Karin Harman James
Professor
Psychological and Brain Sciences

Curriculum Vitae

Contact Information

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Education

2001-2004: Vanderbilt University, Post-Doctoral Fellow
1998-2001: University of Western Ontario, Doctor of Philosophy (Psychology)
1996-1998: University of Western Ontario, Master of Arts (Psychology)
1993-1996: University of Toronto, Bachelor of Science (Psychology)
1987-1991: University of Toronto, Bachelor of Arts (History)

University Experience

2022-present- Director of Graduate Studies and Professor,
Department of Psychological and Brain
Sciences, Programs in Cognitive Science and Neuroscience
Indiana University
2017-present: Professor, Department of Psychological and Brain
Sciences, Programs in Cognitive Science and Neuroscience
Indiana University
2012-2017: Associate Professor, Department of Psychological and Brain
Sciences, Programs in Cognitive Science and Neuroscience
Indiana University
2007-2012: Assistant Professor, Department of Psychological and Brain
Sciences, Programs in Cognitive Science and Neuroscience, Indiana University
2004-2007: Research Scientist, Department of Psychological and Brain
Sciences, Program in Neuroscience, Indiana University
2001-2004: Postdoctoral fellow, Vanderbilt University
1994-1996: Research Assistant, University of Toronto

Awards and Honors

2020: Association for Psychological Sciences - Fellow
2017: Indiana University Trustee Teaching Award
2001-2004: Natural Sciences and Engineering Research Council

-Industrial Research Fellowship (declined)
1998-2001: Medical Research Council of Canada Student Fellowship
1998-2000: Natural Sciences and Engineering Research Council PGSb (declined)
1998-1999: Ontario Graduate Scholarship (declined)
1996-2001: University of Western Ontario Graduate Tuition Scholarship
1996-1998: National Science and Engineering Research Council PGSa
1996-1997:Ontario Graduate Scholarship (declined)
1996: University of Toronto Alumni Association Award for Excellence in Science
1995: University of Toronto Scholar

Graduate Student Awards

Daniel Plebanek
2020: Commendation on Doctoral Qualifying Examinations

Sophia Vinci-Booher:
2019: Federation of Associations in Behavioral & Brain Sciences (FABBS) Doctoral Dissertation Research Excellence Award
2019: J.R. Kantor Graduate Award for Distinction in Research
2015: Commendation on Doctoral Qualifying Examinations
2015: James S. McDonnell Foundation Fellowship
2014: Graduate student poster winner at the Center of Excellence for Women in Technology Conference

Felipe Munoz-Rabke:

2017: UC Berkeley. Fellowship for the “Data on the Mind” workshop
2017: Indiana University. Bloomington Supplemental Research Fellowship
2016: Indiana University Bloomington**.** Program in Neuroscience/College of Arts and Sciences Travel Award
2016: James S. McDonnell Foundation. Fellowship for the LAschool for Education, Cognitive and Neural Sciences
2015: UC Davis, UC Santa Barbara. Fellowship for the Summer Institute in Cognitive Neuroscience

Elizabeth Wakefield:

2014-2017: NSF Collaborative Grant: The Role of Gesture in Word Learning
PIs: S. Goldin-Meadow & K. James Role: Co-PI
2014: Provost’s Travel Award for Women in Science, Indiana University ($500)
2013: Imaging Research Facility Pilot Grant, Indiana University (40 hours scan time)
2013: J. R. Kantor Graduate Student Award, Indiana University
2013: Outstanding Graduate Student Instructor Award, Indiana University
2012: Service-Learning Graduate Fellowship Recipient, Indiana University
2012: Commendation on Doctoral Qualifying Exams, Indiana University
2012: Honorable Mention, NSF Graduate Research Fellowship
2012: Full Travel Stipend, International Society for Gesture Studies Summer Program
2011: Outstanding Instructor for Experimental Methods, Indiana University 2011
2010: Outstanding Professor Award, Kappa Alpha Theta, Indiana University Chapter
2010: Student Presentation Travel Award, Society for Music Perception and Cognition

Intellectual Property: Patent (USA) "Electronic tablet for use in functional MRI," US Patent No. 62/370, 372, confirmed June, 2019, updated July 2020 (Sturgeon, J., Shroyer, A., Vinci-Booher, S., & **James, K.H.)**

Peer Reviewed Research Publications

Students directly advised in *italics.* Senior author listed first or last.

Articles currently under review/revise & resubmit:

Munoz-Rubke, F., Maniar, A., & **James, K. H.** (under review). Frontal motor system activation does not reflect the degree of action inherent in word meaning.

Plebanek, D.J. & **James, K.H.** (R & R). Variability and task-dynamics expand category spaces but do not extract category rules.

In press or published peer reviewed articles (68):

2022

Plebanek, D.J. & **James, K.H.** (2022). Why handwriting is good for your brain. *Frontiers for Young Minds,*

Vinci-Booher, S., Caron, B., Bullock, D., **James, K.H.,** & Pestilli, F. (2022). Development of white matter tracts between and within the dorsal and ventral streams. *Brain Structure and Function, 227*(4), 1457-1477.

Vinci-Booher, S & **James, KH.** (2022). The effects of handwriting on brain development. To appear in: *Handbook of Visual-motor skills, Handwriting, and Spelling: Theory, Research, and Practice.* (Eds: Yanyan Ye, Tomohiro Inoue, Ur's Maurer & Catherine McBride). Routledge Press.

James, K. H. (2022). The embodiment of letter perception: The importance of handwriting in early childhood. In S.L. Macrine and J.B. Fugate (Eds.) *Movement Matters: How Embodied Cognition Informs Teaching and Learning* (pp. 55-77). Cambridge, MA; MIT Press**.**

2021

Vinci-Booher, S & **James, K.H.** (2021). Protracted neural development of dorsal motor systems during handwriting and the relation to early literacy skills*. Frontiers In Psychology: Language, 12.*

Vinci-Booher, S., Caron, B., Bullock, D., **James, K.H.,** & Pestilli, F. (2022). Development of white matter tracts between and within the dorsal and ventral streams*. Brain Structure and Function.* Preprint available here: https://www.biorxiv.org/content/10.1101/2021.01.27.428423v2.

Munoz-Rubke, F., Will, R., Hawes, Z., & **James, K. H.** (2021). Enhancing spatial skills through mechanical problem solving. *Learning and Instruction*, *75*, 101496.

Vinci-Booher, S., James, T. W., & **James, K. H**. (2021). Visual-motor contingency during symbol production contributes to short-term changes in the functional connectivity during symbol perception and long-term gains in symbol recognition. *NeuroImage*, *227*, 117554.

Plebanek, D. J., & **James, K. H.** (2021). The Effects of Frequency, Variability, and Co-occurrence on Category Formation in Neural Systems. *Journal of Cognitive Neuroscience*, 1-16.

Plebanek, D. J., & **James, K. H.** (2021). Category structure guides the formation of neural representations. *Experimental Brain Research*, *239*(5), 1667-1684.

