

Alyssa J. Kersey

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EDUCATION

- 2013 – Present **Ph.D., University of Rochester** (Rochester, NY)
Brain & Cognitive Sciences
Primary Advisor: Jessica Cantlon
- 2016 **M.A., University of Rochester** (Rochester, NY)
Brain & Cognitive Sciences
Committee: Jessica Cantlon (advisor), Brad Mahon, Dick Aslin
- 2013 **B.S., Highest Distinction & Honors, Indiana University** (Bloomington, IN)
Psychology; Neuroscience Certificate
Honors Thesis Advisor: Karin James

RESEARCH EXPERIENCE

- 2013 – Present **Graduate Research Assistant** (PIs: Jessica Cantlon and Brad Mahon)
Concepts, Objects, and Actions (CAOs) Lab, University of Rochester
- 2012 – 2013 **Honors Thesis** (Committee: Karin James, Sharlene Newman, Dan Kennedy)
Psychological & Brain Sciences, Indiana University
"The role of motor experience in the development of a visual network for cursive letters in 6-7 year old children."
- 2009 – 2013 **Undergraduate Research Assistant** (PI: Karin James)
Cognition and Action Neuroimaging Lab, Indiana University
- 2009 – 2013 **STARS Scholar** (Program Director: Preston Garraghty)
Science, Technology, & Research Scholars (STARS) Program, Indiana University

AWARDS, SCHOLARSHIPS, AND RECOGNITION

- 2016 Early Career Award, Flux Congress & Jacobs Foundation
- 2016 Conference Travel Award, Graduate Student Association, University of Rochester
- 2015 – 2016 Donald M. and Janet C. Bernard Fellowship for PhD Students in Engineering and Science, University of Rochester
- 2015 NIMH Summer Institute in Cognitive Neuroscience Fellowship, UCSB
- 2014 – 2017 National Science Foundation (NSF) Graduate Research Fellowship
- 2013 Outstanding Honors Thesis Award, Psychological & Brain Sciences, IU
- 2013 James A. Dinsmoor Award for Outstanding Undergraduate Research, Psychological & Brain Sciences, IU
- 2013 College of Arts & Sciences Excellence Award, STARS Symposium, IU
- 2012 Phi Beta Kappa
- 2012 STARS Summer Stipend, IU
- 2011 Edward L. Hutton International Experience Program Scholarship, IU
- 2011 Psi Chi
- 2010 Phi Eta Sigma/Alpha Lambda Delta Honorary Societies
- 2010 – 2013 Indiana University Founders Scholar
- 2009 – 2013 Indiana University Dean's List
- 2009 – 2013 Indiana University Distinction Scholarship
- 2009 – 2013 Indiana University Hutton Honors College Merit Scholarship
- 2009 – 2013 Indiana University Hutton Honors College

PUBLICATIONS

- Kersey, A. J.** & Cantlon, J. F. (2017). Neural tuning to numerosity relates to perceptual tuning in 3- to 6-year-old children. *Journal of Neuroscience*. 37 (3), 512-522. doi: 10.1523/JNEUROSCI.0065-16.2017
- Kersey, A. J.** & Cantlon, J. F. (2017). Primitive concepts of number and the developing human brain. *Language Learning and Development*, 13 (2), 191-214. doi: 10.1080/15475441.2016.1264878
- James, K. H. & **Kersey, A. J.** (2017). Dorsal stream function in the young child: An fMRI investigation of visually-guided action. *Developmental Science*. doi: 10.1111/desc.12546
- Kersey, A. J.** & Emberson, L. L. (2016). Tracing trajectories of audiovisual learning in the infant brain. *Developmental Science*. doi: 10.1111/desc.12480
- Kersey, A. J.**, Clark, T. S., Lussier, C. A., Mahon, B. Z., & Cantlon, J. F. (2016). Development of tool representations in the dorsal and ventral visual object processing pathways. *Cerebral Cortex*. 26 (7), 3135-3145. doi: 10.1093/cercor/bhv140
- Kersey, A. J.** & James, K. H. (2013). Brain activation patterns resulting from learning letter forms through active self-production and passive observation in young children. *Front. Psychol.* 4:567 doi: 10.3389/fpsyg.2013.00567

MANUSCRIPTS IN PREPARATION AND UNDER REVIEW

- Kersey, A. J.**, Wakim, K., Li, R., & Cantlon, J. F. (in preparation). Uniquely child functions of the brain.
- Kersey, A. J.**, Braham, E., Csumitta, K. D., Libertus, M., & Cantlon, J. F. (in preparation). No gender differences in children's core numerical processing abilities.

