring (visual, acoustic, sonar, lidar, hyperspectral, time-series, text, museum collections, community science, environmental covariates). Deployable, reliable computer vision under domain shift, including verification and participatory systems for efficient use of human expertise out of distribution. Distributed sensing with limited bandwidth including efficient and edge-based computer vision. Incorporating structure and knowledge from scientific domains into computer vision and machine learning methods. Collaborative development of equitable tools that empower NGOs, governmental agencies, and local communities to make data-centric, informed decisions on conservation policy. International fieldwork to test our methods on the ground in diverse ecosystems.

Belay, Adam M [CS] (abelay@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Operating systems, networking, cloud computing, and performance engineering.

Berggren, Karl [EE] (berggren@mit.edu)
[EECS] Electrical Engineering Faculty Head

Methods and materials for nanofabrication. Superconductive electronics and detectors. Optics, nano-optics, and electron optics. Quantum-information-based systems.

Bertsekas, Dimitri [EE] (dimitrib@mit.edu)
[EECS] McAfee Professor of Electrical Engineering

Analytical and computational methods of deterministic and stochastic optimization, large scale systems, data networks. (Post- Tenure)

Berwick, Robert [AI+D, CS] (berwick@csail.mit.edu)
[EECS] Professor

Natural language processing: computer models of language acquisition and parsing. Computational biology and evolutionary theory including evolution of language. Artificial intelligence: formal models of learning, including inductive inference and computational complexity analysis of language. Cognitive science: word learning, semantics of natural languages.

Bhatia, Sangeeta [EE, AI+D] (sbhatia@mit.edu)
[EECS] John and Dorthy Wilson Professor

Applications of miniaturization technologies in medicine. Specific interests include using microfabrication, synthetic biology; 3D printing and nanotechnology to regenerate human livers and diagnose and treat cancer.

Bodner, Abigail [EE] (abodner@mit.edu)
[EAPS] Assistant Professor

Analytical and computational methods for climate model development. Numerical simulations of ocean and climate. Machine learning applied to geophysical fluid dynamics and turbulence. [*]

Boning, Duane S [EE, AI+D] (boning@mit.edu)
[PROVOST] Vice Provost, Intl Activities/Prof, EECS

Semiconductor and photonics manufacturing. Modeling, optimization, and control of IC, photonic, and MEMS processes, devices and circuits using statistical and machine learning methods. Computer aided design (CAD) tools and systems. Design for manufacturability (DFM).

Bresler, Guy [AI+D] (guy@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Statistics and computation, theoretical machine learning and applied probability. Algorithms and performance limits for statistical inference and decision-making in large-scale systems.

Broderick, Tamara [AI+D] (tamarab@mit.edu)
[EECS] Associate Professor

Statistics and machine learning; uncertainty and robustness quantification; Bayesian methods; nonparametric, unsupervised, scalable learning; approximation methods including variational inference and Markov chain Monte Carlo; exchangeability; approximations to cross validation, the bootstrap, and other reweighting schemes.

Bulovic, Vladimir [EE] (bulovic@mit.edu)
[VPRES_DEPTHD] Director of MIT.nano

Physical properties of nano-structured thin films, structures, and devices as applied to the development of optoelectronic, electronic, photonic, and mechanical active surfaces of nano-scale thickness, including LEDs, lasers, solar cells, photodetectors, transistors, actuators, sensors, and encompassing flexible, lightweight, and transparent formats for imperceptibly integrated technologies.

Carbin, Michael [CS, AI+D] (mcarbin@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Design and implementation of programming systems, including languages, program logics, program analysis/verification systems, and runtime systems. Particular interest in programming systems for emerging probabilistic and approximate computing fabrics.

Chan, Vincent [AI+D, EE] (chan@mit.edu)
[EECS] Joan & Irwin M Jacobs Prof of Elec Eng and A&A

Optical, wireless and space communications and networks. Architecture, technology, system designs, and testbed implementations. New communication and network technologies, architectures and applications.

Chandrakasan, Anantha [EE, CS] (anantha@mit.edu)
[DOE] Dean of Engineering & Vannevar Bush Prof of EECS

Design of energy-efficient integrated circuits and systems. Energy efficient implementation of signal processing, communication, security, machine learning, and medical electronics. Circuit design with emerging technologies.

Cheema, Suraj [EE] (sscheema@mit.edu)
[DMSE] Assistant Professor

Electronic materials and devices for microelectronics to address energy consumption, storage, and generation challenges. Atomic engineering of electronic phenomena (e.g. ferroelectricity, negative capacitance) for energy-efficient computing (logic transistors, nonvolatile memory, AI hardware, superconducting electronics) and energy technologies (energy storage and power delivery, energy harvesting and thermal management). [*]

Chen, Kevin [EE, AI+D] (yufengc@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Microscale robotics, aerial robotics, bio-mimetic and bio-inspired design, and dynamics and control; soft robotics and soft actuation resembling artificial muscles; intermediate Reynolds number aerodynamics, fluid structure interaction, and interfacial effects.

Chlipala, Adam [CS] (adamc@csail.mit.edu)
[EECS] Professor

Formal methods. Programming languages and compilers. Computer systems, especially including computer architecture, databases, and security.

Chuang, Isaac [AI+D, EE, CS] (ichuang@mit.edu)
[EECS] Prof of EECS; Sr Assoc Dean of Digital Learning

Quantum information science, quantum physics, computation and physics.

Clark, David [CS] (ddc@csail.mit.edu)
[CSAIL] Senior Research Scientist

Computer networks: Internet engineering; hardware and protocols for high-speed large-scale network communications. Real-time services over networks. Policy and economic issues; pricing. Computer/communication security.

Coday, Sam [EE] (coday@mit.edu)
[EECS] Assistant Professor

Power electronics and energy conversion; circuit design, control and optimization; device characterization and modeling; applications to future electric aircraft, space exploration and renewable energy systems.

Coley, Connor Wilson [AI+D] (ccoley@mit.edu)
[CHEME] Associate Professor

Molecular design, chemistry-informed neural networks, drug discovery, Bayesian optimization, experimental design, and laboratory automation. (Has shared appointment in Chemical Engineering.)

Corrigan-Gibbs, Henry [CS] (henrycg@csail.mit.edu)
[EECS] Assistant Professor

Computer security, cryptography, computer systems, privacy.

Dahleh, Munther A [AI+D, EE] (dahleh@mit.edu)
[EECS] William A. Coolidge Professor

Networked systems with applications to social and economic networks, transportation networks, financial networks and the power grid. Specific focus on the development of foundational theory necessary to understand, monitor, and control systemic risk in interconnected systems. Statistical learning of controlled systems and its relations to model reduction of stochastic systems. The economics of data and the design of real-time markets for data and digital goods. The interface between system theory and neuroscience with application to motor control.