Butler, A. J., James, T., *Pavisian, B.,* & **James, K. H.** (2021). Neural differences in expert guitarists during over-learned non-standard visuomotor mapping of abstract versus concrete information. *Neuroscience Letters*, *750*, 135624.

2020:

Vinci-Booher, S., & **James, K. H.** (2020a). Ecological validity of experimental set-up affects parietal involvement during letter production. *Neuroscience letters*, *731*.

Vinci-Booher, S*.*, & **James, K. H. (2020b). Visual experiences during letter production contribute to the development of the neural systems supporting letter perception. *Developmental Science*, *23(5),* 1-17.

Merritt, E., Swain, S. N., *Vinci-Booher, S*., & **James, K. H**. (2020). Constraining Stroke Order During Manual Symbol Learning Hinders Subsequent Recognition in Children Under 4 1/2 Years. *Frontiers in Psychology*, *11*, 500.

*Cover image feature

2019:

James, K.H. & Berninger, V. (2019) Brain research shows why handwriting should be taught in the computer age. *Learning Difficulties Australia Bulletin, 51*,1, 25-30.

Vinci-Booher, S., Cheng, H., & **James, K.H.** (2019). An analysis of the brain systems involved with producing letters by hand. *Journal of Cognitive Neuroscience, 31*(1), 138-154.

James, K., & *Vinci-Booher, S.* (2019). Visual experiences during letter production contribute to the development of the neural systems supporting letter perception. *Journal of Vision*, *19*(10), 5-5.

Wakefield, E. M., Congdon, E. L., Novack, M. A., Goldin-Meadow, S., & **James, K. H**. (2019). Learning math by hand: The neural effects of gesture-based instruction in 8-year-old children. *Attention, Perception, & Psychophysics*, *81*(7), 2343-2353.

2018:

Munoz-Rubke, F., Olson, D., Will, R., & **James, K. H.** (2018). Functional Fixedness in Tool Use: Learning modality, limitations and individual differences. *Acta Psychologia*, 190, 11–26. https://doi.org/10.1016/j.actpsy.2018.06.006

Zemlock, D., Vinci-Booher, S., & **James, K.H.** (2018). Visual-motor Symbol Production Facilitates Letter Recognition in Young Children. *Reading and Writing.* 31, 1255-1271

Vinci-Booher, S., Sturgeon, J., James, T., & **James, K.H.** (2018). The MRItab: An MR-Compatible Touchscreen with Video-Display. *Journal of Neuroscience: Methods,* 306, 10-18.

Wakefield, E. M., Hall, C., **James, K. H**., & Goldin-Meadow, S. (2018). Gesture for generalization: Gesture facilitates flexible learning of words for actions on objects. *Developmental Science*. doi: 10.1111/desc.1265 http://dx.doi.org/10.1111/desc.12656

Munoz-Rubke, F., Kafadar, K., & **James, K.H**. (2018). A new statistical model for analyzing rating scale data pertaining to word meaning. Psychological Research. https://doi.org/10.1007/s00426-017-0864-8

2017:

James, K.H. (2017). The importance of handwriting experience on the development of the literate brain. *Current Directions in Psychological Science, 26,6,* 502-508. https://doi.org/10.1177/0963721417709821

James, K.H. ***&*** *Kersey, A.* (2017). Dorsal stream function in the young child: an fMRI investigation of visually guided action. *Developmental Science* Dev Sci. 2017;00:e12546. https://doi.org/10.1111/desc.12546

James, K.H., *Vinci-Booher, S. & Munoz-Rabke, F*. (2017). Sensorimotor learning and brain plasticity. *In The Handbook of Multimodal-Multisensory Interfaces*: ACM Books, Morgan Clayfield. USA.

2016:

Jao, R.J., James, T.W., & **James, K.H**. (2016). Crossmodal enhancement in the LOC for visuohaptic object recognition over development. *Neuropsychologia, 77*, 76-89. doi: 10.1016/j.neuropsychologia.2015.08.008.

Li, J.X*., **James K.H. (2016). Handwriting generates variable visual input to facilitate symbol learning. *Journal of Experimental Psychology: General*. *145*(3):298-313. doi:10.1037/xge0000134.
* American Psychological Association Spotlight paper, May, 2016

Vinci-Booher, S., James, T.W., & **James, K.H.** (2016). Visual-motor functional connectivity in preschool children emerges after handwriting experience. *Trends in Neuroscience and Education*. *5*(3).107-120. doi.org/10.1016/j.tine.2016.07.006

Vinci-Booher, S., & **James, K.H**. (2016). Neural Substrates of Sensorimotor Processes: Letter Writing and Letter Perception. *Journal of Neurophysiology*, *115*(1), 1-4. doi: 10.1152/jn.01042.2014

2015:

Latinus, M., Love, S.A., Rossi, A., Parada, F.J., Huang, L., Conty L, George, N., **James, K.H.,** Puce, A. (2015). Social decisions affect neural activity to perceived dynamic gaze. *Social Cognitive & Affective Neuroscience 10*(11), 1557-1567. doi:10.1093/scan/nsv049 PMID: 25925272

Jao, R. J., James, T. W., & **James, K. H.** (2015). Crossmodal enhancement in the LOC for visuohaptic object recognition over development. *Neuropsychologia*, *77*, 76-89.

Wakefield, E.M. & **James, K.H.** (2015). Effects of learning with gesture on children's understanding of a new language concept. *Developmental Psychology 51*(8), 1105-1114. doi:10.1037/a0039471

James, K.H., *Jao, R.J.* & Berninger, V. (2015). The development of multi-leveled writing brain systems: brain lessons for writing instruction. In MacArthur, C. A., Graham, S., & Fitzgerald, J. (Eds.), *Handbook of writing research, 2nd edition*. New York: Guilford.

2014:

James, K.H., Jones, S.S., Swain, S., *Pereira, A*., & Smith, L.B. (2014). Some views are better than others: Evidence for a visual bias in object views self-generated by toddlers. *Developmental Science, 17*(3), 338-351. doi:10.1111/desc.12124 NIHMS 518867.

James, K.H., Jones, S.S., Smith, L.B., & Swain, S.N. (2014). Young Children's Self-Generated Object Views and Object Recognition. *Journal of Cognition and Development: Official Journal of the Cognitive Development Society, 15*(3), 393–401. doi.org/10.1080/15248372.2012.749481

Jao, R.J., James, T.W., & **James, K. H**. (2014). Multisensory convergence of visual and haptic object preference across development. *Neuropsychologia*, *56*, 381–392. doi.org/10.1016/j.neuropsychologia.2014.02.009 NIHMS 573317

Smith, L.B., *Street, S*., Jones, S.S., & **James, K.H.** (2014). Using the axis of elongation to align shapes: Developmental changes between 18 and 24 months of age. *Journal of Experimental Child Psychology, 123*, 15-35. doi: 10.1016/j.jecp.2014.01.009 NIHMS 577438

2013:

Butler, A.J., & **James, K.H.** (2013). Active learning of novel sound-producing objects: Motor reactivation and enhancement of visuo-motor connectivity. *Journal of Cognitive Neuroscience*, *25*, 203-218. doi:10.1162/jocn_a_00284

Kersey, A. J. & **James, K.H.** (2013). Brian activation patterns resulting from learning letter forms through active self-production and passive observation in young children. *Frontiers in Psychology, 4*(567), 10-3389. doi:10.3389/fpsyg.2013.00567 NIHMS 629654.

