

Department of Brain and Cognitive Sciences

Mission

The mission of the [Department of Brain and Cognitive Sciences \(BCS\)](#) is to reverse engineer the mechanisms of the mind. BCS is anchored by the idea that an understanding of how the brain gives rise to the mind requires basic science investigation at multiple scales of analysis (genes, molecules, synapses, neurons, networks of neurons, brain systems, individuals, and groups of individuals) and quantitative models that encapsulate our understanding by formally describing the links between each of those levels.

BCS aims to offer an environment in which the world's most talented researchers and students are free to devise and pursue new ideas about the underlying mechanisms of the brain and how they give rise to the mind and then collaborate when needed and/or translational potential emerges. We also uphold a core value of MIT—that sufficient, accurate explanations of these processes must ultimately be rooted in the language of mathematics and computation. The mission of BCS thus spans research, teaching, and training in cognitive science, neuroscience, and computation.

The research in BCS is organized around three levels of empirical analysis: cognitive science, the study of behavior to infer the representations and algorithms of the mind; systems neuroscience, the study of the brain structures and circuits that implement those algorithms and representations; and cellular and molecular neuroscience, the study of the mechanisms that control the construction and maintenance of those brain structures and circuits. Crucially, we also apply computational approaches to build the formal links within and between these empirical levels. We believe a deep understanding of these mechanisms is a fascinating pursuit in itself and also the path to ameliorating or eliminating disorders of the mind, building truly intelligent machines, and advancing education, among other advances we cannot even predict.

A unique and defining identity of our department is that we pursue all these levels of analysis in an integrated and synergistic way. There are very few other departments in the world organized in the same manner as BCS—in most universities, the study of the brain (neuroscience) and the study of the mind (cognitive science) are housed in separate buildings and often on separate campuses. At MIT, the Brain and Cognitive Sciences Complex (Building 46) not only houses the BCS department and all of its primary faculty labs but also includes the space and facilities of the McGovern Institute for Brain Research (MIBR) and the Picower Institute for Learning and Memory (PILM), where many of the BCS faculty carry out their research.

We are a community of more than 600 students, faculty, and staff led by a team of 57 highly decorated professors pursuing their individual expertise, from genes and molecules to neural circuits, algorithms, and complex behavior and cognition. The insightful, innovative, and high-impact research led by our world-renowned faculty provides a stellar training ground for the next generation of scientific leaders in brain and cognitive sciences. This combined strength puts us squarely at the forefront of our mission.

Leadership

In December 2020, Jim DiCarlo, who was appointed department head in 2012, announced that he would step aside from that role so he could assume directorship of the MIT Quest for Intelligence; he retained his appointment as Peter de Florez Professor of Neuroscience in BCS. A department head search committee chaired by Professor John Gabrieli included faculty along with staff representatives, graduate students, and postdocs, a first for the department and a rarity for the School and the Institute. On the recommendation of the search committee, School of Science dean Nergis Mavalvala named Michale Fee, the Glenn V. and Phyllis F. Dorflinger Professor of Neuroscience, as the next department head effective May 1. Fee is well versed in departmental structure and priorities, having joined the faculty in 2003 and served since 2012 as the associate department head for education.

The departmental leadership structure also grew in an important direction in November 2020 with the addition of Professor Laura Schulz in a new associate department head role dedicated to diversity, equity, inclusion, and justice (DEIJ); she also succeeded Professor Pawan Sinha as chair of the Building 46 DEIJ Committee. Her energy and commitment have been essential as we mobilize and coordinate grassroots efforts, engage in meaningful dialogue on these issues, and marshal funding to make our department and profession more welcoming and inclusive.

The BCS leadership team currently stands as follows:

- Professor Michale Fee, department head and Education Committee chair
- Professor Rebecca Saxe, associate department head, graduate officer, and chair of the Graduate Student Affairs Committee
- Professor Laura Schulz, associate department head, undergraduate officer, and chair of the DEIJ Committee
- Professor Mark Bear, postdoctoral officer
- Professor Matt Wilson, chair of the Graduate Admissions Committee
- Professor Nancy Kanwisher, space officer and chair of the Junior Faculty Mentoring Committee
- Professor Alan Jasanoff, chair of the Seminars Committee
- Satra Ghosh, chair of the Computational Infrastructure Committee

As the fiscal year ended, a search was under way for a new associate department head for education.