Dalca, Adrian [AI+D] (adalca@mit.edu)
[CSAIL] Research Scientist-Computational

Machine learning and graphical models, especially applied to computer vision, biomedical image analysis, and healthcare.

Daniel, Luca [EE, AI+D] (luca@mit.edu)
[EECS] Professor

We develop numerical techniques related to uncertainty quantification, inverse problems, assessment and improvement of robustness. Currently we are applying those techniques to: nano- devices, magnetic resonance imaging scanners, electrical energy networks, virtual spaces and enhanced environments, lack of robustness in deep neural networks.

Daskalakis, Konstantinos [AI+D, CS] (costis@csail.mit.edu)
[EECS] Professor

Theory of Computation, Game Theory, Machine Learning, Probability Theory, Statistics.

Davis, Randall [AI+D] (davis@csail.mit.edu) [*on leave Fall 2025*]
[EECS] Professor

Artificial intelligence; intelligent multimodal interfaces; novel interfaces for evaluating cognition; AI and ethics; intellectual property issues in software.

del Alamo, Jesus A. [EE] (alamo@mit.edu)
[EECS] Donner Professor, Mac Vicar Faculty Fellow

Nanometer-scale III-V compound semiconductor transistors for future digital, power, RF, microwave and millimeter wave applications. Reliability of compound semiconductor transistors. Diamond transistors. Ionic and ferroelectric non-volatile programmable synaptic devices for memory and artificial intelligence applications.

Delimitrou, Christina [CS] (cdel@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Computer architecture, cloud computing, machine learning for systems. Hardware acceleration for cloud systems, cluster management and scheduling, cloud programming frameworks, cloud-edge environments, cloud security.

Demaine, Erik [CS] (edemaine@mit.edu)
[EECS] Professor

Algorithms and data structures. Discrete and computational geometry, particularly folding. Graph algorithms and graph minors. Combinatorial games, puzzles, and magic. Art.

Dennis, Jack [CS] (dennis@csail.mit.edu)
[EECS] Professor Emeritus

Parallel computer system design to support functional languages and advanced environments for modular programming. Study of architecture, performance and reliability issues. (Emeritus)

Devadas, Srinivas [CS] (devadas@mit.edu)
[EECS] Edwin Sibley Webster Professor of EECS

Computer-aided design. Computer security and applied cryptography. Computer architecture.

DeWitt, David J [CS] (dewitt@cs.wisc.edu)
[EECS] Adjunct Professor

Database systems, parallel query processing and optimization; scalable data warehouse, big data. (Adjunct)

Donti, Priya [EE, AI+D] (donti@mit.edu)
[EECS] Assistant Professor

Machine learning methods (robust, physics-informed, and/or engineering-constrained), optimization, control, power and energy systems, climate change mitigation and adaptation.

Durand (he/him/his), Fredo [AI+D, CS] (fredo@mit.edu)
[EECS] Amar Bose Professor of Computing

Computer graphics; computational photography; structural analysis of masonry, content creation for online education. Lighting simulation, Fourier analysis, light fields. Computational optics, blur removal, revealing the invisible, video magnification. Systems for computational imaging, compilers. Video lecture authoring and editing.

Emer, Joel [CS] (emer@csail.mit.edu)
[EECS] Professor of the Practice

Architectures for machine learning, spatial computing architectures, performance/energy modeling, parallel and multi-threaded processor architecture, cache and memory hierarchy design, processor reliability analysis.

Englund, Dirk R [EE, AI+D] (englund@mit.edu)
[EECS] Professor

Understand and bridge gaps between today's technology and the theoretical limits given by quantum mechanics and information theory. Key focus on theory and proof-of-principle demonstrations working at the discreteness ('graininess') of quantum mechanics and information theory: [Quantum Computing] - Development of large, programmable quantum systems combining individual-qubit control and large numbers of qubits to solve bottlenecks in large-scale quantum control (see DARPA ONISQ, DOE QSA, MITRE MOONSHOT, etc.). [Quantum Networks] - Constructing the 'quantum information' layer on the internet by new quantum control and noise mitigation methods for large-scale utility (viz. NSF Center for Quantum Networks). [Machine Learning] - Explore the complexity frontier of ML by new algorithms, architectures, and coherent physical systems including photonic, quantum, and mixed-signal CMOS systems with world-leading foundries.

Farina, Gabriele [AI+D] (gfarina@mit.edu)
[EECS] Assistant Professor

Optimization and computational game theory, multi-agent systems and reinforcement learning, decision-making under uncertainty, machine learning, online allocation.

Flanigan, Bailey [CS] (baileyf@mit.edu) [*starting Fall 2025*]
[EECS, PolySci] Assistant Professor

Democratic and political scientific applications of computer science methods, often in collaboration with practitioners. From computer science, methods include social choice theory, game theory/mechanism design, algorithms, and some statistics/machine learning. Democratic applications include deliberative and participatory democratic processes, notions of representation, voting systems, political behavior, and various topics in political methodology.

Fletcher, Richard Ribon [EE, CS, AI+D] (fletcher@media.mit.edu)
[MECHE] Research Scientist 3

Biomedical devices; signal processing and machine learning for clinical diagnosis; wearable sensors; antenna design and electromagnetic propagation; wireless sensors and RFID; application to psychiatry (psychophysiology, mediation, mental health) and behavior medicine (drug addiction, substance abuse, depression).

Freeman, Dennis [EE, AI+D] (freeman@mit.edu)
[EECS] Professor

Theoretical and experimental studies of hearing. Development of optical methods to measure nanometer motions of biological structures at audio frequencies. Measurement of sound-induced motions of inner ear structures.

Freeman, William [AI+D] (billf@mit.edu)
[EECS] Thomas and Gerd Perkins Prof. of Elec. Engineering

Machine learning applied to computer vision and computer graphics. Computational photography. Bayesian models of visual perception.

Fujimoto, James [EE] (jgfuji@mit.edu)
[EECS] Elihu Thomson Professor in Electrical Engineering

Biomedical optical imaging, new imaging technology and methods, clinical applications. Optical coherence tomography (OCT) and nonlinear microscopy. Advanced photonics. Medical imaging devices. Image analysis. Applications in ophthalmology, endoscopy, pathology and cancer surgery. Technology development and clinical studies for age related macular degeneration and diabetic retinopathy, leading causes of blindness. Imaging technologies for gastrointestinal cancer detection. Advanced microscopy for real-time pathology and intraoperative assessment. Surgical guidance in breast cancer lumpectomy to reduce repeat surgeries and radical prostatectomy to reduce incontinence and impotence. Collaborations with teaching hospitals.