James, T.W.* **& James, K.H**.* (2013). Expert individuation of objects increases activation in the fusiform face area of children. *NeuroImage*, *67*, 182-192.
doi: 10.1016/j.neuroimage.2012.11.007 * equal author contribution

Wakefield, E.M. James, T.W. *&* **James, K.H**. (2013)**.** The neural correlates of gesture processing across human development, *Cognitive Neuropsychology*, *30*, 58-76. doi:10.1080/02643294.2013.794777

2012:

***James, K.H.** *&* *Engelhardt, L.* (2012). The effects of handwriting experience on functional brain development in pre-literate children. *Trends in Neuroscience and Education*, *1*, 32-42.
doi.org/10.1016/j.tine.2012.08.001 NIHMS 629881
*most cited article for that year for that journal.

Motz, B.A., **James, K.H.** & Busey, T.A. (2012). The lateralizer: A tool for students to explore the divided brain. *Advances in Physiology Education*, *36*(3).
doi: 10.1152/advan.00060.2012

2011:
Wakefield, E.M. & **James, K.H**. (2011). Effects of sensori-motor learning on melody processing across development. *Cognition, Brain & Behavior*, *15*(4), 505-534.
NIHMS 629890.

James, K.H. *& Bose, P.* (2011). Self-generated actions during learning objects and sounds create sensori-motor systems in the developing brain. *Cognition, Brain & Behavior*, *15*(4), 485-503. NIHMS 629882.

Butler, A.J. & **James, K.H.** (2011). Cross-modal versus within-modal recall: Differences in behavioral and brain responses. *Behavioral Brain Research, 224,* 387-396.
doi:10.1016/j.bbr.2011.06.017

Butler, A.J., James, T.W. *&* **James, K.H.** (2011). Enhanced multisensory integration and motor reactivation after active motor learning of audiovisual associations. *Journal of Cognitive Neuroscience*, *23*(11), 3515-3528*.* doi:10.1162/jocn_a_00015

James, T.W., VanDerKlok, R.M., Stevenson, R.A., & **Harman James, K.** (2011). Multisensory perception of action in posterior temporal cortex. *Neuropsychologia*, *49*, 108-114.
doi:10.1016/j.neuropsychologia.2010.10.030

James, T.W., Stevenson, R.A, Kim, S., VanDerKlok, R.M **& James, K.H.** (2011). Shape from sound: Evidence for a shape operator in the lateral occipital cortex. *Neuropsychologia*, *49*, 1807-1815. doi:10.1016/j.neuropsychologia.2010.10.030

James, K.H., & Swain, S.N. (2011). Only self-generated actions create sensori-motor systems in the developing brain. *Developmental Science*, *14*(4), 673-687.
doi: 10.1111/j.1467-7687.2010.01011.x NIHMS 629884.

2010+

Butler, A.J. & **James, K.H**. (2010). The neural correlates of attempting to suppress negative versus neutral memories. *Cognitive and Affective Behavioral Neuroscience*, *10*, 182-194. doi:10.3758/CABN.10.2.182

Street, S., **James, K.H.,** Jones, S. & Smith, L.B. (2010). Vision for action in toddlers: The posting task. *Child Development*, *82*(6), 2083-2094. doi:10.1111/j.14678624.2011.01655.x NIHMS 321290.

James, K.H. (2010). Sensori-motor experience leads to changes in visual processing in the developing brain. *Developmental Science*, *13*(2), 279-288. doi:10.1111/j.1467-7687.2009.00883.x NIHMS 629888.

James, K.H. & Mauoene, J. (2010). Auditory verb perception recruits motor systems in the developing brain: an fMRI investigation. *Developmental Science, 12*(6), F26-F34. doi:10.1111/j.1467-7687.2009.00919.x

Periera, A.F., **James, K.H**., Jones, S.S. & Smith, L.B. (2010). Early biases and developmental changes in self-generated object views. *Journal of Vision*, *10*(11): 22. doi: 10.1167/10.11.22 NIHMS 273211.

James, K.H. & Gauthier, I. (2009). When writing impairs reading: Letter perception's susceptibility to motor interference. *Journal of Experimental Psychology: General*, *138*, 416-43. doi:10.1037/a0015836

James, K.H. & *Atwood, T.* (2009). The role of sensorimotor learning in the perception of letter-like forms: Tracking the causes of neural specialization for letters. *Cognitive Neuropsychology, 26*(1), 91-110. doi:10.1080/02643290802425914

Wong, A C-N, Jobard, G., James, T.W., **James, K.H**., Gauthier, I. (2009). Expertise with characters in alphabetic and non-alphabetic writing system engage the same occipito-temporal area. *Cognitive Neuropsychology*, *26*, 111-127.

James, K.H., Wong, C-N, Jobard, G. (2009). The case for letter expertise. *Perceptual Expertise: Bridging Brain and Behavior,* Gauthier, I, Bub, D. & Tarr, M.J. (Eds.) Oxford University Press. doi:10.1093/acprof:oso/9780195309607.003.0011

Foss, A. H, Altschuler, E.L. & **James, K.H**. (2007). Neural correlates of the Pythagorean ratio rules. *Neuroreport***,** *18*, 1521-1525. doi:10.1093/acprof:oso/9780195309607.001.0001

James, K.H. & Gauthier, I. (2006). Letter processing automatically recruits a sensory-motor brain network. *Neuropsychologia*, *44*, 2937-2949. doi:10.1016/j.neuropsychologia.2006.06.026

James, K.H., James, T.W., Jobard, G., Wong, C-N., & Gauthier, I (2005). Letter processing in the visual system: Different activation patterns for single letters and strings. *Cognitive, Affective and Behavioral Neuroscience*, *5*(4), 452-466. doi: 10.3758/cabn.5.4.452

James, T.W., Humphrey, G.K., **James, K.H.** & Goodale, M.A. (2005) Do visual and tactile object representations share the same neural substrate? M.A. Heller and S. Ballesteros (Eds.), *Touch and blindness: psychology and neuroscience.* Mahwah, NJ: Lawrence Erlbaum.