All faculty members with primary appointments in BCS serve on at least one of the standing committees listed above. In addition to facilitating the operation of the department, these committees, by including representatives from multiple Building 46 constituencies and departments, labs, and centers (DLCs), support a departmental priority of bolstering the sub-communities of Building 46 and lowering the walls between the various units.

The department head also convenes monthly meetings of the BCS Council, a faculty committee that sets long-term strategies for the department. Its members are as follows:

- Jim DiCarlo, chair
- Mark Bear, postdoctoral representative
- Emery Brown, Institute for Medical Engineering and Science (IMES) and Institute for Data, Systems, and Society
- Bob Desimone, McGovern Institute for Brain Research
- Evelina Fedorenko, junior faculty representative
- Michale Fee, systems area representative
- Michael Halassa, junior faculty representative
- Troy Littleton, cellular/molecular area representative
- Elly Nedivi, cellular/molecular area representative
- Tomaso Poggio, Center for Brains, Minds and Machines
- Rebecca Saxe, cognitive area representative
- Laura Schulz, DEIJ representative
- Mriganka Sur, Simons Center for the Social Brain
- Josh Tenenbaum, computation area representative
- Li-Huei Tsai, Picower Institute for Learning and Memory

The council serves as an advisory committee to ensure that departmental decisions are informed by a broad array of voices and that all leaders in the building are comfortable with and enthusiastic about those decisions.

Faculty

BCS faculty members are widely recognized as being international leaders in their respective fields. We are proud to count among our current faculty five members of the National Academy of Sciences, three members of the National Academy of Medicine, and 15 members of the American Academy of Arts and Sciences. Our faculty have also been recipients of prestigious awards and fellowships including the National Medal of Science, the MacArthur Foundation “Genius Grant” Fellowship, the Guggenheim Fellowship, the Wilhelm Exner Medal, the Kavli Prize, the Breakthrough Prize in Life Sciences, the National Academy of Sciences Troland Award, the National Science Foundation CAREER Award, the Gairdner International Award, the McKnight Scholar Award, the Vallee Scholar Award, and the PAMI Azriel Rosenfeld Lifetime Achievement Award.

The McGovern Institute for Brain Research (MIBR) and the Picower Institute for Learning and Memory (PILM) are critical components of the BCS community: of the 36 tenured or tenure-track faculty members with primary appointments in BCS, 17

are affiliated with MIBR and 12 with PILM. The specialized missions of each institute bring significant depth to the department's research enterprise. The department, as the academic hub, is an essential link to graduate students and undergraduates who perform essential work in labs. The triumvirate of BCS, MIBR, and PILM makes the Building 46 community unique.

The department also has significant connections to other centers at MIT. As noted below, our most recent faculty additions are Guangyu Robert Yang and Nidhi Seethapathi, both joint hires with the MIT Stephen A. Schwarzman College of Computing. Three faculty are affiliated with the Computer Science and Artificial Intelligence Laboratory and two with IMES. Other joint faculty are affiliated with Chemical Engineering, Mechanical Engineering, the Media Lab, Biology, Biological Engineering, the Sloan School of Management, and the Weizmann Institute. BCS faculty members in turn hold secondary appointments in many of those departments, including Linguistics and Philosophy and IMES. Five BCS faculty have appointments in the Broad Institute, one holds the special title of Institute Professor, and one has the distinctive honor of being president emerita.

