MIT launches the Center for Neurobiological Engineering

Establishing a neuroengineering community that can set new research directions and address emerging issues in brain science.

Center for Neurobiological Engineering

August 26, 2013

"Reverse-engineering the brain" is one of the National Academy of Engineering's Grand Challenges for the 21st Century, and last spring President Barack Obama renewed the call for more advanced neurological research by launching the "BRAIN" initiative.

While a number of MIT researchers and faculty have been pursuing these goals for some time, the Institute has now launched a new center to help synergize their efforts. The Center for Neurobiological Engineering (CNBE) will connect the efforts of researchers from approximately 20 labs across campus, as well as faculty from more than a dozen academic departments, institutes and other units.

"To address the complexity of the brain, new technologies are needed to map, control, repair and build brain circuits," says Alan Jasanoff, an associate professor of biological engineering, brain and cognitive sciences, and nuclear science and engineering, who will co-direct the center with Ed Boyden, an associate professor of biological engineering and brain and cognitive sciences and at the MIT Media Lab and the McGovern Institute for Brain Research. "By bringing together many different disciplines to exchange ideas and generate new inventions, we might solve major problems in brain science — and help better treat the roughly 1 billion people living with neurological and psychiatric disorders."

Jim DiCarlo, head of MIT's Department of Brain and Cognitive Science, expects the CNBE to fill an important niche within the Institute's neurobiological community. "Training students and fostering collaboration at the interfaces between neuroscience and engineering is exactly what we should be emphasizing at MIT," he says.

The CNBE will organize a neuroengineering curriculum to help train new graduate students and postdocs interested in advancing neurotechnology, equipping them with the disciplines and problem-solving strategies needed to innovate. The center will also seek to disseminate technologies throughout the neuroscience communities both at MIT and globally, developing facilities and teaching materials to educate brain scientists on how to use new neuroscience tools.

The CNBE will be jointly administered by the departments of Biological Engineering and Brain and Cognitive Sciences. For more information, visit the CNBE website or email cnbe-admin@mit.edu.

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