Ghaffari, Mohsen [CS] (ghaffari@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Algorithms, theory of computing, distributed & parallel algorithms, randomized algorithms, graph algorithms.

Ghassemi, Marzyeh [CS, AI+D] (mghassem@mit.edu)
[EECS] Associate Professor

Machine learning for healthcare, ethical machine learning, robustness, fairness, privacy, policies for technology in human/health deployments.

Ghobadi, Manya [CS, EE, AI+D] (ghobadi@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Systems for machine learning, high-performance cloud infrastructure, hardware-software co-design, data center networks, network optimization, and optical networks.

Gifford, David K [AI+D, CS] (gifford@mit.edu)
[EECS] Professor

Machine learning methods and algorithms for therapeutic design, genomics, genetics, and experimental design. Machine learning. Systems biology.

Glass, James R [AI+D] (glass@mit.edu)
[CSAIL] Senior Research Scientist

Speech and natural language processing including robust speech recognition, multilingual speech processing, health-related biomarkers in speech, multimodal audio-visual processing, language understanding and generation, and conversational systems.

Goldwasser, Shafi [CS] (shafi@csail.mit.edu)
[EECS] RSA Professor of Computer Science and Engineering

Cryptography, complexity theory, computational number theory, randomized algorithms.

Golland, Polina [AI+D] (polina@csail.mit.edu)
[EECS] Sunlin (1966) and Priscilla Chou Professor

Image analysis and understanding. Statistical inference and machine learning for medical image computing.

Gordon, Mitchell [CS] (mlgordon@mit.edu)
[CSAIL] Visiting Scientist

Human-computer interaction, human-AI interaction, social computing, design and creativity tools, machine learning evaluation and interpretability, large language models

Gray, Martha L [EE] (mgray@mit.edu)
[EECS] Professor

Biomedical imaging. Needs-driven biomedical technology innovation. Wearable and point-of-care devices. Imaging biomarkers.

Guttag, John [CS, AI+D] (guttag@mit.edu)
[EECS] Dugald C. Jackson Prof of Computer Science & Eng

Application of machine learning and data mining techniques to large data sets, especially medical data sets. Application of computer vision to medicine. Sports analytics.

Hadfield-Menell, Dylan [AI+D] (dylanhm@mit.edu) [*on leave Spring 2025*]
[EECS] Assistant Professor

Human-robot interaction, inverse reinforcement learning, multi- agent and multi-stakeholder systems, AI policy + regulation, preference elicitation, AI safety, sequential decision making, robotics, recommender systems.

Hagelstein, Peter [EE] (plh@mit.edu)
[EECS] Associate Professor

Theoretical studies of anomalies in metal deuterides, excitation transfer, and anomalous energy exchange between disparate quantum systems, and thermal to electric conversion.

Han, Jongyoon [EE] (jyhan@mit.edu) [*on leave Spring 2026*]
[EECS] Professor

Micro-nanofluidic systems, biological MEMS. nanofluidics, electrokinetics, biosample preparation, bioprocessing engineering, stem cell engineering, water purification, desalination, electrochemical devices.

Han, Ruonan [EE] (ruonan@mit.edu)
[EECS] Associate Professor

Design of high-speed (millimeter-wave and terahertz) integrated circuits using CMOS and emerging technologies. Microsystems for high-precision spectroscopy, time-keeping, imaging and communications. AI-assisted design methodologies for analog/RF integrated circuits.

Han, Song [EE, CS] (songhan@mit.edu) [*on leave Fall 2025, Spring 2026*]
[EECS] Associate Professor

Efficient AI on edge devices, TinyML, MLSys, large language model, long context LLM, visual language model, image/video generation, model compression, pruning, quantization, neural architecture search, efficient training and inference.

Harrell, D. Fox [AI+D, CS] (kitsune@mit.edu)
[CMS] Prof of DgtMedia,Computing,AI;CSAIL,IDSS

Virtuality (VR, AR, MR, etc.), interactive narrative, cognitive science (cognitive semantics), artificial intelligence (AI) and the arts. Game studies and game engineering, serious impact games. (CSAIL/CMS/IDSS Faculty)

He, Kaiming [AI+D] (kaiming@mit.edu)
[EECS] Associate Professor

Computer vision, visual perception, machine learning, deep learning, with emphasis on representation learning and generative learning.

Hedden, Brian [AI+D] (Brian.Hedden@anu.edu.au) [*starting July 2025*]
[EECS, Ling&Phil] Assistant Professor

Algorithmic fairness and bias, societal impacts of AI, decision theory, probabilistic reasoning, social choice theory.

Heldt, Thomas [EE, AI+D] (thomas@mit.edu)
[EECS] Associate Professor

Signal processing, modeling, estimation and identification of physiological systems; computational physiology; computational medicine; clinical inference. Application of machine learning and data mining to medicine.

Hopkins, Sam [CS, AI+D] (samhop@mit.edu)
[EECS] Assistant Professor

Algorithms, high-dimensional statistics. theoretical machine learning, convex programming, information-computation tradeoffs, sum of squares method

Horn, Berthold Klaus Paul [AI+D, CS] (bkph@csail.mit.edu)
[EECS] Professor Emeritus

Computational imaging, machine vision. Representation of objects and space. X-ray phase imaging. Traffic flow instability suppression. Indoor navigation.

Hu, Qing [EE] (qhu@mit.edu)
[EECS] Distinguished Professor in Elec Eng & Comp Sci

Terahertz and infrared quantum cascade lasers, frequency combs and amplifiers; and imaging and sensing applications using those devices.

Huang, Anna [CS, AI+D] (huangcza@mit.edu)
[MTA] Associate Professor (wot)

Generative AI for Human-AI Collaboration: (1) Generative modeling, learning from human feedback, preference elicitation and learning, creative practice, participatory design, tools for artists. (2) Music theories and music cognition of neural networks (NNs) and for NNs, music cognition and perception, interpretability, explainability, interactive systems and visualizations. (3) Multi-agent reinforcement learning and efficient AI for interactive and real-time jamming, improvisation, composition, performance, music education, and game design.

Huttenlocher, Daniel [CS, AI+D] (huttenlocher@mit.edu)
[DEANCOMP] Dean, Schwarzman College/HE Warren Professor, EECS

Computer vision, social and information systems and networks, social responsibilities of computing.