James, K.H., Humphrey, G.K., Vilis, T., Baddour, R., Corrie, B. & Goodale, M.A. (2002). "Active" and "passive" learning of three-dimensional object structure within an immersive virtual reality environment. *Behavioral Research Methods, Instruments and Computers, 34*(3), 383-390. doi:10.3758/BF03195466

James, K.H., Humphrey, G.K. & Goodale, M.A. (2001). Manipulating and Recognizing Virtual Objects: Where the Action Is. *Canadian Journal of Experimental Psychology*, 55(2), 111-120. doi:10.1037/h0087358

Harman, K.L., Humphrey, G.K. & Goodale, M.A. (1999). Active manual control of object views facilitates visual recognition. *Current Biology*, 9 (22), 1315-1318. doi:10.1016/S0960-9822(00)80053-6

Harman, K.L. & Humphrey, G.K. (1999). Encoding 'regular' and 'random' sequences of views of novel, three-dimensional objects. *Perception*, 28, 601-615. doi:10.1068/p2924

Invited Oral Presentations

James, K.H. (September 23, 2021). From basic science to the classroom: the importance of handwriting practice. The Reading Science Academy.

James, K.H. (July 1, 2021) The importance of handwriting for pre-literacy skills. Barksdale Reading Institute.

James, K.H. (March 28, 2021) How handwriting changes the brain to affect cognitive development. University of California, San Diego.

James, K.H. (March 31, 2020) Why handwriting is important in the technological age. Ball State University Town & Gown (postponed)

James, K.H. (April 2020) Studying visually-guided action in developing populations using fMRI, Western University (postponed)

Vinci-Booher, S., & **James, K.H.** (2019). The Developmental Trajectory of Brain Systems Supporting Handwriting and the Perception of Handwritten Letters. Western University, London, Ontario.

James, K.H. (2019). How handwriting changes the brain to affect cognitive development. Keynote address at *The Philosophy of Science meeting*, University of Pittsburgh.

James, K.H. (2018) The effects of writing by hand on cognitive development. University of Illinois, Urbana-Champaine

Vinci-Booher, S., & **James, K.H.** (2017). The Developmental Trajectory of Brain Systems Supporting Handwriting and the Perception of Handwritten Letters. Loyola University, Chicago, IL.

Vinci-Booher, S., & **James, K.H**. (2016). Brain Systems Supporting Handwriting and Letter Perception Across Development. Indiana University Alumni Homecoming, Bloomington, IN.

Wakefield, E. M., Hall, C., **James, K. H.,** & Goldin-Meadow, S. (2016). Representational gesture as a tool for promoting word learning in young children. In *Proceedings of the 41st Annual Boston University Conference on Language Development,* Boston, MA.

James, K.H. (2015). How handwriting experience changes visual letter processing in the pre-literate brain. Peabody College, Vanderbilt University. Nashville, TN.

James, K.H. (2015). How handwriting experience changes visual letter processing in the pre-literate brain. *Indiana Association for School Psychologists*. Indianapolis, IN.

James, K.H. (2015). (community outreach). What handwriting is important for brain development. *Monroe County Community School Corporation*, Bloomington, IN.

James, K.H. (2015). (community outreach). What handwriting is important for brain development. *Women's Institute Unitarian Universalist Church*, Bloomington IN.

James, K.H. (2015). How Visual-motor learning changes symbol understanding during development. Johns Hopkins University, *Cognitive Science Colloquium series*. Baltimore, MD.

James, K.H. (2015). What Neuroscience tells us about handwriting skill. *School of Neuropsychology Summer Institute*, Dallas, TX.

James, K.H. (2015). How Visual-motor Experience Changes the Neural Processing of Symbols During Development. *President's Presentation for the Canadian Society for Brain, Behavior and Cognitive Science*. Ottawa, Ontario.

James, K.H. (2015). How Visual-motor Experience Changes the Neural Processing of Symbols During Development. *Midwestern Psychological Association*, Chicago, IL.

James, K.H. (2014). Changing brains: How printing effects thinking in pre-school children. *The University Club*, Bloomington, IN.

James, K.H. (2014). How Visual-motor Experience Changes Symbol Learning During Development: An Educational Cognitive Neuroscience Perspective. *Indiana University Alumni Association "The Future" series*. Bloomington, IN.

James, K.H., (2013). Educational Neuroscience. "*It takes a Village" Conference*, Ivy Tech Vocational Institute, Bloomington, IN.

James, K. H., & *Wakefield, E. M.* (May, 2013). Using fMRI with pre-school children to show brain changes associated with learning. *Cognitive Development Neuroscientific Approaches Symposium*, Austin, TX.

James, K.H., (2012) The affect of writing on pre-reading skills: A developmental cognitive neuroscience approach. "*Get Ready Iowa"* workshop held by *the Development and Learning: From Theory to Application Center*, University of Iowa, Iowa City, IA.

James, K.H. (2012). The neural correlates of handwriting and its affect on reading acquisition. *Handwriting in the 21st century, Educational Summit*, Washington, D.C.

James, K.H. (2011). How printing practice affects letter perception: An educational cognitive neuroscience perspective. *Learning Sciences Department*, Indiana University, Bloomington, IN.

James, K.H. (2010). Influences of action on visual perception: A developmental cognitive neuroscience approach*. Optometry Department*, Indiana University Bloomington, IN.

James, K.H. (2010). How action experience affects visual and auditory processing in the developing brain. *Cincinnati Children's Hospital Medical Center*, Cincinnati, OH.

James, K.H. (2008). The effects of early motor experience on visual cognition: A proposal using fMRI with typically and atypically developing children. *Clinical Science Colloquium series*, Indiana University. Bloomington, IN.

James, K.H. (2007). The effects of motor experience on visual processing: a developmental fMRI approach. *Indiana University Program in Neuroscience Annual Retreat*. Bloomington, IN.

James, K.H. (2005). Neural changes associated with learning to read. *Sackler Institute*, New York, NY.

Invited Oral Presentations (Conferences)

Vinci-Booher, S., Caron, B., Bullock, D., **James, K.H.,** & Pestilli, F. (2021, May). A model of the development of major white matter pathways within and between ventral and dorsal visual streams. Oral presentation presented at the Annual Meeting of the Vision Sciences Society, Virtual Meeting.

James, K.H., & *Vinci-Booher, S*. (2019, May). Visual Experiences During Letter Production Contribute to the Development of the Neural Systems Supporting Letter Perception. In T. Schubert, Reading as a visual act: Recognition of visual letter symbols in the mind and brain. Symposium conducted at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL, USA.

Vinci-Booher, S., Nikoulina, A., James, T.W., & **James, K.H.** (2019, March). Sensorimotor Contingency Leads to Developmental Changes in the Neural Mechanisms Supporting Visual Recognition. Data blitz presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, USA.

James, K.H., & *Vinci-Booher, S.* (2019, May). Visual Experiences During Letter Production Contribute to the Development of the Neural Systems Supporting Letter Perception. In T. Schubert, *Reading as a visual act: Recognition of visual letter symbols in the mind and brain.* Symposium conducted at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL, USA.

Vinci-Booher, S., **James, K.H.,** & Pestilli, F. (2019, November). Development of vertical white matter pathways connecting dorsal and ventral visual streams. Oral presentation presented at the Brain and Mind Institute at the University of Western Ontario, ON, CA.
(Invited talk.)

Vinci-Booher, S., Nikoulina, A., James, T.W., & **James, K.H.** (2019, March). Sensorimotor Contingency Leads to Developmental Changes in the Neural Mechanisms Supporting Visual Recognition. Data blitz presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, USA.