Guangyu Robert Yang joined the MIT faculty in summer 2021 as an assistant professor in BCS and a member of the artificial intelligence and decision-making faculty of the Department of Electrical Engineering and Computer Science (EECS) in the MIT Schwarzman College of Computing. Yang, who is also an associate investigator in the McGovern Institute, was previously a postdoctoral research scientist at Columbia University. He obtained his PhD in 2018 at New York University. Yang is the first joint BCS/MIT Schwarzman College of Computing joint hire, an arrangement meant to maximize collaboration and improve intellectual ties between the college and the department. Yang's research connecting artificial neural networks to the actual functions of cognition is distinctive in its close interplay between computational and biological systems and ambitious in its use of computational modeling to understand the optimization of neural systems that function to accomplish multiple tasks.

The department also completed a successful search for a second shared faculty position with the MIT Schwarzman College of Computing. Nidhi Seethapathi, currently a postdoc at the University of Pennsylvania, will join the department and college as an assistant professor in January 2022.

Several successful tenure and promotion cases took effect in 2020–2021. Gloria Choi, Mark Harnett, Michael Halassa, Ev Fedorenko, and Steven Flavell were promoted from assistant professor to associate professor without tenure; Josh McDermott, Mehrdad Jazayeri, and Myriam Heiman were promoted from associate professor without tenure to associate professor with tenure; and Ila Fiete, Roger Levy, and Alexander Rakhlin were promoted from associate professor with tenure to full professor.

Development

Strategic outreach efforts broadly aim to enhance the department's profile as a cutting-edge hub for innovation in brain and cognitive sciences and increase philanthropic funds to support student and faculty research into fundamental neuroscience and cognitive science. BCS resource development efforts include individual giving, planned

giving, foundation and corporate support, donor communications, stewardship, and donor-centric events. Philanthropic support represents an increasingly important source of funding to advance the department's research and educational missions.

While BCS welcomes gifts of any amount to support a broad range of activities, including faculty, student, and research activities, fundraising efforts continue to focus on three priorities: (1) graduate fellowships, (2) computational resources and intelligence-related research and infrastructure, and (3) diversity efforts, especially support for the Research Scholars Program, a post-baccalaureate scholarship program that aims to lower barriers to scientific training in the field of neuroscience.

While the Covid-19 pandemic presented unique challenges for fundraising and necessitated that all meetings and cultivation opportunities take place virtually, BCS received approximately \$3.5 million in new gifts and pledges during the reporting period. Notable gifts include three endowed graduate fellowships: BCS professor emeritus Emilio Bizzi established an eponymous fellowship, BCS Visiting Committee member Larry Hilibrand and Alan Hilibrand established a second Jack Hilibrand (1956) Fellowship, and Beth and Russ Siegelman established the Siegelman Fellowship in partnership with PILM resource development.

In 2020–2021 BCS moved all cultivation and stewardship events online, which marked a unique opportunity to expand invitee lists and engage with new prospects and donors. The 2020 Champions of the Brain Fellows event was held via Zoom and included remarks by Dean Mavalvala, presentations by graduate fellows, and trivia that focused on MIT and the brain. The event was attended by 23 donors/guests, four staff members, 15 students, and nine faculty members, and feedback was overwhelmingly positive. BCS and the Simons Center for the Social Brain co-sponsored a half-day virtual symposium highlighting autism research at MIT. This invitation-only event attracted approximately 400 attendees. Finally, while the 2021 Visiting Committee meeting was postponed because of Covid-19, the biennial Brains on Brains symposium, usually held to coincide with the Visiting Committee meeting, went forward as an online webcast available to BCS alumni as well as donors and friends. The event included talks, virtual lab tours, and panel discussions and was attended by more than 400 people.

Science and Engineering of Intelligence

BCS continues to embrace its important and natural role in the future of intelligence research and education at MIT through several initiatives, including ones focusing on continued support for departmental infrastructure improvements in computing. The CompCore, launched in 2018 and led by Ila Fiete and Josh McDermott, provides ongoing support, training, development, and guidance for the BCS community and serves as the central point of contact for the OpenMind High Performance Computing Cluster system. The department also continues to support the BCS Fellows in Computation program, housed in the CompCore space, which provides talented junior scientists with the opportunity to develop an independent research program. The 2020–2021 fellows are Noga Zaslavsky (second year) and Brian Cheung (first year). The Computational Infrastructure Committee, created in 2019, continues to help address the growing computational needs of the department.