Ilic, Marija [EE] (ilic@mit.edu)
[LIDS] Senior Research Scientist

Large-scale systems modeling and simulation; power systems control and pricing algorithms; critical infrastructures and interdependencies; smart grids; micro-grids; computing for energy systems.

Indyk, Piotr [CS, AI+D] (indyk@csail.mit.edu)
[EECS] Thomas D. and Virginia W. Cabot Professor

Computational geometry, especially in high-dimensional spaces; databases and information retrieval; streaming and sketching algorithms; sparse recovery and sparse Fourier transform; learning- augmented algorithms.

Isola, Phillip [AI+D] (phillipi@mit.edu) [*on leave Fall 2025, Spring 2026*]
[EECS] Associate Professor

Computer vision and graphics, machine learning, artificial intelligence, robotics and embodied cognition, models of human and biological perception, learning and evolution.

Jaakkola, Tommi S [AI+D] (jaakkola@mit.edu) [*on leave Spring 2025, Fall 2025*]
[EECS] Thomas M. Siebel Distinguish Professor

Statistical inference and machine learning. Applications to molecular design, therapeutics, and computational chemistry. Artificial Intelligence.

Jackson, Daniel [CS] (dnj@mit.edu) [*on leave Spring 2025*]
[EECS] Professor

Software design for usability, security and dependability; critical systems; design languages, methods and tools; new programming paradigms.

Jaillet, Patrick [AI+D] (jaillet@mit.edu)
[EECS] Dugald C. Jackson Professorship

Online optimization and learning; machine learning; decision-making under uncertainty.

Jegelka, Stefanie [AI+D] (stefje@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Machine learning; optimization; discrete and combinatorial optimization; submodular functions; discrete probability; applications in materials science, computational biology and other areas.

Jossou, Ericmoore [AI+D] (ejossou@mit.edu)
[NUCENG] Assistant Professor

Rational materials design for energy applications using advanced characterization tools coupled with multiscale simulations and physics-based machine learning models.

Kaashoek, M. [CS] (kaashoek@mit.edu)
[EECS] Professor

Computer systems: operating systems, networking, programming languages, compilers, and computer architecture for distributed systems, mobile systems and parallel systems.

Kaelbling, Leslie [AI+D] (lpk@mit.edu)
[EECS] Panasonic Professor

Planning and learning with applications to robotics, with special interest in: decision-theoretic planning, integrating geometry and probability, integrating logic and probability, and connections to cognitive science.

Kagal, Lalana [AI+D] (lkagal@csail.mit.edu)
[CSAIL] Principal Research Scientist

ML systems; knowledge representation and reasoning; private, fair and trustworthy systems; policy frameworks.

Kalai, Yael T [CS] (tauman@mit.edu)
[EECS] Professor

Cryptography, complexity theory, interactive coding, computer security, and distributed algorithms. (Adjunct)

Karger, David [CS] (karger@mit.edu)
[EECS] Professor of Electrical Engineering

Systems that help people (mainly non-programmers) manage information more effectively. User interfaces for databases that regular people can use. Frameworks to let non-programmers create interactive web applications. Personal information management. Improving online discussion and collaboration tools such as wikis and social media.

Katabi, Dina [AI+D, CS] (dina@csail.mit.edu)
[EECS] Thuan (1990) and Nicole Pham Professor

Digital health, machine learning and computer vision models for medicine and healthcare, and mobile computing and Internet of Things (IoT).

Katz, Boris [CS] (boris@ai.mit.edu)
[CSAIL] Principal Research Scientist

Natural language understanding and generation, human computer interaction, artificial intelligence, and integration of language, vision and robotics.

Keathley, Phillip Donald [EE] (pdkeat2@mit.edu)
[RLE] Principal Research Scientist

Ultrafast optics, nanophotonics, nanoelectronics, nano-vacuum devices, nonlinear optics, light-matter interaction, quantum metrology, free-electron devices.

Kellis, Manolis [AI+D, CS] (manoli@mit.edu)
[EECS] Professor

AI for Science, Machine Learning, Computational Biology, Genomics, Therapeutics, Personalized Medicine, Cognitive Cartography.
(1) Genomes, their programming language, circuitry, epigenomics, dynamics, single-cell, multi-omics.
(2) Disease mechanism, genetic variation, patient subtyping, personalized medicine, electronic health records.
(3) Neuroscience, Alzheimer's, schizophrenia, cardiovascular disease, obesity, cancer, evolution.
(4) Therapeutic design, drug repurposing, high-throughput experiments, drug screening, genome circuitry manipulation, disease reversal.
(5) Statistical genetics, causal inference, geometric deep learning, joint embeddings, contrastive learning, computational chemistry, therapeutic design.
(6) Cognitive Cartography, embedding spaces, idea representations, visualization, and navigation for learning, discovery, invention, and collaboration.

Khattab, Omar [AI+D, CS] (okhattab@stanford.edu) [*starting July 2025*]
[EECS] Assistant Professor

Natural language processing (NLP), Information Retrieval (IR), and Machine Learning Systems (ML Systems). Language models, retrieval models, NLP programming abstractions, ML data systems, prompt optimization and Reinforcement Learning (RL) in NLP, and benchmarking and automatic evaluation in IR & NLP.

Kim, Yoon [AI+D, CS] (yoonhkim@mit.edu)
[EECS] Assistant Professor

Natural language processing; machine learning; deep learning; approximate inference.

Konakovic Lukovic, Mina [AI+D] (minakl@mit.edu) [*on leave Spring 2025*]
[EECS] Assistant Professor

Computer graphics, computational fabrication, 3D geometry processing and machine learning, including architectural geometry and design of smart materials.

Kong, Jing [EE, AI+D] (jingkong@mit.edu)
[EECS] Professor

Synthesis, characterization and applications of nanomaterials, including graphene and other two-dimensional materials, nanotubes, and inorganic nanowires.

Kraska, Tim [CS, AI+D] (kraska@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Generative AI Assistants for data problems, NL2SQL, Generative AI for System Development, Systems for machine learning/machine learning for systems, interactive data science tools, systems for visual data exploration, risk-aware data analysis, database systems, transactions processing, and adaptive system design.

Lampson, Butler [CS] (b@lampsons.us)
[EECS] Adjunct Professor Emeritus

Computer science. Hardware design and machine architecture through distributed systems and programming languages to user interfaces and office automation. (Adjunct)

Lang, Jeffrey [EE] (lang@mit.edu)
[EECS] Vitesse Professor

Analysis, design and control of electromechanical motion control and energy conversion systems with an emphasis on: traditional rotating and linear machinery; micro/nano-scale (MEMS/NEMS) sensors, actuators, and energy converters; energy harvesters; flexible electromechanical structures; and the dual use of electromechanics for motion actuation and sensing.

