

**The Temporal Dynamics of Learning Center – List of Publications
2010-2018**

2018 Publications

TDLC Publications 2018
Annis, J., & Palmeri, T. J. (under review). Modelling memory dynamics in visual expertise. Manuscript under review.
Annis, J., & Palmeri, T.J. (2018). Bayesian statistical approaches to evaluating cognitive models. Wiley Interdisciplinary Reviews in Cognitive Science.
Artoni, F., Delorme, A., Makeig, S. (2018). Applying dimension reduction to EEG data by principal component analysis reduces the quality of its subsequent independent component decomposition . Neuroimage. 2018 Jul 15;175:176-187. doi: 10.1016/j.neuroimage.2018.03.016. Epub 2018 Mar 9.
Bedrosian TA, Quayle C, Novaresi N, Gage FH. (2018). Early life experience drives structural variation of neural genomes in mice . Science, 2018 Mar 23; doi:10.1126/science.aah3378
Behrmann, M. and Geskin, J. (2018). Over time, the right results will emerge. Response to commentaries . Cognitive Neuropsychology, 35, 1-2, 101-111.
Boehm, U., Annis, J., Frank, M.J., Hawkins, G.E., Heathcote, A., Kellen, D., Krypotos, A.-M., Lerche, V., Logan, G.D., Palmeri, T.J., Servant, M., Singmann, H., van Ravenzwaaij, D., Starns, J.J., Wiecki, T.V., Voss, A., Matzke, D., Wagenmakers, E.-J. (under revision). Estimating between-trial variability parameters of the drift diffusion model: Expert advice and recommendations. Manuscript under revision.

Bromer, C., Bartol, T.M., Bowden, J.B., Hubbard, D.D., Hanka, D.C., Gonzalez, P.V., Kuwajima, M., Mendenhall, J.M., Parker, P.H., Abraham, W.C., Sejnowski, T.J., and Harris, K.M. (2018). [Long-term potentiation expands information content of hippocampal dentate gyrus synapses](#). (2018) PNAS March 6, 2018. 115 (10) E2410-E2418; published ahead of print February 20, 2018. <https://doi.org/10.1073/pnas.1716189115>

Chua, K.-W., Chua, Bub, D.N., Masson, M.E.J. & Gauthier, I. (2018). [Grasp representations depend on knowledge and attention](#). Journal of Experimental Psychology: Learning, Memory, and Cognition, 44(2), 268-279. doi: 10.1037/xlm0000453. Epub 2017 Sep 21. DOI: 10.1037/xlm0000453

Cheng, X.J., McCarthy, C., Wang, T.S.L., Palmeri, T.J., & Little, D.R. (2018). [Composite faces are not \(necessarily\) processed coactively: A test using Systems Factorial Technology and logical-rule models](#). Journal of Experimental Psychology: Learning, Memory, and Cognition. 2018 Jun;44(6):833-862. doi: 10.1037/xlm0000479. Epub 2018 Apr 23.

Chukoskie, L., Westerfield, M., & Townsend, J. (2018). [A novel approach to training attention and gaze in ASD: A feasibility and efficacy pilot study](#). 2017 Wiley Periodicals, Inc.; Develop Neurobiol 78: 546–554, 2018. <https://doi.org/10.1002/dneu.22563>

Collins, E., Robinson, A., and Behrmann, M. (2018). [Distinct neural processes for the perception of familiar and unfamiliar faces along the visual hierarchy revealed by frequency tagging](#). Neuroimage, 181:120-131. doi: 10.1016/j.neuroimage.2018.06.080. PMID: 29966716.

Artori F, Delorme A, S Makeig (2018). [Applying dimension reduction to EEG data by principal component analysis reduces the quality of its subsequent independent component decomposition](#). NeuroImage 175:176–187. <https://doi.org/10.1016/j.neuroimage.2018.03.016>.