BCS also continues to play an active role in the discussions around the organization of the MIT Stephen A. Schwarzman College of Computing, creating a strong interface between the college and the department. BCS worked closely with the School of Science on strategic hiring areas that overlap with natural intelligence research. The MIT Schwarzman College of Computing announced six strategic hiring areas, including two that provide opportunities to develop strong ties to BCS (Computing and Natural Intelligence: Cognition, Perception, and Language and Computing in Health and Life Sciences). As discussed above, BCS, the MIT Schwarzman College of Computing, and EECS collaborated on two successful faculty searches to recruit Guangyu Robert Yang and Nidhi Seethapathi.

The MIT Quest for Intelligence, an Institute-wide initiative to advance the science and engineering of both human and machine intelligence (now a research unit within the MIT Schwarzman College of Computing), recently underwent a reorganization and substantial repositioning of its vision and mission. With Jim DiCarlo as MIT Quest's newly appointed director, the refocused mission is to understand how brains produce intelligence and how this process can be replicated in artificial systems. This mission is also well aligned with the Center for Brains, Minds, and Machines. Over the past year, MIT Quest funded several BCS faculty research missions, including research spearheaded by Josh Tenenbaum, Nancy Kanwisher, and Guangyu Robert Yang.

Education and Training

BCS provides its students and trainees with a dynamic interdisciplinary curriculum designed to educate them in cognitive science, systems neuroscience, cellular and molecular neuroscience, and computation. The undergraduate program offers tiered and broad instruction on topics drawn from molecular, cellular, and systems neuroscience; cognitive and perceptual psychology; applied mathematics; computer science and artificial intelligence; linguistics; and philosophy of the mind. The graduate program provides advanced instruction on current research topics and methods and faculty mentoring to achieve cutting-edge research progress. We seek to facilitate unfettered opportunities for our postdoctoral trainees to focus on developing and executing cutting-edge research projects within individual faculty laboratories and to offer open opportunities for second faculty mentors, grant-writing and oral presentation training, teaching experience, and industry networking. Through our undergraduate, graduate, and trainee programs, our students work with world-renowned faculty, have access to state-of-the-art equipment, and are able to seize upon remarkable opportunities to participate in groundbreaking research.

Undergraduate Program

In June 2021, 30 students received BCS degrees: 16 students graduated with a degree in Course 9 (Brain and Cognitive Sciences), and 14 with a degree in Course 6-9 (Computation and Cognition).

Our vision for our undergraduate program is for Course 9 majors to be deeply educated in key phenomena associated with the mind and the brain, quantitative methods for describing the mechanisms that underlie those phenomena, the procedures by which we discover new phenomena and new mechanisms, and myriad connections of that knowledge with fields including physics, biology, engineering, mathematics, linguistics, and economics.

Course 6-9, a joint program in collaboration with the Department of Electrical Engineering and Computer Science, focuses on the emerging field of computational and engineering approaches to brain science, cognition, and machine intelligence. The curriculum is flexible and accommodates students with a wide range of interests in this area, from biologically inspired approaches to artificial intelligence and reverse engineering of circuits in the brain. Computation and Cognition provides students with outstanding preparation for research and development in the science and engineering of intelligent systems. Students in Course 6-9 can also opt to pursue a master of engineering (MEng) in computation and cognition; in this program, Course 6-9 students earn a bachelor's and a master's degree, either concurrently or sequentially with their undergraduate degree.

Graduate Program

Nine students received doctoral degrees in 2020–2021: Kelsey Allen, Scarlett Barker, Lou Beaulieu-Laroche, Chia-Jung Chang, Kevin Ellis, Gladia Hotan, Rosary Lim, Joshua Rule, and Mellin Zhan. The department awarded a master of science degree to Yuan Bian and MEng degrees to Melat Anteneh and Hang Le Thi Nguyet, the first master's degrees for the Computation and Cognition program.