Lee, Hae-Seung [EE] (hslee@mtl.mit.edu)
[EECS] Advanced Television & Signal Processing Professor

Analog and mixed signal integrated circuits with the emphasis on low power consumption. Applications include communication, hardware security, signal processing, automotive, and medical electronic devices.

Leeb, Steven [EE, CS] (sbleeb@mit.edu)
[EECS] Emanuel E. Landsman (1958) Professor

Energy conversion systems, circuit design, power electronics, and embedded control. Applications to power systems, power system monitoring, energy scorekeeping, and fault detection and diagnostics for critical systems. Construction of combined electrical and mechanical systems with applications to wireless power transfer, solar power, electric utility, electric drives for propulsion systems, power supplies and dc-dc converter systems, and electromagnetic power harvesting.

Leiserson, Charles E. [CS] (cel@mit.edu)
[EECS] Edwin Sibley Webster Professor

Algorithms, caching, cloud computing, computer architecture, concurrency, fast AI, fast code, multicore systems, multithreading, parallel computing, performance engineering, theory.

Lewis, Laura D. [EE, AI+D] (ldlewis@mit.edu) [*on leave Spring 2026*]
[EECS] Athinoula A. Martinos Associate Professor

Human brain imaging technologies (MRI, PET, EEG); biomedical image and signal processing; computational neuroscience; machine learning for neural data; imaging and modeling physiological fluid dynamics; applications to neurological and psychiatric disorders and the neuroscience of sleep.

Liang, Paul [AI] (ppliang@mit.edu)
[MAS] Assistant Professor

multimodal machine learning, multisensory artificial intelligence, natural language processing, deep learning, human-AI interaction, human computer interaction, computer vision, AI for health and wellbeing, AI for human sensory experiences

Lim, Jae S [EE, AI+D] (jslim@mit.edu)
[EECS] Professor

Signal processing, image/video processing, speech processing.

Liskov, Barbara [CS] (liskov@csail.mit.edu)
[INST_PROF] Institute Professor

Parallel and distributed systems including blockchains, programming languages, programming methodology.

Liu, Kuikui [CS] (liukui@mit.edu)
[EECS] Assistant Professor

Liu, Luqiao [EE] (luqiao@mit.edu)
[EECS] Associate Professor

Spintronics; spin-based non-volatile logic and memory devices; magnetic material for information storage and microwave applications; generation and manipulation of spin in systems such as low dimensional material, high spin orbit coupling metals and semiconductors; novel spin-related phenomena in superconductors; sensing and imaging techniques for magnetic materials.

Lozano-Perez, Tomas [AI+D] (tlp@mit.edu)
[EECS] School of Eng Professor in Teaching Excellence

Robotics and artificial intelligence. Emphasis on developing planning and learning methods for robots operating in complex and uncertain environments.

Lynch, Nancy [CS] (nlynch@mit.edu)
[EECS] NEC Professor of Software Science & Engineering

Theory of distributed computing: models, algorithms, proofs, analysis, and lower bounds. Algorithms for fixed and mobile networks for problems of communication, building network structures, data management. Hybrid (continuous/discrete) distributed systems. Biological distributed algorithms, including insect colony algorithms and brain network algorithms. (Post- Tenure)

Madden, Samuel [CS, AI+D] (madden@csail.mit.edu)
[EECS] Head of the Faculty of Computer Science

Databases and computer systems; query processing, distributed systems, analytics and applied machine learning over massive scale data.

Madry, Aleksander [AI+D, CS] (madry@mit.edu) [*on leave Spring 2025*]
[EECS] Cadence Design Systems Professor

Deployable machine learning. Algorithms and optimization.

Mark, Roger Greenwood [EE] (rgmark@mit.edu)
[DOE] Distinguished Professor in Health Sci & Technology

Improve health care through the generation of new knowledge, monitoring technology and clinical decision support through the application of physiological signal processing, data science and machine learning technology to large collections of critical care data.

Matusik, Wojciech [CS, AI+D] (wojciech@mit.edu) [*on leave Spring 2025*]
[EECS] Joan and Irwin M. (1957) Jacobs Professor

Computer graphics. Additive manufacturing (3D printing). Computer- aided design. Compilers. Robotics. Computational imaging. Optics. Display devices.

Medard, Muriel [CS, AI+D, EE] (medard@mit.edu) [*on leave Spring 2025*]
[EECS] NEC Professor of Software Science and Engineering

Communications and networking. Low latency, security and reliability. Network coding. Universal decoding. Computation in networks.

Megretski, Alexandre [EE, AI+D] (ameg@mit.edu) [*on leave Spring 2025*]
[EECS] Professor

Theory and algorithms of analysis and design of hybrid systems, nonlinear and robust control, non-convex and convex optimization, formalization of knowledge in education, functional analysis and operator theory.

Miller, Robert C [CS] (rcm@mit.edu)
[EECS] Co-Education Officer, Professor

Human-computer interaction, online education, programming systems, software engineering.

Morris, Robert [CS] (rtm@csail.mit.edu)
[EECS] Professor

The design of an easy-to-control data networking infrastructure designed to bring about a new level of flexibility to network configuration. The Resilient Overlay Networks Project. Grid routing protocols.

Mueller, Stefanie [CS, EE] (stefmue@mit.edu) [*on leave Spring 2026*]
[EECS] Associate Professor

Human-computer interaction, 3D printing, computer aided design, creativity tools, prototyping, robotics, computer graphics, materials.

Mullainathan, Sendhil (sendhil@mit.edu)
[ECO] Professor, Economics & EECS

Combining machine learning with behavioral science to build algorithms that (1) better understand people; (2) address consequential problems in decision systems. Accomplishing this requires us to build new ML for science tools and procedures for incorporating structured understanding of the world into algorithms. Other application areas of interest include medicine and other complex sciences.

Natarajan, Anand [CS] (anandn@mit.edu)
[EECS] Assistant Professor

Quantum information theory, focusing on quantum complexity theory. Also interested in quantum cryptography, quantum algorithms, and connections with classical CS theory, and to physics.

Nigam, Rachit (rnigam@mit.edu)
[CSAIL] Visiting Scientist

Nigam, Rachit [CS] (rachit.nigam12@gmail.com) [*starting Fall 2025*]
[EECS] Assistant Professor

Programming Languages, Compilers, Computer Architecture. In particular, designing programming systems for generating correct, efficient, and optimized specialized accelerators from high-level descriptions and mapping them to FPGAs and ASICs.

