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|  | Employment |
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| 2016– | **Director of Innovative Technologies**  Director of the [MATTER Lab](https://matter.childmind.org)  *Mind-Assisting Technologies for Therapy, Education, and Research*  Senior Research Scientist and Healey Scholar  [Child Mind Institute](https://childmind.org) (Manhattan, NY)  — Building open-source software infrastructure, informatics, and  Interfaces for language and mental health assisting platforms  — Created the end-to-end encrypted MindLogger platform ([mindlogger.org](http://mindlogger.org))  for building data collection, assessment, and intervention mobile/web apps.  — Built hundreds of mental health and other assessments in MindLogger  — Designed protocols to collect speech and actigraphy data from  thousands of participants as part of the [Health Brain Network](http://healthybrainnetwork.org) study  — Prototyped journaling and augmented reality apps now in app stores  — Patented wearable devices for gesture recognition and respirometry |
| 2014–2016 | **Principal Scientist of Systems Biology**  Director of Neuroimaging  [Sage Bionetworks](https://sagebionetworks.org/) (Seattle, WA)  — Mobile health research app development with Apple (HealthKit)  — [mPower](https://parkinsonmpower.org/) app, used in the world’s largest Parkinson study  — Feature extraction from mobile phone sensor data  — Open science crowdsourced data analysis [contests](https://www.synapse.org/Synapse:syn2290704/wiki/60828) |
| 2012–2013 | **Research Assistant Professor**  Department of Psychiatry and Behavioral Science  [Stony Brook University](https://www.stonybrook.edu/) (Stony Brook, NY)  — Research on imaging biomarkers of depression and PTSD  — Co-taught brain imaging courses |
| 2007–2012 | **Assistant Professor of Clinical Neurobiology**  Division of Molecular Imaging and Neuropathology  Department of Psychiatry, New York State Psychiatric Institute  [Columbia University](https://www.columbia.edu/) (Manhattan, NY)  — Research on brain image processing, registration, and labeling  — Open-source brain morphometry software ([mindboggle.info](https://mindboggle.info)) |
| 2004–2007 | **Information Synthesis Theorist** and Program Analyst  Parsons Institute for Information Mapping  [The New School](https://www.newschool.edu/) (Manhattan, NY)  — Complex data visualization and information visualization  — Construction of visualization ontologies |
| 2004–2005 | **Research Scientist**  Department of Psychiatry  [Columbia University](https://www.columbia.edu/) (Manhattan, NY)  — Detection of biomarkers of disease in brain MRI data |
|  | Education |
| 1998–2005 | [**Weill Medical College of Cornell University**](https://weill.cornell.edu/education) (Manhattan, NY)  Functional MRI Laboratory, Memorial Sloan-Kettering Cancer Center  Functional MRI Research Center, Columbia University  Ph.D. in Neuroscience, May, 2004  Thesis: *Automated brain labeling with Mindboggle*  — Invented open-source Mindboggle software to  automate anatomical labeling of human brain MRI data  — Simple mindreading based on task-evoked fMRI activity |
| 1996–1998 | [**California Institute of Technology**](https://www.caltech.edu/) (Pasadena, CA)  Computation and Neural Systems Program  — Brain tissue optics research:  2-photon microscopy and light-based uncaging of molecules  — Biophysical computer modeling of light propagation |
| 1994–1996 | [**Massachusetts Institute of Technology**](https://mit.edu)(Cambridge, MA)  Spatial Imaging Group, MIT Media Laboratory  M.S. in Media Arts and Sciences, September 1996  Thesis: [Dispersion Compensation for Reflection Holography](https://mfr.osf.io/render?url=https://osf.io/72sv5/?action=download%26mode=render)  — Dispersion correction for holographic view stations:  World’s deepest dispersion-controlled viewing stations  World’s thinnest edge-lit holograms  — Computer animation for an electronic-holography display  — Later published a general raytracing equation for holograms |
| 1991–1993 | [**University of Michigan**](https://umich.edu/) (Ann Arbor, MI)  B.S. in Biopsychology, Perception and Cognition Studies, May 1993  — Research assistant in the Kellogg Eye Institute  — Independent computer-generated holography research |
| 1990–1991 | [**Waseda University**](https://www.waseda.jp/top/en/) (Tokyo, Japan)  Japanese studies  International Division (Kokusaibu)  — Autostereoscopic holography research (Tama Art College) |
| 1988–1990 | [**University of Southern California**](https://usc.edu) (Los Angeles, CA)  Resident Honors Program scholar  — Research assistant in Hedco Neurosciences  — Independent display holography projects |