Carnegie Mellon University

News

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MIT's Ed Boyden To Receive Andrew Carnegie Prize in Mind and Brain Sciences

CNBC Award Recognizes Trailblazers in Neuroscience

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Carnegie Mellon University will award the third annual Andrew Carnegie Prize in Mind and Brain Sciences to Ed Boyden (http://www.media.mit.edu/people/esb), associate professor of biological engineering and brain and cognitive sciences at the MIT Media Lab and the MIT McGovern Institute.

The prize, given by the Center for the Neural Basis of Cognition (http://www.cnbc.cmu.edu/) (CNBC) and funded by the Carnegie Corporation of New York (http://www.carnegie.org/) as part of its centennial celebration, recognizes trailblazers in the mind and brain sciences whose research has helped advance the field and its applications. The CNBC will present the award to Boyden at 4 p.m. on Thursday, April 9 in the Rashid Auditorium in CMU's Hillman Center for Future Generation Technologies.

"Boyden is a pioneer in bioengineering and neuroscience," said Marlene Behrmann, the George A. and Helen Dunham Cowan Professor of Cognitive Neuroscience at Carnegie Mellon and co-director of the CNBC. "His work has opened a new window into our ability to study brain function with the development of optically activated ion channels for the precise

temporal control of neural activity. He embodies all the criteria for this award with his discoveries, their basic science impact and their potential therapeutic applications. We are delighted to recognize his contributions."

At MIT, Boyden leads the synthetic neurobiology group, which develops tools for analyzing and engineering the circuits of the brain. These technologies include "optogenetic" tools that enable the activation and silencing of neural circuit elements with light, 3-D microfabricated neural interfaces that enable control and readout of neural activity, and robotic methods for automatically recording intracellular neural activity and performing single-cell analyses of the living brain. He also co-directs the Center for Neurobiological Engineering, designed to develop new tools to accelerate neuroscience progress.

Boyden has launched an award-winning series of classes at MIT that teach principles of neuroengineering, starting with how to control and observe neural functions and culminating with strategies for launching companies in the nascent neurotechnology space.

As part of the award ceremony, Boyden will give a presentation, titled "Tools for Understanding and Fixing the Brain," referencing his work.

The CNBC, a collaborative research center between CMU and the University of Pittsburgh focused on neuroscience, has helped establish Carnegie Mellon and the Pittsburgh scientific community as a world leader in brain and behavioral sciences.

As the birthplace of artificial intelligence and cognitive psychology, Carnegie Mellon has created the first cognitive tutors, helped to develop the Jeopardy-winning Watson, founded a groundbreaking doctoral program in neural computation, and completed cutting-edge work in understanding the genetics of autism. Building on its strengths in biology, computer science, psychology, statistics and engineering, CMU recently launched BrainHub (http://www.cmu.edu/research/brain/)^{SM}, a global initiative that focuses on how the structure and activity of the brain give rise to complex behaviors.

For more information, visit http://www.cnbc.cmu.edu/ (http://www.cnbc.cmu.edu/).

Related Articles:
Carnegie Mellon, University of Pittsburgh Celebrate 20 Years of Advancing Brain Research Through Center for the Neural Basis of Cognition (CNBC) (http://www.cmu.edu/news/stories/archives/2014/october/october8_cnbc20thanniversary.html)

Carnegie Mellon To Present Ricardo Dolmetsch with Andrew Carnegie Prize in Mind and Brain Sciences (http://www.cmu.edu/news/stories/archives/2014/april/april7_carnegieprizemindbrain.html)

Carnegie Mellon To Present NIMH's Leslie Ungerleider With Andrew Carnegie Prize in Mind and Brain Sciences (http://www.cmu.edu/news/stories/archives/2013/may/may14_carnegieprize.html)

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