RESEARCH TALKS

* denotes undergraduate mentee

- Kersey, A. J.** (2017). Developmental continuity in the neural representation of numerical sets, words, and symbols. **Talk** presented at the Department of Brain & Cognitive Sciences Lunch Talk Series, University of Rochester, Rochester, NY.
- Kersey, A. J.**, Wakim, K., Li, R., & Cantlon, J. F. (2016). Neural patterns of reading and mathematics development from controlled versus naturalistic stimuli. **Talk**** presented at the Flux Congress Annual Meeting, Science of Learning Symposium, St. Louis, MO.
****Only 3 abstracts selected for symposium talk presentations**
- Kersey, A. J.** (2016). Neural tuning to numerosity in 3- to 6-year-old children. **Talk** presented at the Department of Brain & Cognitive Sciences Lunch Talk Series, University of Rochester, Rochester, NY.
- *Csumitta, K., **Kersey, A. J.** & Cantlon, J. F. (2016). Origins of gender differences in mathematics. **Talk** presented by K. Csumitta at the University of Rochester Undergraduate Research Exposition, Rochester, NY.
- *Adulley, K., **Kersey, A. J.**, & Cantlon, J. F. (2016). Gender differences in numerical processing in young children. **Talk** presented by K. Adulley at the 17th Annual National McNair Undergraduate Research Conference. University of Maryland, College Park, Maryland.

Kersey, A. J. & Cantlon, J. F. (2015). Neural tuning to numerosity in 3- to 6-year-old children predicts numerical development. **Talk**** presented at the Cognitive Development Society Biennial Meeting, Columbus, OH.

***Only 20 selected oral paper presentations*

James, K.H. & **Kersey, A.** (2011). Dorsal stream function in the 4-6 year old child: Assessing the neural correlates of the posting task using fMRI. **Talk** presented by K. H. James at the Society for Research in Child Development. Montreal, PQ.

POSTER PRESENTATIONS

* denotes undergraduate mentee

Kersey, A. J. & Cantlon, J. F. (2017). Neural representations of numerosity support the acquisition of counting in preschool children. **Poster** presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

*Csumitta, K. D., **Kersey, A. J.**, Libertus, M., & Cantlon, J. F. (2017). No gender differences in children's core numerical processing abilities. **Poster** presented by K. D. Csumitta at the University of Rochester Undergraduate Research Exposition, Rochester, NY.

Emberson, L. L. & **Kersey, A. J.** (2016). Tracing trajectories of audiovisual learning in the infant brain. **Poster** presented by L. L. Emberson at the Flux Congress Annual Meeting, St. Louis, MO.

Kersey, A. J. & Cantlon, J. F. (2016). Functional networks of counting acquisition in preschool children. **Poster** presented at the Cognitive Neuroscience Society Annual Meeting, New York, NY.

*Yurkovic, J. R., **Kersey, A. J.**, & Cantlon, J. F. (2015). Dissociable contributions of working memory and numerical cognition to math achievement in 3- to 5-year-old children. **Poster** presented by J. R. Yurkovic at the University of Rochester Undergraduate Research Exposition, Rochester, NY.

Kersey, A. J. & Cantlon, J. F. (2015). Distinct neural circuitry underlying numerical development in 3- to 6-year-old children. **Poster** presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Kersey, A. J. & James, K. H. (2013). The neural mechanisms underlying handwriting: Effects of sensorimotor experience. **Poster** presented at the UCLA Psychology Undergraduate Research Conference, Los Angeles, CA.