Vinci-Booher, S., & **James, K.H.** (2018, February). The Development of Brain Systems Supporting Handwriting and Letter Perception. Oral presentation at the Psychological and Brain

Sciences Graduate Recruitment Event at Indiana University, Bloomington, IN, USA. (Invited talk.)

James, K.H. & *Vinci-Booher, S.* (2017, October). The development of neural systems that support production and perception of handwritten forms. Cognitive Development Society, Portland, OR.

*Vinci-Booher, S***.**, James, T.W., & **James, K.H.** (2015, March). The influence of visual-motor experiences on the development of brain mechanisms subserving letter perception. In E. Wakefield & M. Novack, *Comparing the effects of active and passive learning experiences through action and gesture.* Symposium conducted at the Biennial Meeting of the Society for Research in Child Development**,** Philadelphia, Pennsylvania, USA.

Frizell, T., *Vinci-Booher, S*., *Zemlock, D*., **James, K.H.,** & Crandall, D.J. (2015). Exploring automated techniques for identifying and scoring children's handwriting samples. *Summer Research Experience for Undergraduates Conference*, Bloomington, IN.

Munoz-Rubke, F., Kafadar, K., & **James, K.H**. (2015). Action is the key to observe the continuum among concrete and abstract words. *Cognitive Neuroscience Society*, San Francisco, CA.

Vinci-Booher, S., James, T.W., & **James, K.H**. (2015). The influence of visual-motor experiences on the development of brain mechanisms subserving letter perception. In E. Wakefield & M. Novack, Comparing the effects of active and passive learning experiences through action and gesture. *Society for Research in Child Development*, Philadelphia, PA.

Vinci-Booher, S., *Engelhardt, L*., James, T.W., & **James, K.H.** (2015). Functional connections during letter perception reflect aspects of letter writing. *Cognitive Neuroscience Society*, San Francisco, CA.

Vinci-Booher, S., James, T.W., & **James, K.H.** (2015). Investigating functional connectivity in the developing brain using generalized psychophysiological interactions analysis. *Society for Research in Child Development*, Philadelphia, PA.

Hall, C., *Wakefield, E. M*., **James, K. H**., & Goldin-Meadow, S. G. (2015). Learning verbs through action vs. gesture. *Cognitive Development Society*, Columbus, OH.

James, K.H. (2015). The development of neural systems that support letter perception: the importance of early handwriting. *Psychonomics Society*. Chicago, IL.

James, K.H. (2015). Only self-generated actions create sensori-motor networks in the developing brain. *Society for Research in Child Development*, Philadelphia, PA.

Vinci-Booher, S., James, T.W., & **James, K.H.** (2015). Investigating functional connectivity in the developing brain using generalized psychophysiological interactions analysis. *Society for Research in Child Development*, Philadelphia, PA.

Wakefield, E.M. Goldin-Meadow, S. & **James, K.H**. (2015). Can you show me yocking? Learning novel verbs through producing and observing actions and gestures. *Society for Research in Child Development*, Philadelphia, PA.

Wakefield, E. M., Novack, M., Congdon, E., Goldin-Meadow, S., & **James, K.H.** (2014). Understanding the Neural Effects of Learning with Gesture: Does gesture help learners because it is grounded in action*? International Society of Gesture Studies,* San Diego, CA.

James, K.H., (2013). Using functional Magnetic Resonance Imaging techniques to probe learning mechanisms in young children. *Cognitive Development Society*, Memphis, TN.

James, K.H. (2013). Manual actions on objects are driven by visual biases in 18-24-month-old children. *Society for Research in Child Development,* Seattle, WA.

James, K.H., James, T.W., & Swain, S.N. (2012). The neural correlates of object expertise in the young child. *Cognitive Neuroscience Society*, Chicago, IL.

Wakefield, E. M., & **James, K.H.** (July, 2012). Changes in iconic and metaphoric gesture processing across development. *International Society for Gesture Studies*, Lund, Sweden.

James, K.H. & *Engelhardt, L*. (2011) Visual object processing as a function of active experience in preschool children. *Cognitive Development Society*, Philadelphia, PA.

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. *Society for Research in Child Development*, Montreal, PQ.

James, K.H. (2010). The emergence of sensorimotor representations in the developing brain during language processing. *Cognitive Neuroscience Society*, Montreal, PQ.

Butler, A. & **James, K.H**. (2009). Cued retrieval of novel auditory or visual stimuli activates modality specific cortices regardless of correct performance. *Cognitive Neuroscience Society*, San Francisco, CA.*
*received the "graduate student presents" award at annual meeting.

James, K.H. & Mahoune, J. (2009). Neural correlates of verb processing in the developing brain. *Society for Research in Child Development*, Denver, CO.

Wakefield, E. M., & **James, K. H.** (2009). The effects of sensori-motor learning on melody processing. *Society for Music Perception and Cognition*, Indianapolis, IN.

James K.H., *Butler, A. & Mueller, S*. (2008). Active learning of objects recruits a sensori-motor network upon visual presentation. *Vision Sciences Society*, Naples, FL.

James, K.H. & *Augustine, E*. (2007). The effects of Motor Experience on Visual Processing: an fMRI approach. *Society for Research in Child Development*, Boston, MA.

Altschluler, E.L., *Foss, A.H*. & **James, K.H**. (2007). Neural correlates of the Pythagorean ratio rules. *Society for Neuroscience*, San Diego, CA.

Schneider, B., DeLong, J., Wyatte, D., **James, K.H**., Busey, T. (2007). The neural correlates of face-like expertise in fingerprint examiners. *Vision Sciences Society*, Sarasota, FL.

Pereira, A., **James, K.H.,** Jones, S. S., & Smith, L. B. (2011). Children's knowledge of an object's canonical upright and the statistical structure of self-selected object views. *Society for Research on Child Development*, Montreal, Canada.

James, K.H. (2011). Action influences perception by limiting available information: What toddlers look at is determined by how they hold objects. *Society for Research on Child Development*, Montreal, Canada.

