

Joseph M. Baker, Ph.D.
Instructor, Department of Psychiatry and Behavioral Sciences,
Stanford University School of Medicine, Stanford, CA 94305

EDUCATION

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| 2013 | Ph.D., Experimental Cognitive Psychology,
Utah State University
Dissertation Chair: Dr. Kerry E. Jordan |
| 2008 | M.A., Cognitive Psychology,
Middle Tennessee State University
Thesis Chair: Dr. Stephen Schmidt |
| 2005 | B.A., Experimental Psychology
New Mexico State University |

APPOINTMENTS

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|----------------|---|
| 2018 – Present | Instructor, Division of Interdisciplinary Brain Sciences, Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA |
| 2013 – 2018 | Postdoctoral Scholar, Center for Interdisciplinary Brain Sciences Research, Division of Interdisciplinary Brain Sciences, Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA, Faculty Mentor: Dr. Allan Reiss |

GRANTS AWARDED

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| 2018 – 2023 | NIH Career Development Award (K99/R00) , Eunice Kennedy Shriver National Institute of Child Health and Human Development
<i>Title:</i> Investigation of the role of Turner syndrome on approximate number sense
<i>Role:</i> Principal Investigator |
| 2018 – 2020 | NIH Loan Repayment Program Clinical Research LRP , Eunice Kennedy Shriver National Institute of Child Health and Human Development
<i>Role:</i> Principal Investigator |
| 2018 – 2020 | K-award Support Grant , Stanford Maternal & Child Health Research Institute.
<i>Role:</i> Principal Investigator |
| 2017 | CNI-Seed Grant , Center for Cognitive Neurobiological Imaging, Stanford University
<i>Role:</i> Principal Investigator |
| 2015 – 2018 | NIH T32 Institutional Training Grant , National Institute of Mental Health
<i>Title:</i> Training for Child Psychiatry and Child Neurodevelopment |

- Role:* Postdoctoral Fellowship (PI: Allan Reiss)
- 2013 **CNI-Seed Grant**, Center for Cognitive Neurobiological Imaging, Stanford University
Role: Principal Investigator
- 2013-2014 **Vice President for Research RC Funding**, Utah State University
Title: Captivated! Young children's learning interactions with iPad mathematics apps.
Role: Co-investigator (PI: Patricia Moyer-Packenham)
- 2012-2013 **Dissertation Fellowship**, Utah State University
Role: Principal Investigator
- 2011-2012 **Vice President for Research SPARC Funding**, Utah State University
Title: Virtual Manipulatives Research Group: Effects of Multiple Visual Modalities of Representation on Rational Number Competence
Role: Co-investigator (PI: Patricia Moyer-Packenham)

