

## BEN DEEN

Laboratory of Neural Systems, Rockefeller University  
<https://bendeen.com/> - [contact@bendeen.com](mailto:contact@bendeen.com)

### EDUCATION & TRAINING

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Rockefeller University	<i>Postdoctoral Fellow in Neuroscience</i> Advisor: Winrich Freiwald	February 2016 – Present
MIT	<i>Ph.D. in Neuroscience</i> Advisors: Rebecca Saxe, Nancy Kanwisher	Sept 2010 – February 2016
Yale University	<i>B.S. in Physics and Cognitive Science</i> Magna cum laude, distinction in both majors Advisor: Gregory McCarthy	Sept 2005 – May 2009
	<i>Research Assistant</i> Advisor: Kevin Pelphrey	July 2009 – July 2010

### AWARDS & FELLOWSHIPS

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Human Brain Mapping Editor's Choice Award	2020
Leon Levy Fellowship	2020 – 2022
Kavli Neural Systems Institute Pilot Grant	2019
Helen Hay Whitney Fellowship	2017 – 2020
Vision Sciences Society Travel Award	2016
National Science Foundation Graduate Research Fellowship	2012 – 2015 (awarded 2010)
MIT Presidential Fellowship	2010 – 2011

### STUDENTS MENTORED

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Matthew Peoples, Research Assistant, Rockefeller University (2020 – Present)  
Gazi Husain, Undergraduate, Hunter College (2019 – Present)  
Farid Aboharb, MD-PhD Student, Rockefeller University / Tri-I (2016, 2020 – Present)  
Yorkiris Marmol, Undergraduate, Vassar College (Summer 2018, Tri-I Gateways to Lab Program)  
Petr Filipenko, Undergraduate, Hunter College (Summer 2016, MIT CBMM Summer Internship)

### PEER-REVIEWED PUBLICATIONS

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**Deen, B.**, Saxe, R., Kanwisher, N.G. (2020). Processing communicative facial and vocal cues in the superior temporal sulcus. *NeuroImage*, 221(1), 117191.

**Deen, B.**, Saxe, R. (2019). Parts-based representations of perceived face movements in the superior temporal sulcus. *Human Brain Mapping*, 40(8), 2499-2510.

Powell, L. J., **Deen, B.**, Saxe, R. (2018). Using individual functional channels of interest to study cortical development with fNIRS. *Developmental Science*, 21(e12595).

**Deen, B.**, Richardson, H., Dilks, D., Takahashi, A., Keil, B., Wald, L., Kanwisher, N.G., Saxe, R. (2017). Organization of high-level visual cortex in human infants. *Nature Communications* 8, 13995.

**Deen, B.**, Koldewyn, K., Kanwisher, N.G., Saxe, R. (2015). Functional organization of social perception and cognition in the superior temporal sulcus. *Cerebral Cortex*, 25(11), 4596-4609.

**Deen, B.**, Saxe, R., Bedny, M. (2015). Occipital cortex of blind individuals is functionally coupled with executive-control areas of frontal cortex. *Journal of Cognitive Neuroscience*, 27(8), 1633-1647.

Di Martino, A., Yan, C.-G., Li, Q., Denio, E., Castellanos, F.X., Alaerts, K., Anderson, J.-S., Assaf, M., Berghmann, M., Bookheimer, S.Y., Dapretto, M., **Deen, B.**, Delmonte, S., Dinstein, I., Ertl-Wagner, D., Fair, D.A., Gallagher, L., Kennedy, D.P., Keown, C.L., Keyser, C., Lainhart, J.E., Lord, C., Luna, B., Menon, V., Minshew, N.J., Monk, C.S., Müller, R.-A., Nebel, M.B., Nigg, J.T., O’Hearn, K., Pelphrey, K.A., Peltier, S.J., Rudie, J.D., Sunaert, S., Thioux, M., Tyszka, J.M., Uddin, L.Q., Verhoeven, J.S., Wenderoth, N., Wiggins, J.L., Mostofsky, S.H., Milham, M.P. (2013). The autism brain imaging data exchange: towards a large-scale evaluation of the intrinsic brain architecture in autism. *Molecular Psychiatry*, 19(6), 659-667.

Bolling, D.Z., Pitskel, N.B., **Deen, B.**, Crowley, M.J., Mayes, L.C., Pelphrey, K.A. (2011). Development of neural systems for processing social exclusion from childhood to adolescence. *Developmental Science*, 14(6), 1431-1444.

Bolling, D.Z., Pitskel, N.B., **Deen, B.**, Crowley, M.J., McPartland, J.C., Kaiser, M.D., Vander Wyk, B.C., Wu, J., Mayes, L.C., Pelphrey, K.A. (2011). Enhanced neural responses to rule violation in children with autism: a comparison to social exclusion. *Developmental Cognitive Neuroscience*, 1(3), 280-294.

**Deen, B.**, Pitskel, N.B., Pelphrey, K.A. (2011). Three systems of insular functional connectivity identified with cluster analysis. *Cerebral Cortex*, 21(7), 1489-1506.