Our rigorous, cross-disciplinary doctoral program prepares students to pursue careers in research, teaching, or industry. During their first year of study, students rotate through three different laboratories, gaining exposure to the department's rich scientific diversity of cutting-edge methods, model systems, and research questions. Typically, by the end of their first year, students have selected a primary faculty thesis mentor to work with in conducting their PhD research. Coursework requirements are limited to six subjects, completed during the first two years of study. Although students are encouraged to take advanced seminars throughout the program, the remainder of the program is spent primarily working in a laboratory. Students typically complete the PhD program in five to six years. They leave MIT prepared to train, lead, and partner with the next generation of scientists.

Twenty-one students (of 557 applicants) entered the program in fall 2020. Eighteen students (of 722 applicants) will enter in fall 2021; this class will be the first to be admitted since the department suspended the requirement for applicants to submit Graduate Record Examination (GRE) scores.

The Computationally-Enabled Training Program, with support from a National Institutes of Health training grant, funded six partial graduate slots.

Postdoctoral Program

In 2020–2021, 42 new postdoctoral researchers joined the BCS community, bringing the total number to 153. Postdocs represent approximately a quarter of the total BCS community and are an important part of the community, contributing to the depth and breadth of our work and providing additional mentorship to both graduate students and undergraduates. The department and its affiliated institutes appoint postdocs on the recommendation of a faculty sponsor.

Working alongside faculty members who are experts in their fields, postdoctoral researchers hone their skills as scientists and teachers. The interdisciplinary nature of our program exposes them to multiple areas of research and prepares them to advance to tenure-track positions at major universities or significant research positions in industry. Trainees who have their own external funding are given the title of postdoctoral fellow, while those supported by grants awarded to a particular lab or group are postdoctoral associates.

Department Culture and Environment

The most influential factors in departmental environment and culture during 2020–2021 were Covid-19 and the push for improved equity, diversity, inclusion, and justice.

In response to the Covid-19 pandemic, BCS followed Institute guidelines on density and occupancy within Building 46. Classes remained online and remote throughout the academic year. Likewise, DLC-organized seminars and colloquia were entirely online. Social and networking events were held online as well, including the annual BCS event welcoming new graduate students; in 2020 the event, usually a Boston Harbor cruise, was an online trivia contest dubbed “the Cruise to Nowhere.” These events were generally well received but were no substitute for the in-person interactions that underlie the life of the department. As spring 2021 moved into summer, relaxing of restrictions enabled more people to return to the building.

An unanticipated benefit of moving so much of the department’s activities online has been greater access and engagement. Online audiences for colloquia far exceed in-person pre-pandemic attendance. The department’s biennial Brains on Brains symposium was opened to all BCS alumni for the first time in 2021 and was attended by over 400 people, many for the first time.

As in 2020, the annual visit weekend for admitted graduate students was converted to an online event including prerecorded talks and lab tours by current students and opportunities for synchronous interactions with faculty and students. Moving the event online has had no perceptible negative impact on admissions; to the contrary, our admissions yield has increased.

In the areas of diversity, equity, inclusion, and justice, the department has made significant progress on structure, programs, and strategy at multiple levels from leadership to the lab level. As described above, Laura Schulz was appointed in November to an associate department head role with oversight of DEIJ initiatives. In April, Farrah Belizaire joined the staff as DEIJ program officer, a new position created for planning and coordination of DEIJ activities across the Building 46 community (BCS, MIBR, and PILM).

Schulz and Belizaire have undertaken numerous projects including development of a DEIJ statement of support as well as strategic and tactical plans to identify existing and new initiatives and the funding needed to make them more effective; organization and management of a community of practice to foster discussion, idea sharing, and data gathering across all building constituencies; expansion of existing programs such as the

post-baccalaureate Research Scholars Program, MIT Summer Research Program, and Quantitative Methods Workshop, which all target underrepresented minority (URM) students; and enhancement of efforts to recruit URM faculty candidates.

In addition to these departmentally organized projects, several labs have developed new or expanded outreach programs to target students from URM and minority-serving institutions in the Boston area and locations outside New England.