PEER-REVIEWED ARTICLES

- Sagiv, S. K., Bruno, J. L., **Baker, J. M.**, Palzes, V., Kogut, K., Rauch, S., Gunier, R., Mora, A. M., Reiss, A. L., & Eskenazi, B. (In press). Prenatal exposure to organophosphate pesticides and functional neuroimaging in adolescents living in proximity to pesticide application. *Proceedings of the National Academy of Sciences*. ** *Developed all fNIRS tasks, data preprocessing pipeline, and conducted all fNIRS and behavioral analyses. Mentored authors S.K.S., A.M.M., and B.E on fNIRS preprocessing and GLM analyses.*
- Palzes, V. A., Sagiv, S. K., **Baker, J. M.**, Rojas-Valverde, D., Gutierrez, R., Winkler, M., Fuhrmann, S., Staudacher, P., Menezes-Filho, J. A., Reiss, A. L., Eskenazi, B., Mora, A. M. (2019). Manganese exposure and working memory-related brain activity in farmworkers in Costa Rica. *Environmental Research*, doi: [10.1016/j.envres.2019.04.006](https://doi.org/10.1016/j.envres.2019.04.006). ***Designed and implemented all fNIRS tasks, and developed data processing pipeline. Also mentored author V.A.P.*
- Miller, J G., Vrtička P., Cui, X., Shrestha, S., Hosseini S M H., **Baker, J M.**, & Reiss, A L. (2019). Inter-brain synchrony in mother-child dyads during cooperation: An fNIRS study. *Neuropsychologia*, doi: [10.1016/j.neuropsychologia.2018.12.021](https://doi.org/10.1016/j.neuropsychologia.2018.12.021). ***Assisted in fNIRS hyperscanning analysis and interpretation.*
- Baker, J. M.**, Bruno, J. L., Gundran, A., Hosseini, S. M. H., & Reiss, A. L. (2018). fNIRS measurement of cortical activation and functional connectivity during a visuospatial working memory task. *PLOS ONE*, doi: [10.1371/journal.pone.0201486](https://doi.org/10.1371/journal.pone.0201486).
- Fuhrmann, S., Winkler M. S., Staudacher P., Weiss F., Stamm C., Eggen R. I. L., Lindh C. H., Menezes-Filho J. A., **Baker, J. M.**, Ramirez F., Gutierrez R., & Mora, A. M. (2018). Exposure to pesticides and health effects in farm owners and workers from conventional and organic agricultural farms in Costa Rica: A study protocol. *JMIR Research Protocols*, doi: [10.2196/10914](https://doi.org/10.2196/10914). ***Designed and implemented all methods relevant to fNIRS.*
- Bruno, J. L., **Baker, J. M.**, Gundran, A., Harbott, L. K., Stuart, Z., Piccirilli, A., Hosseini, S. M. H., Gerdes, J. G., & Reiss, A. L. (2018). Mind over motor mapping: Driver response to changing vehicle dynamics. *Human Brain Mapping*; doi: [10.1002/hbm.24220](https://doi.org/10.1002/hbm.24220). ***Developed and implemented the fNIRS and behavioral data processing and analysis pipelines. Assisted*

in the methodological development of the driving task, produced all figures, and helped develop and finalize the manuscript.

- Baker, J. M.**, Moyer-Packenham, P. S., Tucker, S. I., Shumway, J. F., Jordan, K. E., & Gillam, R. B. (2018). The brains response to digital math apps: A pilot study examining children's cortical responses during touch-screen interactions. *Journal of Computers in Mathematics and Science Teaching*, *37*(1), 69-86.
- Baker, J. M.**, Rojas-Valverde, D., Gutierrez R., Winkler, M., Fuhrmann, S., Eskenazi B., Reiss A. L., Mora A. M. (2017). Portable functional neuroimaging as an environmental epidemiological tool: A how-to guide for the use of fNIRS in field studies. *Environmental Health Perspectives*; doi: [10.1289/ehp2049](https://doi.org/10.1289/ehp2049).
- Hosseini, S. M. H., Bruno, J. L., **Baker, J. M.**, Gundran, A., Piccirilli, A. M., Harbott, L. K., Gerdes, C., & Reiss, A. L. (2017). Neural, physiological, and behavioral correlates of visuomotor cognitive load using functional NIRS. *Scientific Reports*; doi: [10.1038/s41598-017-07897-z](https://doi.org/10.1038/s41598-017-07897-z). **Assisted in the methodological development of the task.
- Baker, J. M.***, Liu, N.*, Vrtička, P., Sagar, M., Hosseini, H., & Reiss, A. L. (2016). Sex differences in neural and behavioral signatures of cooperation revealed by fNIRS hyperscanning. *Scientific Reports*, 6, 26492; doi: [10.1038/srep26492](https://doi.org/10.1038/srep26492). *Authors contributed equally
- Fu, G., Wan, N. J. A., **Baker, J. M.**, Montgomery J. W., Evans, J. L., & Gillam, R. B. (2016). Function-based statistical analysis of fNIRS data: A proof of concept study of sentence comprehension in children with specific language impairment and their typically-developing controls. *Frontiers in Behavioral Neuroscience*, doi: [10.3389/fnbeh.2016.00108](https://doi.org/10.3389/fnbeh.2016.00108). **Developed and implemented the task.
- Shumway, J. F., Moyer-Packenham, P. S., **Baker, J. M.**, Westenskow, A., Anderson-Pence, K. L., Tucker, S. I., Boyer-Thurgood, J., & Jordan, K. E. (2016). Using open-response fraction items to explore the relationship between instructional modalities and students' solution strategies. *International Journal of Education in Mathematics, Sciences, and Technology*, *4*(2), 112-132, doi: [10.18404/ijemst.20845](https://doi.org/10.18404/ijemst.20845). **Assisted in task design and implementation.
- Baker, J. M.**, & Reiss, A. L. (2015). A meta-analysis of math performance in Turner syndrome. *Developmental Medicine & Child Neurology*, doi: [10.1111/dmcn.12961](https://doi.org/10.1111/dmcn.12961).
- Baker, J. M.**, Aghababayan, A., Gillam, R., & Martin, T. (2015). Cortical activations during a computer-based fraction learning game: Preliminary results from a pilot study. *Journal of Technology, Knowledge, and Learning*, doi: [10/1007/s10758-015-9251-y](https://doi.org/10/1007/s10758-015-9251-y).
- Cui, X. *, **Baker, J. M.***, Liu, N. *, & Reiss, A. L. (2015). Sensitivity of fNIRS measurement to head motion: An applied use of smartphones in the lab. *Journal of Neuroscience Methods*, doi: [10.1016/j.jneumeth.2015.02.006](https://doi.org/10.1016/j.jneumeth.2015.02.006). *Authors contributed equally
- Maclean, E. L., Hare, B., Nunn, C. L., Addessi, E., Amici, F., Anderson, R. C., Aureli, F., **Baker, J. M.**, Bania, A. E., Barnard, A. M., Boogert, N. J., Brannon, E. M., Bray, E. E., Brent, L. J., Burkart, J. M., Call, J., Cantlon, J. F., Cheke, L. G., Clayton, N. S., Delgado, M. M., DiVincenti, L. J., Fujita, K., Herrmann, E., Hiramatsu, C., Jacobs, L. F., Jordan, K. E., Laude, J. R., Leimgruber, K. L., Messer, E. J., Moura, A. C., Ostojić, L., Picard, A., Platt, M. L., Plotnik, J. M., Range, F., Reader, S. M., Reddy, R. B., Sandel, A. A., Santos, L. R., Schumann, K., Seed, A. M., Sewall, K. B., Shaw, R. C., Slocombe, K. E., Takimoto, A., Tan, J., Tao, R., van Schaik, C. P., Virányi, Z., Visalberghi, E., Wade, J. C., Wantanabe, A., Widness, J., Young, J. K., Zentall, T. R., Zhao, Y. (2014). The evolution of self-control.