Niroui, Farnaz [EE] (fniroui@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Active engineering of light-matter interactions, electronic transport and exciton dynamics at extreme nanoscale dimensions. Design and development of nanoscale devices and systems for applications including plasmonics, molecular electronics and quantum technologies.

Notaros, Jelena [EE] (notaros@mit.edu) [*on leave Fall 2025*]
[EECS] Assistant Professor

Integrated photonics platforms, devices, and systems for applications including augmented-reality displays, LiDAR sensing for autonomous vehicles, free-space optical communications, trapped-ion quantum engineering, and biophotonics.

O'Brien, Kevin P [EE, CS] (kpobrien@mit.edu)
[EECS] Associate Professor

Quantum metamaterials, quantum optics, and experimental quantum computing with superconducting circuits and circuit quantum electrodynamics (cQED). Near quantum limited amplifiers and quantum measurement. Making noisy intermediate-scale quantum (NISQ) technology less noisy.

O'Reilly, Una-May [CS, AI+D] (unamay@csail.mit.edu)
[CSAIL] Principal Research Scientist

Artificial adversarial intelligence: data-driven ML, symbolic AI, and mod-sim approaches to intelligent behavior in adversarial domains, e.g., cyber security, disinformation.

Oliva, Aude [AI+D] (oliva@mit.edu)
[DEANCOMP] Director of Strategic Industry Engagement

Human perception and cognition; computer vision; human neuroscience; computational neuroscience; face, object, scene and place recognition by human and artificial systems; big data for visual recognition; modeling human perceptual, cognitive and memory capabilities.

Oliver, William [EE, AI+D] (william.oliver@mit.edu)
[EECS] Professor

Quantum computing with multi-qubit superconducting circuits and high-performance cryogenic classical computing. High-coherence materials, fabrication, and 3D integration; circuit design; quantum algorithms and benchmarking; noise spectroscopy and error mitigation; quantum-limited amplification and precision measurements; quantum optics with microwave photons.

Oppenheim, Alan [EE, CS] (avo@mit.edu)
[EECS] Professor

Signal processing theory, applications and algorithms.

Orlando, Terry [EE] (orlando@mit.edu)
[EECS] Professor

Quantum computing with superconducting devices. Superconducting devices.

Ozdaglar, Asu [AI+D, EE, CS] (asuman@mit.edu)
[EECS] Deputy Dean of Academics and EECS Dept. Head

Optimization theory and algorithms with focus on algorithms for machine learning and large-scale data processing and distributed and parallel computation. Game theory and mechanism design. Modeling, analysis and optimization of multi-agent networked systems, with applications in infrastructure systems (communication networks, traffic networks and power grid) and social, economic and financial systems.

Palacios, Tomas [EE] (tpalacios@mit.edu) [*on leave Spring 2025*]
[EECS] MTL Director/Professor

Novel electronic devices and systems in wide bandgap semiconductors and two-dimensional materials, such as graphene; polarization and bandgap engineering; transistors for sub-mm wave power and digital applications; new concepts for power conversion, generation and storage, interaction of biological systems with semiconductor materials and devices.

Parrilo, Pablo [AI+D] (parrilo@mit.edu) [*on leave Spring 2025*]
[EECS] Joseph F & Nancy P. Keithley Professor of EE

Control and identification of uncertain complex systems, robustness analysis and synthesis, and the development and application of computational tools based on convex optimization and algorithmic algebra to practically relevant problems in engineering, economics and physics.

Perreault, David J [EE] (djperrea@mit.edu)
[EECS] Ford Professor of Engineering

Power electronics and energy conversion; renewable energy systems; efficient generation and application of electrical energy; circuit design and control; applications to industrial, commercial, scientific, transportation and biomedical systems.

Polyanskiy, Yury [AI+D, EE] (ypol@mit.edu)
[EECS] Professor

Information theory, statistics, theoretical machine learning and transformers.

Popescu, Mariana [CS, AI+D] (M.A.Popescu@tudelft.nl) [*starting July 2025*]
[EECS, ARCH] Assistant Professor

Computational design including architectural geometry, form finding, structurally informed design and smart materials. Computational/digital fabrication techniques for materialising intelligent structures and meta-materials - with a special interest for 3D knitting and flexible/deployable architectural systems.

Quatieri, Thomas [EE] (quatieri@ll.mit.edu)
[LINCOLN] LL - Senior Staff

Biologically-inspired signal processing; modeling speech production, auditory processing, and their coupling. Application to early detection of neurological, cognitive, and auditory disorders.

Ragan-Kelley, Jonathan [CS, AI+D] (jrk@mit.edu)
[EECS] Associate Professor

High-performance visual computing, computer graphics, domain- specific languages, programming languages, differentiable programming, compilers, GPUs, computer architecture.

Raghavan, Manish [CS] (mragh@mit.edu)
[SLOAN] Assistant Professor

Algorithmic fairness, machine learning, behavioral economics, technology policy, algorithmic game theory, mechanism design, algorithmic hiring, applied modeling, technology and society, theory.

Ram, Rajeev [EE, AI+D] (rajeev@mit.edu) [*on leave Spring 2025*]
[EECS] Assoc Director, RLE/Professor/MacVicar Fellow

Applied physics with an emphasis on photonics and analysis for applications ranging from advanced computing, medicine to environmental science.

Reiskarimian, Negar [EE] (negarr@mit.edu)
[EECS] Assistant Professor

Radio-frequency and millimeter-wave integrated circuits and systems design inspired by applied electromagnetics and photonics. Analysis, design, and implementation of integrated microsystems and metamaterials based on new physical phenomena. Applications span communication, Internet of Things (IoT), sensing, imaging, and optoelectronics.

Rinard, Martin [CS, AI+D] (rinard@csail.mit.edu) [*on leave Fall 2025, Spring 2026*]
[EECS] Professor

Computer systems, compilers, programming languages, software engineering, program analysis, program verification, real-time systems, embedded systems, distributed systems, parallel systems.

Rives, Alexander (arives@mit.edu)
[EECS] Assistant Professor

Rivest, Ronald [CS] (rivest@mit.edu)
[INST_PROF] Institute Professor

Climate change. Election security. Exposure notification. Cryptography. Note: not currently looking for students.

Rosenholtz, Ruth [CS] (rruth@mit.edu)
[] None

Computational modeling of human vision, attention, and capacity limits. Application of understanding of human vision to design of user interfaces and information visualizations. Perceptual and attentional aspects of distracted driving.

Rubinfeld, Ronitt [CS, AI+D] (ronitt@mit.edu)
[EECS] Edwin Sibley Webster Professor

Theory of computation: sublinear time algorithms, property testing, testing and learning discrete distributions over large domains, randomized algorithms.

