

website: [www.mit.edu/~hopekean](http://www.mit.edu/~hopekean)  
email1: [hopekean@mit.edu](mailto:hopekean@mit.edu)  
email2: [hkean@alumni.princeton.edu](mailto:hkean@alumni.princeton.edu)

Hope H. Kean

phone: +1(240)-743-9983  
46-4127G, 43 Vassar St.,  
Cambridge, MA 02139

## EDUCATION

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**Massachusetts Institute of Technology**, Department of Brain & Cognitive Sciences, PhD candidate expected 2025  
**Princeton University** A.B. in Neuroscience with Honors and Certificate in Cognitive Science June 2018

## PUBLICATIONS

- 
- Li J, **Kean HH**, Fedorenko E, and Saygin Z. (2022) Intact Reading Ability despite Lacking a Canonical Visual Word Form Area in an Individual Born without the Left Superior Temporal Lobe. *Cognitive Neuropsychology*
- Lipkin B, Tuckute G, Affourtit J, Small H, Mineroff Z, **Kean HH**, Jouravlev O, Rakocevic L, Pitchett B, Siegelman M, Hoeflin C, Pongos A, Blank I, Kline M, Ivanova A, Shannon S, Sathe A, Hoffman M, Nieto-Castañón A, and Fedorenko E. (2022). LanA (Language Atlas): A probabilistic atlas for the language network based on fMRI data from >800 individuals. *Nature Scientific Data*
- Chen X, Affourtit J, Ryskin R, Regev T, Norman-Haignere S, Jouravlev O, Malik-Moraleda S, **Kean HH**, Varley R, and Fedorenko E. (2022). The human language system does not support music processing. *Cerebral Cortex*.
- Hu J, Small H, **Kean HH**, Takahashi A, Zekelman L, Kleinman D, Ryan E, Nieto-Castañón A, Ferreira V, and Fedorenko E. (2022). Precision fMRI reveals that the language-selective network supports both phrase-structure building and lexical access during language production. *Cerebral Cortex*
- Tuckute G, Paunov A, **Kean HH**, Blank I, Mineroff Z & Fedorenko E. (2022). Frontal language areas do not emerge in the absence of temporal language areas: A case study of an individual born without a left temporal lobe. *Neuropsychologia*
- Ivanova, A. A., Srikant, S., Sueoka, Y., **Kean, HH.**, Dhamala, R., O'Reilly, U.-M., Bers, M. U., & Fedorenko, E. (2020). Comprehension of computer code relies primarily on domain-general executive resources. *eLife*
- Mollica F, Siegelman M, Diachek E, Piantadosi S, Mineroff Z, Futrell R, **Kean HH**, Qian P & Fedorenko E. (2020). Composition is the core driver of the language-selective network. *Neurobiology of Language*
- Guterstam A\*, **Kean HH\***, Webb TW, Kean FS & Graziano MSA (2019). Implicit model of other people's visual attention as an invisible, force-carrying beam projecting from the eyes. *PNAS* \*equal contributors
- Webb TW, **Kean HH**, and Graziano MSA (2016). Effects of awareness on the control of attention. *Journal of Cognitive Neurosci*

## PREPRINTS / IN PROGRESS

- 
- Siegelman M, **Kean HH**, Pongos A. & Fedorenko E. (in prep). Language activations in the fronto-temporal network are robust to task manipulations.
- Shain C\*, **Kean HH\***, Lipkin B, Affourtit J, Siegelman M, Mollica F, and Fedorenko E. (in prep). 'Constituent length' effects in fMRI do not provide evidence for abstract syntactic processing. \*equal contributors  
[biorxiv.org/content/10.1101/2021.11.12.467812v1](https://doi.org/10.1101/2021.11.12.467812v1)
- Regev T, Lipkin B, Boebinger D, Paunov A, **Kean HH**, Norman-Haignere S, and Fedorenko E. (in prep) Preserved Functional Organization of Human Auditory Cortex in Individuals Missing One Temporal Lobe from Infancy.  
[pubmed.ncbi.nlm.nih.gov/36711687](https://pubmed.ncbi.nlm.nih.gov/36711687)

## PRESENTATIONS

- 
- Probabilistic Program Generating an Intuitive Physics Theory of Balance, *Brains, Minds, & Machines* Summer 2019
- TARP  $\gamma$ -8,  $\gamma$ -2, Cornichon, Auxiliary Binding Proteins in AMPA Receptor Trafficking, *Seoul National University* Summer 2016
- Binding of MAGUK family proteins to Neuroligin-1 and -2, *National Institute of Neurological Disorders & Stroke* Summer 2014
- Elected as a Departmental Speaker