- Proceedings of the National Academy of Sciences*, 111(20), E2140-E2148, doi: [10.1073/pnas.1323533111](https://doi.org/10.1073/pnas.1323533111). **Collected all coyote data that were contributed to the analysis.
- Mahamane, S.*, Grunig, K. L.*, **Baker, J. M.**, Young, J., & Jordan, K. E. (2014). Memory-based quantity discrimination in coyotes (*Canis latrans*). *Animal Behavior and Cognition*, doi: [10.12966/abc.08.09.2014](https://doi.org/10.12966/abc.08.09.2014). **Analyzed and interpreted the data. Also mentored author S.M.
- Baker, J. M.**, Mahamane, S., & Jordan, K. E. (2014). Multiple visual quantitative cues enhance discrimination in infancy. *Journal of Experimental Child Psychology*, 122, 21-32, doi: [10.1016/j.jecp.2013.12.007](https://doi.org/10.1016/j.jecp.2013.12.007).
- Moyer-Packenham, P., **Baker, J. M.**, Westenskow, A., Anderson, K., Shumway, J. F., & Jordan, K. E. (2014). Predictors of achievement when virtual manipulatives are used for mathematics instruction. *REDIMAT- Journal of Research in Mathematics Education*, 3(2), 121-150. doi: [10.4471/redimat.2014.46](https://doi.org/10.4471/redimat.2014.46). **Assisted in study design and implementation. Analyzed and interpreted the data.
- Moyer-Packenham, P., **Baker, J. M.**, Westenskow, A., Rodzon, K., Anderson, K., Shumway, J., & Jordan, K. (2013). A study comparing virtual manipulatives with other instructional treatments in third- and fourth-grade classrooms. *Journal of Education*, [193\(2\), 25-39](https://doi.org/10.1016/j.jed.2013.12.007). **Assisted in study design and implementation. Analyzed and interpreted the data.
- Baker, J. M.**, Rodzon, K. S., & Jordan, K. E. (2013). The impact of emotion on visual numerical estimation. *Frontiers in Cognition*, 1, doi: [10.3389/fpsyg.2013.00521](https://doi.org/10.3389/fpsyg.2013.00521).
- Baker, J. M.**, Morath, J., Rodzon, K. S., & Jordan, K. E. (2012). A shared system of representation governing quantity discrimination in canids. *Frontiers in Psychology*, 3, 387, doi: [10.3389/fpsyg.2012.00387](https://doi.org/10.3389/fpsyg.2012.00387).
- Baker, J. M.**, Shivik, J., & Jordan, K. E. (2011). Tracking of food quantity by coyotes (*Canis Latrans*). *Behavioral Processes*, 88, 72-75, doi: [10.1016/j.beproc.2011.08.006](https://doi.org/10.1016/j.beproc.2011.08.006).
- Jordan, K. & **Baker, J.M.** (2011). Multisensory information boosts numerical matching abilities in young children. *Developmental Science*, 14(2), 205-213, doi: [10.1111/j.1467-7687.2010.00966.x](https://doi.org/10.1111/j.1467-7687.2010.00966.x). **Assisted in data organization and manuscript development.

