

Jacob T. Robinson, PhD Associate Professor Electrical and Computer Engineering Next-gen Neural Interfaces: Less Invasive, More Precise

Dr. Robinson graduated from the University of California, Los Angeles with a B.S. in Physics in 2003. While at UCLA, he worked in the Electrical Engineering and Physics departments in the laboratories of Professors HongWen Jiang, David Saltzberg, and Yahya Rahmat-Samii.

In 2003 he entered the Applied Physics Ph.D. program at Cornell University where he worked with Professor Michal Lipson developing nanoscale silicon devices that confine light to small volumes and thereby enhance the interaction between light and matter. He also developed a novel scanning probe technique to image highly confined optical modes with nanometer spatial resolution.

Upon completing his Ph.D. in 2008, Dr. Robinson joined Professor Hongkun Park's research group in the Chemistry and Chemical Biology Department at Harvard University. As a postdoctoral researcher he helped develop arrays of vertical silicon nanowires that can penetrate the cellular membrane without affecting cell viability. His work at Harvard showed that vertical silicon nanowires can be used to deliver biomolecules into a cell and interrogate a cell's internal electrical activity. His current research interests include nanoelectronic, nanophotonic and nanomagnetic technologies to manipulate and measure brain activity. Dr. Robinson's work has been recognized by several agencies including the DARPA Young Faculty Award and the John S. Dunn Foundation Collaborative Research Award.