Rus, Daniela [AI+D, CS] (rus@csail.mit.edu)
[DEANCOMP] Director, CSAIL/Viterbi

Robotics, machine learning, AI.

Sanchez, Daniel [CS, EE] (sanchez@csail.mit.edu)
[EECS] Professor

Computer architecture. In particular, striving to improve the performance, efficiency and scalability of future parallel and heterogeneous systems, and to enable programmers to leverage their full capabilities easily. Current projects focus on scalable and efficient memory hierarchies, architectures with quality-of-service guarantees, scalable dynamic fine-grained runtimes and schedulers, and hardware support for scheduling.

Satyanarayan, Arvind [CS] (arvindsatya@mit.edu)
[EECS] Associate Professor

Accessibility, Data visualization and analysis, human-computer interaction, design and creativity tools, end-user programming, machine learning interpretability.

Schindall, Joel [EE] (joels@mit.edu)
[EECS] Gordon Prod Dev Chair Prof of Practice, Emeritus

Automotive applications of electronics: energy storage using nanotube-enhanced ultra-capacitors, reliability enhancement of complex system architectures, industry-related research and product development, novel time-domain processing methods, satellite communication architectures. (Available for discussion, but no longer taking on students.)

Seethapathi, Nidhi [AI+D] (nidhise@mit.edu)
[B&CS] Middleton CD Assistant Professor of Neuroscience

Computational modeling of biological motor control, nonlinear dynamics and control, embodied reinforcement learning, control and adaptation of wearable robots, computer vision for human pose estimation, computer-aided rehabilitation, machine learning for diagnostics

Seneff, Stephanie [CS] (seneff@mit.edu)
[CSAIL] Senior Research Scientist

Investigating the role of toxic chemicals and nutritional deficiencies in chronic disease through biomedical data mining.

Shah, Devavrat [AI+D] (devavrat@mit.edu)
[EECS] Andrew (1956) and Erna Viterbi Professor

Graphical models, social data processing, time-series analysis, causal inference, reinforcement learning and stochastic networks.

Shavit, Nir N. [CS] (shanir@csail.mit.edu)
[EECS] Professor

Computational connectomics: understanding how neural tissue computes through the mapping of brain connectivity and applying this knowledge to machine learning and the programming multiprocessor machines.

Shrobe, Howard [CS] (hes@csail.mit.edu)
[CSAIL] Principal Research Scientist

Hardware and software architectures for secure computing, hardware and software architectures for secure and resilient computations, use of natural interfaces (speech, gestures) in the design and synthesis of software.

Shun, Julian [CS] (jshun@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Parallel computing, algorithms, data structures, programming frameworks, concurrency, performance engineering, graph analytics, geometric data processing, text processing.

Sitzmann, Vincent [AI+D] (sitzmann@mit.edu) [*on leave Fall 2025*]
[EECS] Assistant Professor

Computer vision, vision for robotics, learning word models, self-supervised symmetry discovery (e.g. discovering that the world is three-dimensional only from interacting with it or learning an intuitive physics engine, both without hand-crafted inductive biases), representation learning, geometric deep learning for perception.

Smidt, Tess [EE, AI+D] (tsmidt@mit.edu) [*on leave Fall 2025*]
[EECS] Assistant Professor

Machine learning (ML) from first-principles for scientific data. Symmetry equivariant neural networks. Representation learning for 3D geometry. Computational science and ML surrogate models. Design and property prediction of atomic systems (e.g. molecules, materials, proteins, etc.).

Sodini, Charles [EE] (sodini@mit.edu)
[EECS] Clarence J. LeBel Professor

Design of technology-intensive microsystems, emphasizing integrated circuit and system design, for medical electronic devices. These devices include wearable and minimally invasive monitoring and imaging.

Solar Lezama, Armando [CS, AI+D] (asolar@csail.mit.edu)
[EECS] Distinguished Professor of Computing

Programming systems with a focus on software synthesis. Programming tools for parallel and high-performance computing.

Sollins, Karen [CS] (sollins@csail.mit.edu)
[CSAIL] Principal Research Scientist

Computer networks, internet protocols, network security and privacy, identity, denial of service, Internet of Things.

Solomon, Justin [AI+D, CS] (jsolomon@mit.edu) [*on leave Spring 2025*]
[EECS] Associate Professor

Geometry (shape analysis, correspondence, synthesis, meshing, machine learning), computer graphics, optimization/numerical methods, optimal transport, simulation, medical imaging, 3D vision, geometric approaches to machine learning.

Sontag, David [AI+D] (dsontag@mit.edu) [*on leave Spring 2025, Fall 2025*]
[EECS] Professor

Machine learning and artificial intelligence; graphical models; unsupervised learning and topic modeling; variational inference and linear programming relaxations; causality and counterfactual inference; deep learning; natural language processing. Applications to health care: electronic phenotyping, precision medicine, disease progression modeling.

Sra, Suvrit [AI+D] (suvrit@mit.edu)
[EECS] Associate Professor

Machine learning and artificial intelligence, especially from an optimization and mathematical perspective. Fundamental theoretical and algorithmic questions in these areas, as well as their application to data driven science (physics, chemistry, biology) and engineering. Optimization for machine learning, especially non-convex optimization, differential geometric optimization, theory of deep learning, discrete probability, optimal transport, convex geometry, polynomials, and more broadly, bridging different areas of math with optimization and machine learning.

Stonebraker, Michael [CS] (stonebraker@csail.mit.edu)
[EECS] Adjunct Professor Emeritus

Database systems, query processing, data warehouses, federated databases, data visualization. (Adjunct)

Stultz, Collin M [AI+D, EE] (cmstultz@mit.edu)
[EECS] Professor

Machine Learning (ML) for healthcare, Explainable ML in cardiovascular disease, clinically useful AI tools

Sussman, Gerald Jay [CS, EE, AI+D] (gjs@mit.edu) [*on leave Fall 2025, Spring 2026*]
[EECS] Panasonic Professor

Artificial intelligence: learning, problem solving and programming. Computational performance models for intelligent behavior, especially modeling the behavior of engineers. Numerical models of physical systems.

Sze, Vivienne [EE, CS, AI+D] (sze@mit.edu)
[EECS] Professor

Design of signal processing algorithms, computer hardware architectures (e.g., domain-specific accelerators), and VLSI circuit design for energy-efficient systems. Applications include high-performance computing (e.g., deep neural networks, sparse tensor algebra), autonomous robot navigation (e.g., depth sensing and perception, motion planning, localization and mapping, exploration), video compression, image processing, computer vision, and digital health.