PEER-REVIEWED FULL-LENGTH CONFERENCE PROCEEDINGS

- Moyer-Packenham, P.S., Anderson, K.L., Shumway, J.F., Tucker, S., Westenskow, A., Boyer-Thurgood, J., Bullock, E., Mahamane, S., **Baker, J.M.**, Gulkilik, H., Maahs-Fladung, C., Symanzik, J., & Jordan, K.E. (2013). Developing research tools for young children's interactions with mathematics apps on the iPad. Published in the *Proceedings of the 12th Annual Hawaii International Conference on Education (HICE)*, (pp. 1685-1694), Honolulu, Hawaii, ISSN# 1541-5880. **Assisted in methodological development and statistical analysis.
- Clark, D., **Baker, J. M.**, & Jordan, K. E. (2012). Salience of race vs. gender to children and adults. Published in the *Proceedings of the National Conference on Undergraduate Research (NCUR)*, 980-986. **Assisted in methodological design and data analysis. Also mentored author D.C.
- Rodzon, K. S., **Baker, J. M.**, & Jordan, K. E. (2011). The impact of emotion on numerical estimation. Published in the *Proceedings of the Cognitive Science Society*, 3552-3557. **Assisted in methodological development and manuscript development.

Baker, J. M., Feigleson, J. M., & Jordan, K. E. (2010). Multiple visual cues enhance quantitative perception in infancy. Published in the *Proceedings of the Cognitive Science Society*, 2799-2803.

BOOK CHAPTERS

Baker, J.M., & Jordan, K.E. (2015). The influence of multisensory cues on representation of quantity in children. *Math Cognition Vol. 1: Evolutionary Origins and Early Development of Basic Number Processing*, Eds., D. Geary, D. Berch, K. M. Koepke. Elsevier.

PROFESSIONAL PRESENTATIONS

Mora A.M., **Baker J.M.**, Rojas-Valverde D., Rodriguez-Zamora M.G., Palzes V., Gutierrez, R., Fuhrmann S., Winkler M., Lindh C.L., Reiss A.L., Sagiv S., Eskenazi B. (2018 August). Brain activity in farm workers occupationally exposed to pesticides in Costa Rica. Talk given at the International Society of Exposure Science and the International Society for Environmental Epidemiology (ISES-ISEE), Ottawa Canada.

Vrtička P., Rohr, M., Ein-Dor T., Verbeke W., Mokry M., **Baker J.M.**, Liu N., Cui X., Sagar M., Hosseini H., Reiss A. (2018 July). The social neuroscience of human attachment: State of the art and future directions. Symposia presented at the International Conference of the European Society for Cognitive and Affective Neuroscience, Leiden Holland.