Dutilh, G., Annis, J., Brown, S.D., Cassey, P., Evans, N.J., Grasman, R.P.P.P., Hawkins, G.E., Heathcote, A., Holmes, W.R., Kryptos, A.-M., Kupitz, C.-N., Leite, F.P. Lerche, V., Lin, Y.S., Logan, G.D., Palmeri, T.J., Starns, J.J., Trueblood, J.S., van Maanen, L., van Ravenzwaaij, D., Vandekerckhove, J., Visser, I., Voss, A., White, C.N., Wiecki, T.V., Rieskamp, J., & Donkin, C. (2018). [The quality of response time data inference: A blinded, collaborative approach to the validity of cognitive models](#). Psychon Bull Rev. 2018 Feb 15. doi: 10.3758/s13423-017-1417-2. [Epub ahead of print]

Freud, E., Robinson, A. and Behrmann, M. (2018). [More than action: The dorsal pathway contributes to the perception of 3D structure](https://doi.org/10.1162/jocn_a_01262). Journal of Cognitive Neuroscience, in press. Posted Online March 21, 2018. https://doi.org/10.1162/jocn_a_01262

Gauthier, I., Chua, K.-W., Richler, J.J. (2018). [How holistic processing of faces relates to cognitive control and intelligence](https://doi.org/10.3758/s13414-018-1518-7). Attention, Perception, & Psychophysics. (2018) 80:1449-1460. <https://doi.org/10.3758/s13414-018-1518-7>.

Geskin, J. and Behrmann, M. (2018). [Congenital prosopagnosia without object agnosia? A literature review \(with commentaries\)](#). Cognitive Neuropsychology, 35, 1-2, 4-54.

Hawley, K., Huang, J.S., Goodwin, M., Diaz, D. de Sa, V.R., Birnie, K.A., Chambers, C.T. Craig, K.D. (2018). [Youth and Parent Appraisals of Participation in a Study of Spontaneous and Induced Pediatric Clinical Pain](#), Ethics & Behavior. Accepted author version posted online: 11 Apr 2018, Published online: 30 Apr 2018.

Kampasi, K., English, D.F., Seymore, S., Stark, E., McKenzie, S., Vöröslakos, M., Buzsáki, G., Wise, K.D., & Yoon, E. (2018). [Dual color optogenetic control of neural populations using low-noise, multishank optoelectrodes](#). Microsystems & Nanoengineering (2018) 4:10 Microsystems & Nanoengineering DOI 10.1038/s41378-018-0009-2.

Kaya C., Cheng MH., Block ER., Bartol TM., Sejnowski TJ., Sorkin A., Faeder JR., Bahar I. (2018). [Heterogeneities in Axonal Structure and Transporter Distribution Lower Dopamine Reuptake Efficiency](#). eNeuro. 2018 Feb 5;5(1). pii: ENEURO.0298-17.2017. doi: 10.1523/ENEURO.0298-17.2017. eCollection 2018 Jan-Feb.

Krishnan, A., Kumar, R., Etienne, A., Robinson, A., Kelly, S., K., Behrmann, M., Tarr, M., and Grover, P. (2018). Challenges and Opportunities in Instrumentation and Use of High-Density EEG for Underserved Regions. Interdisciplinary Solutions 2018 (InterSol2018).

<p>Liu, T.T., Nestor, A., Vida, M.D., Pyles, J.A., Patterson, C., Yang, Y., Yang, F.N., Freud, E., Behrmann, M. (2018). Successful Reorganization of Category-Selective Visual Cortex following Occipito-temporal Lobectomy in Childhood. Cell Reports, VOLUME 24, ISSUE 5, P1113-1122.E6, JULY 31, 2018. DOI:https://doi.org/10.1016/j.celrep.2018.06.099.</p>
<p>Mao, H.H., Shin, T., and Cottrell, G.W. (2018). DeepJ: Style-Specific Music Generation. In the 12th IEEE International Conference on Semantic Computing. DOI 10.1109/ICSC.2018.00077.</p>
<p>Moldakarimov, S., Bazhenov, M., Feldman, D. E. & Sejnowski, T. J. Structured networks support sparse traveling waves in rodent somatosensory cortex. PNAS April 30, 2018. 201710202; published ahead of print April 30, 2018. https://doi.org/10.1073/pnas.1710202115.</p>
<p>Muller, L., Chavane, F., Reynolds, J., Sejnowski, T.J. (2018). Cortical travelling waves: mechanisms and computational principles. Nat Rev Neurosci. 2018 May;19(5):255-268. doi: 10.1038/nrn.2018.20. Epub 2018 Mar 22.</p>
<p>Nah, J.C., Neppi-Modona, M., Strother, L., Behrmann, M. and Shomstein, S. (2018). Object Width Modulates Object-Based Attentional Selection. Attention, Perception and Psychophysics, 80(6):1375-1389. doi: 10.3758/s13414-018-1530-y. PMID: 29691762.</p>
<p>Qin, Y., Feng, M., Lu, H., Cottrell, G. (2018) Hierarchical Cellular Automata for Visual Saliency. International Journal of Computer Vision, July 2018, Volume 126, Issue 7, pp 751–770.</p>
<p>Ridgeway, K., & Mozer, M. C. (2018). Learning deep disentangled representations with the F-statistic loss. arXiv:1802.05312 [cs.LG] (Submitted on 14 Feb 2018 (v1), last revised 20 May 2018 (this version, v2)).</p>
<p>Ross, D.A., Tamber-Rosenau, B.J., Palmeri, T.J., Zhang, J., Xu, Y., & Gauthier, I. (2018). High-resolution Functional Magnetic Resonance Imaging Reveals Configural Processing of Cars in Right Anterior Fusiform Face Area of Car Experts. J Cogn Neurosci. 2018 Jul;30(7):973-984. Doi: 10.1162/jhocrn_a_01256. Epub 2018 Mar 21.</p>
<p>Ross, D.A., Tamber-Rosenau, B.J., Palmeri, T.J., Zhang, J.D., Xu, Y. & Gauthier, I. (2018).</p>