Research Support

External:

National Institutes of Health NIH/NICHHD 2T32HD007475-21 (2015–present)
NIH Training Grant: Integrative study of developmental process.
Role: Co-Principal Investigator (Principal Investigator: Linda Smith)
Effort: Supervisory as needed, run the weekly seminar for grant

Internal:

Indiana University Emerging Areas of Research (2017-2022)
Learning: Brains, Machines & Children
Role: Co-PI
PI: Linda Smith
1,800,000.00 for hiring and education across Co-PIs

Past Support:

Clinical and Translational Science Institute (2017-2019)
Modern diffusion-weighted MRI protocol for early profiling and detection of reading disabilities in preschool children.
Co-Principal Investigators: James, K.H. & Pestilli, F.
$10,000.00

Indiana University Johnson Center Translational Research Pilot Grant (2017-2019)
MRI-Compatible Touchscreen Video-display
Co-PIs: Karin James, Sophia Vinci-Booher & Jeff Stergeon
$25,000.00

Indiana University Social Sciences Research Council (2016-2018)
Efficacy of Two Reading Interventions: A Randomized Control Trial with a Mixed-Method Evaluation.
Co-PIs: Karin James & Rebecca Martinez (IU School of Education)
$15,000.00

Faculty Research Support Program of Indiana University (2015-2016)
Interaction between sensory and motor processes in the brain.
Co-Principal Investigators: Hannah Block, Karin James, Aina Puce
$22,281.00

National Science Foundation. 064707-00002B (2014-2018)
The role of gesture in word learning: Collaborative Research.
Co-Principal Investigators: James, K.H. & Goldin-Meadow, S. (University of Chicago)
Direct costs: $519,659.00
Percent effort James, K.H.: 15%

National Institutes of Health (NIH)/NICD (2008-2014) R01 HD057077
The role of action in the development of visual object recognition.
Principal Investigator: James, K.H.
Direct costs: $1,150,000.00
Percent effort James, K.H: 30%

National Science Foundation BCS-1422329 (2010-2015)
IGERT Training Grant: The Dynamics of Brain-Body-Environment Systems in Behavior and Cognition.
Role: Co-Principal Investigator (PI: Randolf Beer)
Effort: Supervisory as needed (graduate students)

Indiana University Imaging Research Facility Pilot Program
Neuroimaging studies of the effects of writing on early mathematical understanding.
Principal Investigator: James, K.H.
Amount: $15,000.00

Effects of active learning on word meaning.
Principal Investigator: James, K.H.
Amount: $6,000.00

Gesture processing in pre-school children.
Principal Investigator: James, K.H.
Amount: $20,000.00

The development of writing systems in the pre-school brain.
Principal Investigator: James, K.H.
Amount: $20,000.00

Unfunded applications (since 2015):

Institute for Education Sciences (scored, not funded)
The effects of handwriting on emergent literacy skills in children from low- and higher-income households.
Principal Investigator: James, K.H.
Direct Costs: TBD
Submitted: August 1, 2016

National Science Foundation (not discussed)
The effects of handwriting on early literacy skills.
Principal Investigator: James, K.H.
Direct Costs: TBD
Submitted: December, 2015

National Institute of Health (scored, not funded)

Visual-motor Experience Changes the Neural Processing of Symbols During Development.
Principal Investigator: James, K.H.
Direct Costs: TBD
Submitted: June, 2015

Institute for Education Sciences (scored, not funded)
The effects of handwriting on emergent literacy skills in children from low- and higher-income households.
Principal Investigator: James, K.H.
Direct Costs: TBD
Submitted: August 5, 2015

Teaching Experience
Department of Psychological and Brain Sciences, Indiana University:

Undergraduate:
Scientific Writing in Psychological Science (current)
Human Neuropsychology (current)
Cognitive Neuroscience (current)
Development of Brain and Behavior
Developmental Cognitive Neuroscience
Developmental Psychology

Graduate:
Neuroanatomy (current)
Brain & Cognition
Object Recognition: A Cognitive Neuroscience Perspective

Psychology Department, University of Western Ontario

Computer Applications in Psychological Research

Trainees

Post-Doctoral Fellows
2013-2014: Elizabeth Wakefield
2011-2012: Sandra Street

Graduate Students (Primary advisor only are listed, co-supervised an additional 8)

Gabrielle Shimko, PhD 2
Hellen Kyler, PhD 2
Rebecca Bove, PhD 2

Graduated *(8 PhDs total):*

-Daniel Plebanek
PhD posthumously 2020
-Anna Zhen
MS 2020

-Sophia Vinci-Booher
PhD 2019
Post-Doctoral Fellow: Indiana University
-Felipe Munoz
PhD 2018
Assistant Professor: Universidad Austral de Chile
-R. Joanne Jao
PhD 2015
Research Scientist: San Diego State University
-Julia Li
PhD 2015
Research Scientist, Rotman Associates Research
-Elizabeth Wakefield
PhD 2013
Assistant Professor, Loyola University
-Meagan Yee
PhD 2012
Assistant Visiting Professor, University of Cincinnati
-Andrew Butler
PhD 2011
Assistant Professor, Valparaiso University
-Eungi Huh
MA 2011

Undergraduate Honors Students (Honors thesis supervision)

2022-2023	Annie Aboiye
	Arghya Kashyap
2021-2022	Mia Trueblood
	Lauren Wilkins (*Outstanding Honors thesis award-departmental)*
2019-2020	
	Emily Merritt (*JR Kantor award for outstanding honors thesis*)
	Madison Lee (*Outstanding Honors thesis award-departmental*)
2017-2018	Devon Olsen
	Neha Sehgal *(Outstanding honors thesis award)*
	Russell Will
2015-2016	Allison Grace
	Debbie Zemlock *(Indiana University award for best honors thesis poster)*
2014-2015	Aesha Maniar
2012-2013	Melissa Beringer
	Ariana Guierrtez (*Excellence in Research award)*
	JR Kantor award for outstanding honors thesis)
2010-2011	Benis Pavistan
2009-2013	Alyssa Kersey (*STARS research scholar, STARS summer fellowship award*)
2007-2011	Laura Engelhardt (*Cox Research Scholar, JR Kantor award for outstanding honors thesis*)
2009-2011	Christin Neary
2008-2009	Isak Allen
2006-2007	Matthew King (*Howard Hughes Medical Institute Undergraduate Capstone Award*)

Corrie Beck
2005-2008 Scott Mueller (*Howard Hughes Medical Institute Undergraduate Capstone Award*)
2005-2007 Alexander Foss (*Howard Hughes Medical Institute Undergraduate Capstone award, Hutton Honors College fellowship*)
2005-2008 Thea Atwood, (*Howard Hughes Medical Institute Undergraduate Capstone Award*)
2003-2004 Shilpi Roy, Vanderbilt University

Intellectual Property

"Electronic tablet for use in functional MRI," *US Patent No. 62/370, 372*, filed August 3, 2016, (Sturgeon, J., Shroyer, A., **Vinci-Booher, S.**, & James, K.H., applicants). Amended February 4, 2019, patent granted January 2020.

Departmental, College and University Service

Current:

Departmental:
2022-present: Director of Graduate Studies
2021-2022: Director of Graduate Admissions
2021: TT search committee member: Developmental
2019: NTT search committee member
2018-present: VAP search committee member
2018-present: PBS Retirement Matters Committee, member
2018-present: Science Outreach Committee, member
2017-present: Tenure & Promotion Committee, Emily Fyfe, member
2012-present: Child Scientist Activity Week summer camp, director
2006-present: Developmental Psychology Seminar Series, organizer
2005-present: Indiana University Imaging Research Facility Operations Committee, member

College:
2018-2020: College of Arts and Sciences Tenure Review Committee
2018-present: Academic Fairness Committee, Member.

University:
2018-present: Student Academic Misconduct Committee
2014-present: STIM mentor, IU-Bloomington

Community:
2018-present: Science Fest Coordinator for Cognition and Action Neuroimaging Lab activities
2012-present: Director, Child Scientist Activity Week summer camp
2016-present: Bloomington High School Internship Program, supervisor of one student per year.