Baker J. M., Bruno J. L., Gundran, A., Hosseini H. S. M., Reiss A. L. (2016 November). fNIRS analysis of cortical activity and functional coherence during a visuospatial working memory task. Poster presented at the Society for Neuroscience Annual Conference, San Diego, CA.

Bruno J. L., **Baker J. M.**, Gundran A, Harbott L. K., Stuart Z, Piccirilli A, Hosseini H. S. M., Gerdes J. C., Reiss A. L. (2016 November). Characterizing brain and behavioral correlates of steering control during simulated driving. Poster presented at the Society for Neuroscience Annual Conference, San Diego, CA.

Hosseini H. S. M., Bruno J. L., **Baker J. M.**, Gundran A, Piccirilli A. M., Harbott L. K., Gerdes J. C., Reiss A. L. (2016 November). Neural, physiological and Behavioral correlates of visuomotor cognitive load: a functional NIRS study. Poster presented at the Society for Neuroscience Annual Conference, San Diego, CA.

Gundran A, Piccirilli A, Stuart Z, **Baker J. M.**, Bruno J. L., Harbott L. K., Hosseini H. S. M., Gerdes J. C., Reiss A. L. (2016 November). Complementary physiological and behavioral data streams enhance analysis of fNIRS data during real-world driving task. Poster presented at the Society for Neuroscience Annual Conference, San Diego, CA.

Liu, N., **Baker, J. M.**, Cui, X., Vrtička, P., Sagar, M., & Reiss, A. L. (2014, November). NIRS-based hyperscanning reveals sex differences in brain synchronization during cooperation and competition. Poster to be presented at the Society for Neuroscience Annual Conference, Washington, D. C.

Sagar, M., Schreier, M., **Baker, J. M.**, & Reiss, A. L. (2014, November). Creativity and brain development: Using functional near-infrared spectroscopy to investigate the neural correlates of middle childhood “slump” in creativity. Poster to be presented at the Society for Neuroscience Annual Conference, Washington, D. C.

- Aghababayan, A., **Baker, J. M.**, & Martin, T. (2014, April). Students' neurological response patterns while playing math games. Poster presented at the American Educational Research Association Annual Conference, Philadelphia, PA.
- Baker, J. M.** (2014, January). On the topographic representation of numerosity in the human parietal cortex. Invited lecture, Center for Interdisciplinary Brain Sciences Research Postdoctoral Luncheon Symposium, Stanford University School of Medicine.
- Campbell, B., Kynaston, B., Loosle, B., **Baker, J. M.**, Jordan, K. E., & Tschanze, J. T. (2014, April). Cognitive impairment and mental representation of numerical quantity in the elderly. Poster to be presented at the annual meeting of the Rocky Mountain Psychological Association, Salt Lack City, UT.
- Baker, J. M.**, & Jordan, K. E. (2013, May). *Concurrent neurological and behavioral assessment of number line estimation performance in early math learners*. Poster presented at the NIH Conference on the Evolutionary Precursors and Early Development of Basic Number Processing, Washington, D.C.
- Zobell, C.J., Anderson, A.J., Snow, J., Cooper, J., Johnson, B., **Baker, J.M.**, & Bates, S.C. (2013, April). Subjective well-being and working memory as predictors for sales success. Poster presented at the Western Psychological Association Conference, Reno, NV.
- Baker, J. M.**, & Jordan, K. E. (2013, April). *NIRS based neurological assessment of number line estimation performance in children and adults*. Talk given at the annual Intermountain Graduate Research Symposium, Logan, UT.
- Baker, J. M.**, Jordan, K. E. (2013, January). *Multiple cues enhance quantitative discrimination in infancy*. Talk given at the annual Interdisciplinary Conference, Jackson Hole, WY.
- Baker, J. M.** (2012, October). *Data visualization and management techniques: Approaches using Mondrian and Excel*. Invited lecture, Graduate Student Seminar, Department of Special Education, Utah State University.
- Jenkins, S., **Baker, J. M.**, Friedel, J., & Jordan, K. E. (2012, April). *Incomplete understanding of large scale numbers in adults*. Poster presented at the annual Intermountain Undergraduate Research Symposium, Logan, UT.
- Baker, J. M.**, Jenkins, S., Friedel, J., & Jordan, K. E. (2012, April). *The effect of scale on number line estimations*. Talk given at the annual Intermountain Graduate Research Symposium, Logan, UT.
- Clark, D., **Baker, J. M.**, & Jordan, K. E. (2012, March). *Saliency of race vs. gender to children and adults*. Poster presented at the National Conference for Undergraduate Research, Ogden, UT.
- Clark, D., **Baker, J. M.**, & Jordan, K. E. (2012, January). *Saliency of race vs. gender to children and adults*. Poster presented at the Research on Capitol Hill Undergraduate Research Conference, Salt Lake City, UT.
- Moyer-Packenham, P., Jordan, K. E., Ng, D., Anderson, K., **Baker, J. M.**, Rodzon, K., Shumway, J., & Westenskow, A. (2011, October). *School mathematics research on virtual manipulatives: A collaborative team approach*. Talk given at the annual meeting of the School Science & Math Association, Colorado Springs, CO.
- Baker, J. M.**, & Jordan, K. E. (2011, October). *The effect of intrasensory stimulation on infants' quantitative discrimination*. Poster presented at the biennial meeting of the Cognitive Development Society, Philadelphia, PA.