Kersey, A. J. & James, K. H. (2013). The neural mechanisms underlying handwriting: Effects of sensorimotor experience. **Poster** presented at the J.R. Kantor Undergraduate Banquet, Bloomington, IN.

Kersey, A. J. & James, K. H. (2013). The neural mechanisms underlying handwriting: Effects of sensorimotor experience. **Poster** presented at the STARS Research Symposium, Bloomington, IN.

Kersey, A. J. & James K. H. (2012). The role of motor experience in the development of distinct visual networks for cursive letters in 6-7 year olds. **Poster** presented at the STARS Fall Reception, Bloomington, IN.

Kersey, A. J. & James K. H. (2012). The role of motor experience in the development of distinct visual networks for cursive letters in 6-7 year olds. **Poster** presented at the STARS Research Symposium, Bloomington, IN.

James, K.H. & **Kersey, A. J.** (2011). Dorsal stream function in 4-6 year old children: Assessing the neural correlates of the 'posting' task using fMRI. **Poster** presented at the Hutton Honors College Research Symposium & Fair, Bloomington, IN.

James, K.H. & **Kersey, A. J.** (2011). Dorsal stream function in 4-6 year old children: Assessing the neural correlates of the 'posting' task using fMRI. **Poster** presented at the STARS Research Symposium, Bloomington, IN.

James, K.H. & **Kersey, A. J.** (2011). Dorsal stream function in 4-6 year old children: Assessing the neural correlates of the 'posting' task using fMRI. **Poster** presented at the 13th Annual Women in Science Research Conference, Bloomington, IN.

TEACHING EXPERIENCE

Guest Lectures:

Summer 2017	<i>"Thinking & Language"</i> Introduction to Psychology, University of Rochester (J. Coe)
Spring 2017	<i>"A Developmental Cognitive Neuroscience Approach to Studying Numerical Cognition."</i> Cognitive Neuroscience Graduate Seminar, University of Rochester (R. Raizada)
Spring 2016	<i>"fMRI as a tool for exploring cognitive development."</i> Language Acquisition, University of Rochester (C. Kumurada)
Fall 2015	<i>"Working with data: Descriptive statistics in Excel and R."</i> Undergraduate Research in Cognitive Science, UR (J. Cantlon & R. Haefner)
Fall 2015	<i>"Neural tuning to numerosity in 3- to 6-year-old children"</i> Lab in Cognitive Neuroscience, University of Rochester (B. Mahon & R. Miller)
Fall 2015	<i>"Data Measurement: The subtraction method and stimulus programming."</i> Undergraduate Research in Cognitive Science, UR (J. Cantlon & R. Haefner)
Spring 2015	<i>"fMRI as a tool for exploring cognitive development."</i> Language Acquisition, University of Rochester (C. Kumurada) *Top ranked guest lecture
Fall 2012	<i>"Considerations and applications of fMRI studies with children."</i> Introductory Psychology I, Indiana University (J. Craig)

Graduate Teaching Assistant (University of Rochester):

Spring 2017	Development of Mind and Brain (C. Kidd)
Fall 2015	Neural Foundations of Behavior (Taught weekly recitation sessions, K. Davis)
Spring 2015	Neural Foundations of Behavior (Taught weekly recitation sessions, K. Davis)

Undergraduate Teaching Assistant (Indiana University):

Fall 2012	Introductory Psychology I (J. Craig)
Spring 2012	Assistant to the Introductory Psychology Coordinator
Fall 2011	General Introductory Psychology, Honors (E. M. Wakefield)
Spring 2011	Introductory Psychology I (P. Summers)
Spring 2011	Undergraduate Teaching Internship Course

UNDERGRADUATE MENTORSHIP

2017 (summer)	Kelvin Adulley (McNair Scholar)
2016 – 2017	Kelsey Csumitta (Honors Thesis)
2016 (fall)	CAOs Lab Undergraduate Neuroimaging Journal Club (5 undergraduates)
2016 (summer)	Hetince Zhao (Independent Study)
2015 – 2016	Kelsey Csumitta (Research Assistant)
2015 (summer)	Kelvin Adulley (McNair Scholar), Kelsey Csumitta (Independent Study)
2014 – 2015	Matthew Mullen (Honors Thesis), Julia Yurkovic (Honors Thesis)