Szolovits, Peter [AI+D, CS] (psz@mit.edu)
[EECS] Professor of EECS & HST

Application of artificial intelligence techniques to medical decision making, including machine learning approaches to natural language processing on clinical notes, predictive modeling based on clinical data including images, and discovery of relationships between disease phenotypes and genetics. Effective representation of knowledge, personal health information systems, medical confidentiality.

Tedrake, Russell Louis [AI+D] (russt@mit.edu) [*on leave Spring 2025*]
[EECS] Toyota Professor

Robotics, nonlinear control, and machine learning. Robot manipulation with continued emphasis on rigorous optimization- based approaches to feedback control (which is so far largely absent in manipulation) and the connections between perception and control.

Tidor, Bruce [AI+D] (tidor@mit.edu)
[PROVOST] Director and CEO/SMART (Interim) & Prof. BE/EECS

Modeling of protein-protein interactions, focusing on electrostatic effects and structure-based drug design. Systems-level biology including biological network modeling and information theory applied to data analysis.

Torralba, Antonio [AI+D] (torralba@csail.mit.edu)
[EECS] Faculty Head, AI+D; Delta Electronics Professor

Computer vision, machine learning and human perception; development of computer vision systems and solving real world recognition tasks; modeling human perceptual and cognitive capabilities; object recognition, classification of whole scenes; visual recognition and classification of places and objects.

Uhler, Caroline [AI+D] (cuhler@mit.edu)
[EECS] Professor

Machine learning and statistics (causal inference, graphical models, autoencoders, generative modeling, self-supervised learning, algebraic statistics, multivariate analysis); data science; mathematical and computational biology (genome packing models, inference of gene regulatory networks); convex optimization; applied algebraic geometry;

Vaikuntanathan, Vinod [CS, AI+D] (vinodv@mit.edu)
[EECS] Professor

Cryptography, quantum cryptography, security and privacy in machine learning, computational complexity.

Veeramachaneni, Kalyan [CS] (kalyan@csail.mit.edu)
[LIDS] Principal Research Scientist

Machine learning, data science, software and systems for data science, fairness and accountability in machine learning, AI for cybersecurity, artificial intelligence applications, automated machine learning, data science automation.

Velasquez-Garcia, Luis Fernando [EE, AI+D] (lfvelasq@mit.edu)
[MTL] Principal Research Scientist

Micro- and nano-enabled, multiplexed, scaled-down systems that exploit high electric field phenomena (e.g., electrospray, electrospinning, field emission, field ionization, plasmas, x-rays) for space, energy, healthcare, manufacturing and analytical applications. Additively manufactured micro/nanoelectromechanical systems (MEMS/NEMS) with emphasis on microfluidics, sensors, and actuators. Artificial Intelligence (AI) applied to additively manufactured MEMS/NEMS.

Verghese, George [EE, AI+D] (verghese@mit.edu)
[EECS] Professor

Signal processing, estimation, identification, modeling, structured reduction and control for systems arising in biomedicine and other applications; computational physiology, bedside informatics and clinical inference.

Voldman, Joel [EE] (voldman@mit.edu)
[EECS] William R. Brody (1965) Professor

Biological applications of microtechnology, especially to cell biology; bio-MEMS; electrostatics at the microscale.

Wainwright, Martin [AI+D] (mjwain@mit.edu)
[EECS] Professor

Statistical machine learning; High-dimensional statistics; Reinforcement learning and stochastic control; Graphical models; Causal inference; Semi-parametric statistics; Algorithms and optimization

Warde, Cardinal [EE] (warde@mit.edu)
[EECS] Professor

Investigation of optoelectronic materials and devices for neuromorphic systems. Design, fabrication and testing of the Compact Optoelectronic Integrated Neural (COIN) co-processor system. Novel algorithms and approaches for training the COIN hardware.

Weitzner, Daniel J [CS] (weitzner@mit.edu)
[CSAIL] Senior Research Scientist

Privacy, Cybersecurity, Accountable Systems, Internet public policy, Surveillance law and technology, Encryption policy

White, Jacob [EE, AI+D] (white@mit.edu)
[EECS] Cecil H Green Professor

Numerical simulation, optimization, and machine learning algorithms applied to medical imaging, nano-photonics, terahertz integrated circuits, and microfluidic devices. Design-based pedagogical strategies for teaching electromagnetics, feedback control, and machine learning.

Williams, Ryan [CS, AI+D] (rrw@mit.edu)
[EECS] Professor

Computational complexity, the design and analysis of algorithms, and their interactions: circuit complexity and circuit-analysis algorithms, graph algorithms, parameterized algorithms and complexity, meta-complexity, fine-grained algorithms and complexity.

Williams, Virginia Vassilevska [CS, AI+D] (virgi@mit.edu)
[EECS] Professor

Algorithms and complexity: fine-grained complexity and algorithms, graph and matrix algorithms, dynamic algorithms and data structures, distance compression, computational social choice.

Wilson, Ashia [AI+D] (ashia07@mit.edu)
[EECS] Assistant Professor

Optimization theory; Statistics and machine learning; uncertainty and robustness quantification; AI for society.

Wornell, Gregory [AI+D] (gww@mit.edu)
[EECS] Professor

Signal processing, information theory, statistical inference, artificial intelligence, and information security. Applications including architectures for sensing, learning, computing, communication, and storage; systems for computational imaging, vision, and perception; aspects of computational biology and neuroscience; digitally- enhanced nanoscale systems and devices, and design of wireless networks.

Yan, Mengjia [CS] (mengjiay@mit.edu)
[EECS] Associate Professor

Computer architecture and hardware security

You, Sixian [EE] (sixian@mit.edu) [*on leave Spring 2025*]
[EECS] Assistant Professor

Optics and algorithms to improve human health. Our current research focus includes nonlinear microscopy and spectroscopy (label-free imaging, multiphoton microscopy), light source engineering (fiber sources, wavefront shaping, spectral shaping), computational optics/imaging (3D holography, hyperspectral imaging, AI-assisted augmented microscopy).

Zeldovich, Nickolai [CS] (nickolai@mit.edu) [*on leave Spring 2025*]
[EECS] Joan and Irwin M. (1957) Jacobs Professor

Building practical secure systems. Operating systems, hardware design, networking, and distributing systems. Programming languages and tools, security analysis and verification.

Zheng, Lizhong [AI+D, EE] (lizhong@mit.edu) [*on leave Fall 2025, Spring 2026*]
[EECS] Professor

Wireless communications, physical layer designs, wireless networks; space-time processing, digital communications, multi-user detection algorithms, information theory, stochastic signal processing, optical communications.