- Rodzon, K., **Baker, J. M.**, Jordan, K. E. (2011, July). *Impact of emotion on numerical estimation*. Talk given at the annual Cognitive Society Society, Boston, MA.
- Baker, J. M.**, & Jordan, K. E. (2011, June). Investigating the effects of multisensory stimulation on numerical cognition. Invited lecture, Family Consumer and Human Development Honors, USU, Logan, UT.
- Baker, J. M.**, Thrailkill, E., & Shahan, T. (2011, April). *Allocation of unconscious visual attention and the matching law*. Talk given at the annual Intermountain Graduate Research Symposium, Logan, UT.
- Attwood, N., **Baker, J. M.**, & Jordan, K. E. (2011, April). *Attention restorative effects of differing environments*. Poster presented at the annual meeting to the Rocky Mountain Psychological Association, Salt Lake City, UT.
- Baker, J. M.**, Feigleson, J., & Jordan, K. E. (2010, August). *Multiple visual cues enhance quantitative perception in infancy*. Talk given at the annual conference of the Cognitive Science Society, Portland, OR.
- Jordan, K. E., **Baker, J. M.**, & Rodzon, K. S. (2010, August). *Multisensory information improve numerical matching abilities in preschool children*. Poster presented at the annual conference of the Cognitive Science Society, Portland, OR.
- Jordan, K. E., **Baker, J. M.** (2010, July). *Multisensory stimuli enhance numerical abilities of preschool children*. Poster presented at the annual conference of the International Society for the Study of Behavioral Development, Lusaka, Zambia.
- Jordan, K. E., **Baker, J. M.**, & Rodzon, K. S. (2010, May). *Tracking of food quantity by coyotes (Canis Latrans)*. Poster presented at the annual meeting of the Visual Sciences Society, Naples, FL.
- Baker, J. M.**, Rodzon, K. S., Shivik, J., & Jordan, K. E. (2010, April). *Numerical discrimination abilities in coyotes (Canis Latrans)*. Talk given at the annual conference of the Utah Academy of Sciences, Arts, and Letters, St. George, UT.
- Baker, J. M.**, & Jordan, K. E. (2010, April). *Multisensory redundancy and numerical discrimination abilities in infancy*. Invited lecture, Research Methods, USU, Logan, UT.
- Feigleson, J., **Baker, J. M.**, & Jordan, K. E. (2010, April). *Attention to social categories across infant development*. Poster presented at the Utah Academy of Sciences, Arts, and Letters, St. George, UT.
- Baker, J. M.**, & Jordan, K. E. (2010, March). *Intrasensory cues enhance quantitative perception in infancy*. Talk given at the annual Intermountain Graduate Research Symposium, Logan, UT.
- Jordan, K. E., & **Baker, J. M.** (2010, March). *Redundant visual cues amplify preverbal quantitative skills*. Poster presented the Biennial Meeting of the International Society on Infant Studies, Baltimore, MD.
- Baker, J. M.** (2010, March). *Improving quantitative competence in infancy and early childhood*. Invited lecture, Cognition & Instruction, Utah State University, Logan, UT.
- Feigleson, J., **Baker, J. M.**, & Jordan, K. E. (2010, March). *Attention to social categories in infants*. Poster presented at the Utah State University Undergraduate Research Symposium, Logan, UT.