Mentored Honors Theses & Post-Grad Placement:

- K. Csumitta (2017) *"No gender differences in children's core numerical processing abilities."*
Post-Grad: NIH Research Fellowship
- M. Mullen (2015) *"Spatial and numerical processing in STEM Experts."*
Post-Grad: PhD program in Neuroscience, Northwestern University
- J. Yurkovic (2015) *"The dissociable contributions of working memory and numerical cognition to math achievement in 3- to 5-year-old children."*
Post-Grad: Emory Research Fellowship at Marcus Autism Center

Mentee Research Awards:

- 2017 National Conference on Undergraduate Research Invited Talk
(Council on Undergraduate Research): Kelsey Csumitta
- 2016 Catherine Block Memorial Award for Scientific Achievement
(University of Rochester): Kelsey Csumitta
- 2016 Dean's Choice Award for Undergraduate Research
(University of Rochester): Kelsey Csumitta
- 2016 17th Annual National McNair Undergraduate Research Conference Invited Talk
(McNair Scholars Research Program): Kelvin Adulley
- 2015 Bilski-Mayer Summer Fellowship for Independent Study
(Brain & Cognitive Sciences, University of Rochester): Kelsey Csumitta
- 2015 Donald J. Cohen Fellowship in Developmental Social Neuroscience
(Marcus Autism Center, Atlanta, GA): Julia Yurkovic
- 2015 Professor's Choice Award for Undergraduate Research
(University of Rochester): Julia Yurkovic

SCIENCE OUTREACH

- 2015 – Present **Brain Awareness Campaign Planning Committee**
Neuroscience Department, University of Rochester
- 2014 – Present **Brain Awareness Campaign Student Representative**
Neuroscience Department, University of Rochester
- 2014 – Present **Exhibits Volunteer**
Rochester Museum & Science Center, Rochester, NY
- 2013 **Child-Scientist Activity Week Staff**
Department of Psychological and Brain Sciences, Indiana University
- 2012 – 2013 **Volunteer**
WonderLab Museum of Science, Health, & Technology, Bloomington, IN
- 2012 – 2013 **Lab Representative**
Developmental Psychology Farmer's Market Booth, Bloomington, IN
- 2011 **Department of Psychological & Brain Sciences Student Ambassador**
Girl Scout Math and Science Day, Bloomington, IN
- 2010 **Volunteer**
Field Museum, Crown Family PlayLab, Chicago, IL

ACADEMIC AND PROFESSIONAL SERVICE

Ad hoc Manuscript Reviewer: *Cognitive Neuropsychology*

Spring 2017	Student Organizer of Prospective Graduate Student Interview Weekend Department of Brain & Cognitive Sciences, University of Rochester
Fall 2016	Committee for Workplace Behavior Department of Brain & Cognitive Sciences, University of Rochester
Spring 2016	Student Co-Organizer of Prospective Graduate Student Interview Weekend Department of Brain & Cognitive Sciences, University of Rochester
Spring 2015	APS Student Research Award Reviewer Association for Psychological Science
2014 – 2015	Conference Travel Funding Application Reviewer Graduate Student Association, University of Rochester
Spring 2012	Symposium Speaker Selection Committee Science, Technology, and Research Scholars, Indiana University
Spring 2012	Honors Research Symposium Steering Committee Hutton Honors College, Indiana University
Spring 2012	Honors Research Symposium Undergraduate Moderator Hutton Honors College, Indiana University

SKILLS AND CERTIFICATIONS

Software: BrainVoyager, MATLAB, Psychtoolbox, BVQXtools, R, SuperLab, ELAN, Adobe Illustrator, Adobe Photoshop, Adobe Dreamweaver, Microsoft Office

Hardware: Comfortable with Mac and Windows

Certifications: MRI Safety Certified

Languages: Conversational Spanish