State/National:
2017-present: Indiana Clinical and Translational Sciences Institute (CTSI) Reviewer for Core Pilot Funding Program

Past
2018: Brain Anatomy for High School Students: Teacher, Harmony High School.
2012-present: External advisory board member, National Institutes of Health P50 Center grant #HD071764 (2012-2017) *Defining and Treating Specific Written Language Learning Disabilities*
2018: Search Committee member: EAR faculty search, member
2013-2016: Chairperson, IRF Pilot Scan Review committee
2015-Member, Developmental Area search committee
2010-2016: member, Graduate Admissions committee
2007-2016: member, Graduate Program committee
2010-2016: Spokesperson, Developmental Psychology Area
2012: IGERT admissions committee
2011-2012: Developmental faculty search committee
2007-2010: Chairperson, Personnel committee, Indiana University Imaging Research Facility
2007-2010: Chairperson, IRF Pilot Project committee:
2007: Member, Imaging Research Facility Technician position search committee
2005: Member, cognitive neuroscience faculty search committee.
2004-2012: Member, brain imaging facilities and planning committee
2004-2010: Co-coordinator, Indiana University Neuroimaging Group

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Editorial Service

Ad Hoc reviewer for:
Brain & Cognition, Cerebral Cortex, Child Development, Cortex, Developmental Science, Cognitive Neuropsychology, Journal of Cognitive Neuroscience JEP: General; JEP: HPP, Journal of Learning Disabilities, Journal of Neurophysiology, Journal of Social Cognition, Journal of Vision, Learning and Instruction, Neuroimage, Neuropsychologia, Perception, Vision Research, Frontiers.

Professional Organizations and Memberships
2008-present: Cognitive Development Society
2007-present: Society for Research in Child Development
2004-present: Cognitive Neuroscience Society
2000-present: Vision Sciences Society
1998-2000: Association for Research in Vision and Ophthalmology
1998-2001: Canadian Society for Brain, Behaviour and Cognitive Science

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Published Abstracts (posters and proceedings):

*Vinci-Booher, S***.**, Bullock, D., Caron, B., McPherson, B., **James, K.H**., & Pestilli, F. (2019, October). *The relationship between the microstructure of vertical white matter pathways and behavior in early elementary school children*. Poster presented at the Cognitive Development Society Biennial Conference, Louisville, KY, USA.

Vinci-Booher, S., Nikoulina, A., James, T.W., & **James, K.H.** (2019, March). *Sensorimotor contingency leads to developmental changes in the neural mechanisms supporting visual recognition.* Poster presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, USA.

Vinci-Booher, S., Sehgal, N., & **James, K.H.** (2018, May). *Visual and motor experiences of handwriting contribute to gains in visual recognition*. Poster presented at the Annual Meeting of the Vision Sciences Society, St. Pete Beach, FL.

DelaCuesta, C., Vinci-Booher, S., & **James, K.H**. (2018, April). *Novel symbol learning: The maintenance of brain changes over time.* Poster presented at the Center of Excellence for Women in Technology Conference, Bloomington, IN.

Harris, S., Vinci-Booher, S., & **James, K.H.** (2018, April). *Handwriting influence on symbol learning in adults.* Poster presented at the Center of Excellence for Women in Technology Conference, Bloomington, IN.

Munoz-Rubke, F., Olson, D., Will, R., & **James, K.H.** (2016). Impact of tool function knowledge on visually-informed mechanical problem solving. *Vision Science Society*, St. Pete Beach, FL.

Munoz-Rubke, F., Olson, D., Will, R., & **James, K.H.** (2016). Impact of tool function knowledge on mechanical problem solving. *Latin American School for Education, Cognitive, and Neural Sciences*, Buenos Aires, Argentina.

Vinci-Booher, S., Sehgal, N., Munoz-Rubke, F., & **James, K.H.** (2016). Perceptual and motor effects of letter writing on brain regions associated with letter perception. *Vision Sciences Society*, St. Pete Beach, FL.

Vinci-Booher, S., Cheng, H., & **James, K.H.** (2016). Handwriting as a visually guided action: A developmental neuroimaging study. *American School for Education, Cognitive, and Neural Sciences*, Buenos Aires, Argentina.

Dasgupta, S.E., McIntire, Z.J., Nguyen, M.A., *Li, J.X.*, **James, K.H.,** & Grossman, E. (2015). STSp functional connectivity in adults and children during biological motion perception. *Society for Neuroscience*, Chicago, IL.

Li, J.X. & **James, K.H.** (2015). Why Does Handwriting Matter? The Effects of Output Variability on Symbol Recognition and Categorization. *Society of Research in Child Development*. Philadelphia, PA.

Vinci-Booher, James, **James, K.H.** (2015). Investigating Functional Connectivity in the Developing Brain Using Generalized Psychophysiological Interactions Analysis. *Society of Research in Child Development*. Philadelphia, PA.

Wakefield, Congdon, Novack,Goldin-Meadow & **James, K.H.** (2015). Why Does Gesture Facilitate Learning? An Investigation of the Underlying Neural Mechanism. *Society of Research in Child Development*. Philadelphia, PA.

Jao, R. J., **James, K.H.,** & James, T.W. (2015). The development and organization of visuohaptic modality-biased signals in the LOC. *Vision Sciences Society*, St. Pete Beach, FL.

Wakefield, E.M., Novack, M., Congdon, E., Goldin-Meadow, S., & **James, K.H.** (2014). Understanding the Neural Effects of Learning with Gesture: Does gesture help learners because it is grounded in action? *International Society of Gesture Studies*, San Diego, CA.

Jao, R.J., **James, K.H.**, & James, T.W. (2014). Development of dorsal and ventral stream connectivity: A visuohaptic psychophysiological interaction study. *Vision Science Expo*, Indiana University. Bloomington, IN.

Jao, R.J., **James, K.H**., & James, T.W. (2014). Functional connectivity analysis shows developmental changes in visuohaptic brain networks. *Association for Psychological Science*, San Francisco, CA.

Jao, R. J., **James, K. H.,** & James, T. W. (2014). Developmental changes in functional connectivity: A visuohaptic psychophysiological interaction study. *Annual IGERT Showcase* at Indiana University. Bloomington, IN.

Vinci-Booher, S., Engelhardt, L., James, T.W., & **James, K.H.** (2014). Investigating the development of letter perception using gPPI connectivity analysis. *Center of Excellence for Women in Technology Conference*, Bloomington, IN.

Li, J. X., Smith, L. B., Jones, S. S., & **James, K. H.** (2013). Effects of manual rotation experience on the development of mental rotation strategies. *Cognitive Development Society*, Memphis, TN.

Wakefield, E. M., & **James, K. H.** (2013). Behavioral and neural effects of learning with different gesture strategies. *Cognitive Development Society*, Memphis, TN.