- Jordan, K. E., & Baker, J. M. (2009, October). *Does multisensory information improve matching of large numerosities in young children?* Poster presented at the Annual Meeting of the Cognitive Development Society, Chicago, IL.
- Baker, J. M., & Jordan, K. E. (2009, April). *Multisensory information boosts numerical matching abilities in pre-school children.* Poster presented at the Biannual Meeting of the Society for Research in Child Development, Denver, Co.
- Baker, J. M., & Jordan, K. E. (2008, October). *Multisensory information boosts numerical matching abilities in young children.* Round-table discussion presented at the Annual Meeting of the Northern Rocky Mountain Education Research Association, South Lake Tahoe, NV.
- Baker, J.M., & Schmidt, S. (2007, November). *A word choice: The effect of emotion on lexical decision and accuracy.* Poster session presented at the Annual Meeting of the Psychonomics Society, Long Beach, CA.
- Baker, J.M., & Schmidt, S. (2006, November). *Lexical pop-out: The effect of emotion on automatic attention to words.* Poster session presented at the Annual Meeting of the Psychonomics Society, Houston, TX.

INVITED TALKS

- Baker J. M. (2019 July). Numeracy in Turner syndrome. Invited Research & Science Panel speaker at the Turner Syndrome Society for the United States National Conference, Nashville, TN.
- Baker J. M. (2017 July). CIBSR ECHO: CHAMACOS – fNIRS data pre-processing & analysis. Invited talk, Center for Environmental Research and Children’s Health, School of Public Health, Berkeley University, Berkeley CA.
- Baker, J. M. (2016 September). Math and number cognition in Turner syndrome. Invited talk, Children’s Hospital of Los Angeles Turner Syndrome Patient Family Education Day, Los Angeles, CA.
- Baker, J. M. (2016 June). Functional near-infrared spectroscopy (fNIRS): A portable technique for measuring brain activity in real-world environments. Invited talk, UNA, National University of Costa Rica, Heredia, Costa Rica.
- Baker, J. M. (2016 April). Neural correlates of merging number words. Invited talk, Center for Interdisciplinary Brain Sciences Research T-32 Postdoctoral Journal Club, Stanford, CA.
- Baker, J. M. (2016, February). Math and number processing in Turner syndrome. Invited talk, Chasing butterflies walk for Turner syndrome, Sacramento, CA.
- Baker, J.M. (2014, July). Behavioral and neural correlates to number knowledge. Invited talk, Stanford University School of Medicine’s Center for Interdisciplinary Brain Sciences Research Summer Lecture Series.
- Baker, J. M., Reiss, A. L. (2014, June). A meta-analysis of math performance in Turner syndrome. Invited talk, Lucille Packard Children’s Hospital Turner Syndrome Information Day, Stanford University School of Medicine.

MENTORSHIP

- Supervised the following Research Assistants in experimental design, data collection, statistical analysis, and data visualization
 - Yelena Markiv (currently supervising)
 - Aaron Piccirilli (currently supervising)
 - Vanessa Alschuler (currently supervising)
 - Cindy Hsin-Yu Lee (currently supervising)
 - Kristi Bartholomay (currently supervising)
 - Andrew Gundran (currently Senior Research Associate at Halo Neuroscience)
- Supervised the following Stanford Institute of Medicine Summer Research Program members:
 - Semir Shafi (Stanford University Class of 2020)
 - Mallory Shingle (Columbia University Class of 2019)
- Supervised the following undergraduate students:
 - Sydnee Jenkins (Utah State University)
 - Daniel Clark (Utah State University)
 - Ned Attwood, M.D. (Utah State University)
 - Jessica Feigleson (Utah State University)