BCS has also continued its effort of the past few years to develop and improve mentorship and leadership skills among faculty, with Rebecca Saxe leading the way. BCS recently completed the first full round of “360-degree reviews” for senior faculty. Begun in 2018 and in collaboration with consulting firm MOR Associates, the process gathers anonymous feedback from people who have interacted with the faculty member in question across multiple constituencies including students, postdocs, staff, and other faculty. The resulting individual reports and coaching sessions are intended to help faculty members identify their strengths and their opportunities for improvement. In the first round of reviews, 32 BCS faculty received feedback from almost 600 respondents. The reports to individual faculty were confidential. The aggregate summary to the department revealed areas of collective strength and areas for both collective and individual improvement.

A mentorship review is also now included in all BCS hiring and promotion cases.

Selected Faculty Research Highlights

Some Brain Disorders Exhibit Similar Circuit Malfunctions

Guoping Feng found that certain genes that are mutated or missing in some people with neurodevelopmental disorders cause similar dysfunctions in a neural circuit in the thalamus, which could be a promising therapeutic target.

As Novel Sights Become Familiar, Different Brain Rhythms and Neurons Take Over

Mark Bear’s lab found that as novel visual patterns become familiar, the transition is marked by stark changes in the visual cortex. Gamma rhythms give way to lower-frequency beta rhythms, and the activity of parvalbumin-expressing neurons dies out in favor of a rise in activity by inhibitory somatostatin-expressing neurons. Bear’s lab is working with Boston Children’s Hospital researcher Chuck Nelson to determine whether signals such as this frequency transition can be used as an early biomarker of autism spectrum disorders.

Anesthesia Does Not Simply Turn Off the Brain, It Changes Its Rhythms

As the commonly used anesthetic propofol takes hold in the brain, a wide swath of regions become coordinated by very slow rhythms that maintain a commensurately languid pace of neural activity. Electrically stimulating a deeper region, the thalamus, restores the synchrony of the brain’s normal higher-frequency rhythms and activity levels, waking the brain back up and restoring arousal.

New Method Offers Inexpensive Imaging at the Scale of Virus Particles

Building on revolutionary expansion microscopy techniques, Edward Boyden collaborated with researchers at Massachusetts General Hospital and the University of Massachusetts to develop a new polymer called tetra-gel that forms a more predictable structure than previous expansion microscopy substrates. The technique enables imaging of biological samples with accuracy at the scale of 10 nanometers—the scale of viruses and single biomolecules.

Gene Changes Linked to Severe Repetitive Behaviors

Ann Graybiel’s lab identified genes that are activated in the brain prior to the initiation of severe repetitive behaviors that are common to some brain disorders including autism, schizophrenia, Huntington’s disease, and drug addiction. They found that repetitive behaviors were stimulated by activation of genes regulated by Neuregulin 1, highlighting a shared molecular and circuit pathway for stereotypical behaviors caused by drugs of abuse and brain disorders. This work also has implications for why stimulant intoxication is a risk factor for the onset of schizophrenia.

Neuroscientists Identify Brain Circuit That Encodes Timing of Events

Susumu Tonegawa identified a hippocampal circuit that mice use to store information about the timing of when they should turn left or right in a maze. The findings add to a growing body of evidence suggesting that when we form new memories, different populations of neurons in the brain encode time and place information.

A Hunger for Social Contact

Rebecca Saxe found that the longings we feel following a period of social isolation share a neural basis with the food cravings we feel when hungry. Magnetic resonance imaging data revealed a similar “craving signal” in the substantia nigra in response to food images after fasting and, among socially isolated individuals, images of people enjoying social interactions. The amount of activation in the substantia nigra was correlated with how strongly individuals rated their feelings of craving either food or social interaction.

Using Machine Learning to Track the Pandemic’s Impact on Mental Health

Principal research scientist Satrajit Ghosh used machine learning techniques to analyze the text of more than 800,000 posts on the Reddit website and identified changes in the tone and content of language that people used as the first wave of the Covid-19 pandemic progressed. The findings could help psychiatrists or moderators of the Reddit forums that were studied to better identify and help people whose mental health is suffering.