## POSTERS

- 
- Regev T, Jhingan N, Kim HS, **Kean HH**, Casto C, and Fedorenko E. (2022) Neural Representation of Prosody. *Society for the Neurobiology of Language*.
- Hu, J., Small, H., **Kean, H. H.**, Takahashi, A., Zekelman, L., Kleinman, D., Ryan, E., Ferreira, V., & Fedorenko, E. (2020). Distributed and overlapping neural mechanisms for lexical access and syntactic encoding during language production. *Society for the Neurobiology of Language*.
- Ivanova, A. A., Siegelman, M., Cheung, C., Pongos, A. L. A., **Kean, H. H.**, & Fedorenko, E. (2020) The effect of task on sentence processing in the language and multiple demand brain networks. *Society for the Neurobiology of Language*.
- Gallée J, **Kean HH**, Fedorenko E (2020) Robust Neural Adaptation to Syntactic Structure. *Cognitive Neuroscience Society*.
- Kean HH**, Ellis CT, Webb TW, Graziano MSA (2017) Implicit biases about invisible forces that project from the eyes. *Princeton Neuroscience Institute Research Symposium*.
- Liao VTY, Webb TW, **Kean HH**, Graziano MSA (2017) Effects of Awareness on the Control of Attention: An Auditory Behavioral Paradigm. *Princeton Neuroscience Institute Research Symposium*.
- Webb TW, **Kean HH**, and Graziano MSA (2015) Awareness alters the control of attention. *Society for Neuroscience*.
- Kean HH**, Ogilvie K, Lussier M, Roche K (2014) Binding of MAGUK family proteins to Neuroligin -1 and -2. *NINDS Summer Research Symposium*. (Awarded the NIH Exceptional Summer Student Research Award)

## RESEARCH EXPERIENCE

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<b>Technical Associate &amp; Lab Manager</b> , <i>EvLab, Brain &amp; Cognitive Sciences, MIT</i>	2018 – 2020
<b>Research Assistant</b> , <i>Princeton Neuroscience Institute, Cognitive Science Fellowship</i>	2014 – 2018
<b>Research Student</b> , <i>Semmelweis University Medical School</i>	Summer 2016
<b>Research Fellow</b> , <i>Seoul National University Medical School Neuroscience Department</i>	Summer 2015
<b>Research Intern</b> , <i>National Institute of Neurological Disorders and Stroke NINDS/NIH</i>	Summer 2013

## MOST RELEVANT COURSEWORK

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<b>Diverse Intelligences Summer Institute</b> DISI Summer School	Summer 2022
<b>Center for Brain, Minds, &amp; Machines</b> BMM Summer School	Summer 2019
<b>9.590 Lab in Psycholinguistics</b> , with Prof. Ted Gibson, <i>Brain and Cognitive Sciences, MIT</i>	Spring 2019
<b>9.660 Computational Cognitive Science</b> , with Prof. Josh Tenenbaum, <i>Brain and Cognitive Sciences, MIT</i>	Fall 2015
<b>Mathematical Tools for Neuroscience</b> , with Prof. Jonathan Pillow <i>Princeton Neuroscience Institute</i>	Spring 2016
<b>Memory &amp; Cognition</b> , with Prof. Ken Norman, <i>Princeton Neuroscience Institute</i>	Fall 2015

## WORK EXPERIENCE

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<b>Paideia Institute</b> , <i>Intern &amp; Project Lead – NeuroLatin Initiative</i>	Summer 2016
<b>Cancer Hospital Volunteer</b> , <i>Seoul National University Hospital</i>	Summer 2015
<b>Peer to Peer Tutor</b> , <i>Aristotle Circle</i>	2011-2014
<b>Neurosurgery Intern</b> , <i>Bethesda Surgery Center</i>	Summer 2014

## HONORS, AWARDS, & FELLOWSHIPS

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Presidential Fellowship for incoming PhD candidates	2020
Streicker International Research and Culture Fellowship – fully funded summer research internship at Seoul National	2015
Outstanding Work – Princeton Theatre Class of 2018	2015
James Madison Program Fellow – fully funded research on Spoken Latin in Rome, Italy with the Paideia Institute	2015
National Merit Finalist and Scholarship Recipient	2014
Bausch & Lomb Honorary Science Award	2013
St. Michael's Book Award for Academic Achievement and Social Conscience	2013

## SKILLS

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Natural Languages: Spanish (proficient), Korean (reading/writing), Latin (proficient)  
Programming Languages: Matlab, Python, Java, JavaScript, R/RStudio, HTML/CSS

## ACTIVITIES

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Director/Conference Organizer, *Conversations on Love – week-long campus-wide interdisciplinary series*  
Graduate Philosophy of Science Discussion Group, *Princeton Neuroscience Institute*  
Actor/Volunteer, *Windows Shakespeare Project & Mental Health Initiative*  
Inspiring Women in Philosophy Initiative, *Scala Foundation*  
Organizer, *CAMINO Women's Intellectual Art Society*  
Organizer, *MIT Metaphysics Reading Group*  
Leader/Adviser, *MIT Thomistic Institute*  
Peer Representative, *Honor Committee*  
Captain/Lawyer, *Princeton Mock Trial*  
Founder, *Nox Femina*