TEACHING

2016	Guest Lecturer , Department of Psychiatry and Behavioral Sciences, Stanford University Course: Diagnostic Device Lab (BioE 301c) Level: Undergraduate Format: Small group lecture
2010 – 2012	Instructor of Record , Department of Psychology, Utah State University Course: Introduction to Psychology (PSY 1010) Level: Undergraduate Format: Lecture
2011	Instructor of Record , Department of Psychology, Utah State University Course: Cognitive Psychology (PSY 4420) Level: Undergraduate Format: Lecture
2010 – 2011	Supplemental Instructor , Department of Psychology, Utah State University Course: Research Design & Analysis II (PSY 7610) Level: Graduate Format: Small group lecture
2009 – 2011	Instructor of Record , Department of Psychology, Utah State University Course: Perception and Psychophysics (PSY 3450) Level: Undergraduate

Format: Lecture and online

2009 – 2010

Instructor of Record, Department of Psychology, Utah State University
Course: Research Design & Analysis I (PSY 6600)
Level: Graduate
Format: Small group lecture

INVITED REVIEWER

2019 – present	Educational Researcher
2018 – present	Proceedings of the National Academy of Sciences
2017 – present	NeuroImage
2017 – present	Neuropsychology
2016 – present	Human Brain Mapping
2016 – present	Scientific Reports
2015 – present	PLOS ONE
2014 – present	Psychological Science
2014 – present	Journal of Technology, Knowledge, and Learning
2014 – present	The Psychological Record
2011 – present	Cognitive Development Society Annual Conference
2010 – present	Cognitive Science Society Annual Conference

APPOINTED & ELECTED POSITIONS

2013 – 2015	Chairman, Stanford Postdoc Initiative Fund (SPIF) committee, Stanford University
2013 – 2015	Council Member, Stanford University Postdoctoral Association (SURPAS), Stanford University
2011 – present	Virtual manipulative research group NIRS methodologist and statistician, Utah State University
2008 – 2009	Experimental & Applied Psychological Sciences Student Representative, Utah State University
2006 – 2008	Assistant to Chief Compliance Officer, Middle Tennessee State University
2004	Vice President, Psi Chi, NMSU Chapter
2003 – 2004	Public Relations Executive, Psi Chi, NMSU Chapter

PROFESSIONAL AFFILIATIONS

2014 – present	American Psychological Association
2011 – present	Cognitive Development Society
2010 – present	Vision Science Society

2010 – present	Sigma Xi Scientific Research Society
2008 – 2013	APA Student Affiliate
2008 – 2013	Society for Research in Child Development, Graduate Student Member
2001 – present	Psi Chi, New Mexico State University Chapter

AWARDS

2013	Utah State University Open Access Funding Initiative Award.
2013	NIH Conference on the Evolutionary Precursors and Early Development of Basic Number Processing, Travel Award.
2010	Conference Travel Fellowship, Utah State University
2010	Intermountain Graduate Research Symposium Lecture Presentation Competition, First Place
2010	Walter R. Borg Scholarship and Research Productivity Award, Utah State University, Department of Psychology
2008	Conference Travel Fellowship, Utah State University
2007	Robert E. Prytulla Scholarship for Excellence in Psychological Studies, Middle Tennessee State University, Department of Psychology
2007	Research Travel Grant, Middle Tennessee State University

PRESS COVERAGE

2019	Coverage of “Prenatal exposure to organophosphate pesticides and functional neuroimaging in adolescents living in proximity to pesticide application”, <i>Proceedings of the National Academy of Sciences</i> . https://www.altmetric.com/details/65483492
2016	Coverage of “Sex differences in neural and behavioral signatures of cooperation revealed by fNIRS hyperscanning”, <i>Scientific Reports</i> . https://www.altmetric.com/details/8578658
2014	Coverage of “The evolution of self-control”, <i>Proceedings of the National Academy of Sciences</i> . https://www.altmetric.com/details/2294342
2013	Coverage of my paper in <i>Frontiers in Cognition: Utah State Today-University News</i> , “USU research on the effect of emotion yields unexpected results”, http://www.usu.edu/ust/index.cfm?article=52730
2011	Coverage of my paper in <i>Frontiers in Psychology: Utah State Today-University News</i> , “USU researcher finds coyotes possess rudimentary quantitative abilities”, http://www.usu.edu/ust/index.cfm?article=50261

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