Jao, R.J., James, T.W., & **James, K.H.** (2013). Visuohaptic crossmodal matching: A developmental fMRI study. *Vision Science Society*, Naples, FL.

Jao, R.J., James, T.W., & **James, K.H.** (2012). Multisensory Convergence of Vision and Haptics Across Development. *Cognitive Neuroscience Society*, Chicago, IL.

Wakefield, E.M. & **James, K.H.** (2012). Motor processing during gesture perception across development: An fMRI study. *Cognitive Neuroscience Society*, Chicago, IL.

Butler, A., Pavisian, B. & **James, K.H.** (2012). Neural differences in translating abstract versus concrete visual representations into actions. *Cognitive Neuroscience Society*, Chicago, IL.

Li, J.X., Smith, L.B., Jones, S.S., & **James, K.H.** (2012). Effects of action on the development of object constancy. *International Conference on Infant Studies,* Baltimore, MD.

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. *Society for Research in Child Development*, Montreal, PQ.

Engelhardt, L., & **James, K.H.** (2011). Easy as ABC: Using fMRI to determine how drawing, tracing, and typing contribute to letter acquisition. *UCLA Psychology Undergraduate Research Conference*, Los Angeles, CA.

Engelhardt, L., & **James, K.H**. (2010). Manual interaction with objects leads to motor cortex recruitment in children*. UCLA Psychology Undergraduate Research Conference*, Los Angeles, CA.

Wakefield, E. M., & **James, K. H.** (2011). Neural correlates of gesture processing across development. *Cognitive Neuroscience Society*, San Francisco, CA.

James, K.H., Periera, A., Swain, S. Jones, S. & Smith, L.B. (2011). Vision for action in toddlers: How objects are held influences how they are viewed. *Society for Research in Child Development*, Montreal, PQ.

Maouene, J., **Harman James, K**., Sethuraman, N., Maouene, M. & Smith, L.B. (2010). Correlating Body Experiences, Knowledge of Verbs, and Development of Argument Structure. *International Cognitive Linguistics Association*, San Diego, CA.

Engelhardt, L., & **James, K.H.** (2010). Manual interaction with objects leads to motor cortex recruitment in children. *Hutton Honors College Undergraduate Symposium and Research Fair*, Bloomington, IN.

Butler, A.J. & **James, K.H.** (2010). The Recognition of Actively vs. Passively Learned Audiovisual Associations. *Cognitive Neuroscience Society*, Montreal, PQ.

Wakefield, E. M. & **James, K.H**. (2010). Sensori-motor integration in children: Effects of different forms of training on melody processing. *Cognitive Neuroscience Society*, Montreal, PQ.

Huh, E-J., Jones, S. & **James, K.H.** (2010). Neural correlates of action perception and action performance in the preschool child. *Vision Sciences Society*, Naples, FL.

Huh, E-J., Jones, S. & **James, K.H.** (2009). No evidence of mirroring in the human 'mirror system'. *Cognitive Neuroscience Society*, San Francisco, CA.

James, K.H. (2008). Does learning to print help learning to read? An fMRI approach. *Indiana Neuroimaging Symposium.* Bloomington, IN.

*Butler, A***. & James, K.H.** (2008). Neural suppression of emotional words recruits a different network than neutral words. *Cognitive Neuroscience Society*, San Francisco, CA.

Butler, A. & **James, K.H.** (2007). The role of the hippocampus in processing neutral and negative words. *Indiana Neuroimaging Symposium*, Bloomington, IN.

James, K.H. (2006). Writing facilitates learning of Abstract Representations of Letter-like symbols. *Vision Sciences Society*, Sarasota, FLA.

James, K.H. & Gauthier, I. (2006). Visual-Motor interactions during the perception and writing of letters. *Cognitive Neuroscience Society*, San Francisco, CA.

Wong, A C-N, Jobard, G., James, T.W., **James, K.H**., Gauthier, I. (2005). Neural activation to characters of expertise. *Human Brain Mapping*, Toronto, Ontario, Canada.

Wong, A C-N, Jobard, G., James, T.W., **James, K.H**., Gauthier, I. (2005). Experience associated neural selectivity to single characters. *Vision Sciences Society*, Sarasota, FL.

Gauthier, I., **James, K.H**., James, T.W., Jobard, G., Wong, A C-N. (2004). Selectivity for letters in the left fusiform gyrus. *Society for Neurosciences*, San Diego, CA.

James, K.H., Martelli, M., James, T.W., Majaj, N., Pelli, D.G. & Gauthier, I. (2004). fMRI reveals the role of the left fusiform gyrus in letter detection. *Vision Sciences Society*, Sarasota, FL.

James, K.H., Wong, CN, & Gauthier, I. (2003). fMRI activation to letters: A different picture from letter strings and individual letters. *Human Brain Mapping,* New York, NY.

James, K.H., Roy,S.P, & Gauthier, I. (2003). Visual perception is affected by motor experience: Evidence from letter recognition. *Vision Sciences Society*, Sarasota, FL.

James, K.H., Humphrey, G.K., & Goodale, M.A. (2002). Exploring novel objects: What do we look at? *Vision Sciences Society*, Sarasota, FL.

James, K.H., Humphrey, G.K., Vilis, T. Corrie, B. & Goodale, M.A. (2001). Learning to Recognize Objects in a Virtual Environment. *Vision Sciences Society*, Sarasota, FL.

James, K.H, Humphrey, G.K., Vilis, T. & Goodale, M.A. (2000). Learning to recognize objects: Effects of active exploration and passive viewing. *National Research Council conference for Deans and Presidents of Canadian Universities*. Location?

James, K.H., Humphrey, G.K. & Goodale, M.A. (2000). Matching objects after active exploration and passive viewing. *Southern Ontario Neuroscience Association*, London, ON.

James, K.H. Humphrey, G.K. & Goodale, M.A. (2000). Active exploration and passive viewing of novel objects: Effects on recognition and perceptual matching. *Southern Ontario Neuroscience Association*, London, ON.

Harman, K.L., Humphrey, G.K. & Goodale, M.A. (1999). The effects of self directed exploration on the recognition of novel, 3D objects. *Association for the Scientific Study of Consciousness*, London, ON.

Harman, K.L., Humphrey, G.K. & Goodale, M.A. (1999). Recognizing novel 3D objects after active and passive viewing. *Association for Research in Vision and Ophthalmology*, Ft. Lauderdale, FL.

Harman, K.L. & Humphrey, G.K. (1998). Recognizing novel 3d objects: Effects of training and test tasks. *Canadian Society for the Study of Brain, Behaviour and Cognitive Science*, Ottawa, ON.

Harman, K.L. & Humphrey, G.K. (1998). Encoding 'regular' and 'random' sequences of views of three-dimensional objects rotating in depth. *Association for Research in Vision and Ophthalmology*, Ft. Lauderdale, FL.

Harman, K.L. & Moscovitch, M. (1996). Part based and holistic processing of faces and objects: An investigation of the inversion effect. *Canadian Society for the Study of Brain, Behaviour and Cognitive Science*, Montreal, PQ.