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Media Lab Faculty: Ed Boyden Joins the Media Lab



Edward Boyden, a neurosciences researcher recently selected as one of the world's top young innovators by *Technology Review*, is the newest member of the Media Lab.

Boyden, who joined the Lab this month as a visiting scientist, is slated to be appointed assistant professor in January. He heads the Lab's new Neuroengineering and Neuromedia group, which will focus on inventing tools for the analysis and engineering of brain circuits. The goal is to develop new strategies for systematically repairing pathology, augmenting cognition, and revealing insights into human brain function.

Boyden, who studied in the Lab's Physics and Media group, is pioneering the integration of nano-, molecular, optical, and other technologies to push the boundaries of neuroengineering, and has created an ingenious new technology for analyzing and even precisely controlling any neural circuit, including those in the cerebral cortex. By activating specific neurons, this work has implications for developing radically new medical technologies to treat

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brain disorders such as Parkinson's disease, or even blindness, and for changing mental and emotional states, such as severe depression.

In naming Boyden as one of its "TR35," *Technology Review* stated that "Even in the hypertechnic milieu[s] of MIT and Stanford science departments, Edward Boyden stands out, bubbling with brilliance, energy, infectious enthusiasms, [and] imaginative approaches to impossibly ambitious projects."

Boyden received his PhD in neurosciences from Stanford University, where he was a Hertz Fellow. At the age of 19, he received an MEng in electrical engineering, and BS degrees in physics and electrical engineering from MIT.

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