Selected Awards and Honors

Faculty

Emery Brown received the Swartz Prize for Theoretical and Computational Neuroscience from the Society for Neuroscience.

Gloria Choi was appointed to the Mark Hyman, Jr. Career Development Professorship for a three-year term beginning July 1, 2021.

Steven Flavell was awarded a Sloan Research Fellowship.

John Gabrieli received the Samuel Torrey Orton Award from the International Dyslexia Association.

Ann Graybiel presented the University College London Prize Lecture in Life and Medical Sciences.

Nancy Kanwisher received an honorary degree from the Faculty of Sciences at the University of York (United Kingdom).

Morgan Sheng was awarded the Julius Axelrod Prize by the Society for Neuroscience.

Li-Huei Tsai was elected to the American Academy of Arts and Sciences.

Feng Zhang received the Richard Lounsbery Award from the National Academy of Sciences.

Graduate Students

Archana Poudry (Boyden lab) and Enrique Toloza (Harnett lab) were awarded Soros Fellowships for New Americans.

Postdocs

Sirma Orguc (Brown lab) and Rebecca Pinals (Tsai lab) were awarded Schmidt Science Fellowships.

Undergraduates

Katherine Collins '21 was the recipient of a Marshall Scholarship.

Staff

Omar Abudayyeh was named to the *MIT Technology Review* 2020 list of exceptional innovators under the age of 35.

Laura Frawley (lecturer) and Brittany Greenough (Picower Institute) received School of Science Infinite Mile Awards.

Jonathan Gootenberg was named to the *MIT Technology Review* 2021 list of exceptional innovators under the age of 35.

Kate White (BCS administrative officer) was presented an MIT Excellence Award in the Outstanding Contributor category.

Departmental Awards

Faculty Awards

Ev Fedorenko won the BCS Award for Excellence in Undergraduate Advising.

Guoping Feng was presented the BCS Award for Excellence in Graduate Mentoring and the BCS Postdoc Award to an Outstanding Postdoctoral Mentor.

Roger Levy received the BCS Award for Excellence in Undergraduate Teaching.

Troy Littleton and Morgan Sheng were presented BCS Awards for Excellence in Graduate Teaching.

Gabe Schamberg and Arturo Deza received BCS Awards for Excellence in Teaching by a Postdoc

Teaching Assistant Awards

Angus MacDonald Awards for Excellence in Undergraduate Teaching were presented to Gabi Drummond, Tiwalayo Eisape, Sophia Galligan-Diggs, Annika Heuser, Carina Kauf, Hunter King, Nhat Le, Joao Loula, Daniel Montgomery, Setayesh Radkani, Gal Raz, Dimitra Vardalaki, and Cathy Wong.

Preston Ge and Mahdi Ramadan received Walle Nauta Awards for Excellence in Graduate Teaching.

Mika Braginsky, Maddie Cusimano, Dustin Hayden, and Martin Schrimpf were recipients of Walle Nauta Awards for Continuing Dedication to Teaching by a Graduate Student.

Undergraduate Awards

Academic Awards (cumulative grade point average of 4.9 or greater) were presented to seniors Alex Berg, Katherine Collins, Albert Gerovitch, Skylar Gordon, Kristine Hocker, Keith Murray, Ayesha Ng, Seungweon Park, Katherine Xiao, Alice Zhang, and Irene Zhou. Also receiving Academic Awards were juniors Theodore Cucu, Sophia Diggs-Galligan, Benjamin Dwyer, Emily Huang, Rucha Kelkar, Dana McCormack, Luyao Tian, and Olivia Valle.

Research Awards went to Katherine Collins, Sophia Diggs-Galligan, Emelie Eldracher, Kristin Hocker, Michelle Hung, Joanna Kennedy, Linette Kunin, Alyssa Unell, Cherry Wang, and Mingye Wang.

Katherine Collins, Ayesha Ng, Aaditya Singh, Katherine Xiao, and Irene Zhou were inducted into Phi Beta Kappa.

Michale Fee

Department Head

Glenn V. and Phyllis F. Dorflinger Professor of Neuroscience