Kaiser, M.D., Hudac, C.M., Shultz, S., Lee, S.M., Cheung, C., Berken, A.M., **Deen, B.**, Pitskel, N.B., Sugrue, D.R., Voos, A.C., Saulnier, C.A., Ventola, P., Wolf, J.M., Klin, A., Vander Wyk, B.C., Pelphrey, K.A. (2011). Neural signatures of autism. *Proceedings of the National Academy of Sciences of the USA*, 107(49), 21223-21228.

Bolling, D.Z., Pitskel, N.B., **Deen, B.**, Crowley, M.J., McPartland, J.C., Mayes, L.C., Pelphrey, K.A. (2011). Dissociable brain mechanisms for processing social exclusion and rule violation. *NeuroImage*, 54(3), 2462-2471.

**Deen, B.**, McCarthy, G. (2010). Reading about the actions of others: biological motion imagery and action congruency influence brain activity. *Neuropsychologia*, 48(6), 1607-1615.

## SELECTED TALKS

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**Deen, B.**, Landi, S., Freiwald, W. Social memory responses in macaque medial prefrontal cortex. neuromatch 3.0, October 2020.

**Deen, B.** Probing the neural basis of high-level social cognition using human electrocorticography. NYU Intracranial EEG Meeting, October 2019.

**Deen, B.** Probing the functional role of the posterior STS face area. Social Cognitive and Neural Sciences Lab, NYU, April 2019.

**Deen, B.,** Richardson, H., Dilks, D., Takahashi, A., Keil, B., Wald, L., Kanwisher, N.G., Saxe, R. Organization of high-level visual cortex in human infants. Society for Neuroscience, November 2016.

**Deen, B.,** Richardson, H., Dilks, D., Takahashi, A., Keil, B., Wald, L., Kanwisher, N.G., Saxe, R. Category-selective visual regions in human infants. Vision Sciences Society, May 2016.

**Deen, B.,** Saxe, R. Parts-based representations of perceived face movements in the superior temporal sulcus. Society for Neuroscience, October 2015.

**Deen, B.,** Saxe, R. Neural correlates of social perception: the posterior superior temporal sulcus is modulated by action rationality but not animacy. Cognitive Science Society, August 2012.

**Deen, B.,** Pelphrey, K.A. Large-scale functional connectivity in children with Autism Spectrum Disorders. International Meeting for Autism Research, May 2012.

**Deen, B.** Selectivity and multifunctionality in the superior temporal sulcus. MIT Cognitive Lunch, April 2012.

**Deen, B.** Selectivity and multifunctionality in the superior temporal sulcus. Social Neuroscience Workshop, Harvard, March 2012.

## **SELECTED CONFERENCE ABSTRACTS**

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**Deen, B.,** Kanwisher, N., Saxe, R. Functional organization of the human superior temporal sulcus. Poster: Human Brain Mapping, 2015.

Powell, L.J., **Deen, B.,** Guo, L., Saxe, R. Using fNIRS to map functional specificity in the infant brain: An fROI approach. Poster: Society for Research in Child Development, 2015.

**Deen, B.,** Kanwisher, N., Saxe, R. Exploring the functional organization of the superior temporal sulcus with a broad set of naturalistic stimuli. Poster: Vision Sciences Society, 2014.

**Deen, B.,** Kanwisher, N., Saxe, R. Exploring superior temporal sulcus responses and patterns with a broad set of naturalistic stimuli. Poster: Society for Neuroscience, 2013.

**Deen, B.,** Bedny, M., Saxe, R. Functional connectivity of frontal and occipital cortex in congenitally blind adults. Poster: Organization for Human Brain Mapping, 2013.

**Deen, B.,** Koldewyn, K., Weigelt, S., Kanwisher, N., Saxe, R. Selectivity and multifunctionality in the superior temporal sulcus. Poster: Cognitive Neuroscience Society, 2012.

**Deen, B.,** Pelphrey, K.A. Functional connectivity of the ventromedial prefrontal cortex in children with Autism Spectrum Disorders. Poster: International Meeting for Autism Research, 2011.

**Deen, B.,** Pitskel, N.B., Pelphrey, K.A. Parcellating the human insula using resting-state functional connectivity. Poster: Society for Neuroscience, 2010.

## ESSAYS & OPINION

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**Deen, B.** (2020). How to Fix Science's Diversity Problem. *Scientific American*.

**Deen, B.,** Pelphrey, K.A. (2012). Perspective: Brain scans need a rethink. *Nature* 491, S20.

## TEACHING

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- 2011 (Fall) MIT 9.07 Statistics for Brain and Cognitive Sciences  
Teaching assistant, taught weekly recitations
- 2013 (Spring) MIT 9.65 Cognitive Processes  
Teaching assistant, gave review sessions and one course lecture
- 2014 (Spring) MIT 9.65 Cognitive Processes  
Guest Lecturer on "Face Perception and Theory of Mind"
- 2014 (Fall) MIT 9.520 Statistical Learning Theory  
Teaching assistant, held office hours and oversaw projects
- 2015 (Spring) MIT 9.40 Introduction to Neural Computation  
Teaching assistant, taught weekly recitations
- 2015 (Fall) MIT 9.520 Statistical Learning Theory  
Teaching assistant, held office hours and oversaw projects
- 2019 (Fall) Hunter SCI 111 Brains, Minds, and Machines  
Guest Lecturer on "The Neural Basis of Face Perception"