[High resolution fMRI reveals configural processing of cars in FFA of car experts](#). J Cogn Neurosci. 2018 Jul;30(7):973-984. doi: 10.1162/jocn_a_01256. Epub 2018 Mar 21.

Scott, T. R., Ridgeway, K., & Mozer, M. C. (2018). [Adapted deep embeddings: A synthesis of methods for k-shot inductive transfer learning](#). arXiv:1805.08402 [cs.LG]

Servant, M., Tillman, G., Logan, G.D., Schall, J.D., & Palmeri, T.J. (under review). Neurally-constrained modeling of speed-accuracy tradeoff during visual search: Gated accumulation of modulated evidence. Manuscript under review.

Sjulson, L., Peyrache, A., Cumpelik, A., Cassataro, D., Buzsáki, G. (2018). [Cocaine Place Conditioning Strengthens Location-Specific Hippocampal Coupling to the Nucleus Accumbens](#). Neuron, Volume 98, Issue 5, p926–934.e5, 6 June 2018. DOI: <https://doi.org/10.1016/j.neuron.2018.04.015>

Sunday, M.A., Dodd, M.D., Tomarken, A.J., Gauthier, I. (in press). How faces (and cars) may become special. Vision Research.

Sunday, M.A., Lee, W.-Y., Gauthier, I. (2018). [Age-related differential item functioning in tests of face and car recognition ability](#). Journal of Vision January 2018, Vol.18, 2. doi:10.1167/18.1.2.

Tang, S., Jin, H., Fang, C. Wang, Z., & de Sa, V.R. (2018). Speeding up Context-based Sentence Representation Learning with [Non-autoregressive Convolutional Decoding](#). In Proceedings of the 3rd Workshop on Representation Learning for NLP (RepL4NLP).

Tingley, D., & Buzsáki, G. (2018). [Transformation of a Spatial Map across the Hippocampal-Lateral Septal Circuit](#). Neuron 2018. Volume 98, Issue 6, 27 June. DOI: <https://doi.org/10.1016/j.neuron.2018.04.028>.

Toda, T., Parylak, S.L., Linker, S.B., Gage, F.H. (2018). [The role of adult hippocampal neurogenesis in brain health and disease](#). Mol Psychiatry. 2018 Apr 20. doi: 10.1038/s41380-018-0036-2. [Epub ahead of print]

<p>Tybrandt, K., Khodagholy, D., Dielacher, B., Stauffer, F., Renz, A.F., Buzsáki, G., Vörös, J. (2018). High-Density Stretchable Electrode Grids for Chronic Neural Recording. <i>Advanced Materials</i>, 30, 1706520.</p>
<p>Umakantha, A., Purcell, B.A., & Palmeri, T.J. (in preparation). Bridging circuits and behavior: Relating a spiking neural network model and the diffusion model of perceptual decision making (working title). Manuscript in preparation (PsyRev).</p>
<p>Vatterott, D. B., Mozer, M. C., & Vecera, S. P. (2018). Rejecting salient distractors: Generalization from experience. <i>Attention, Perception, and Psychophysics</i>, 80, 485-499. DOI:10.3758/s13414-017-1465-8.</p>
<p>Vöröslakos, M., Takeuchi, Y., Brinyiczki, K., Zombori, T., Oliva, A., Fernández-Ruiz, A., Kozák, G., Kincses, Z.T., Iványi, B., Buzsáki, G., & Berényi, A. (2018). Direct effects of transcranial electric stimulation on brain circuits in rats and humans. <i>Nature Communications</i> 9 (483). doi:10.1038/s41467-018-02928-3</p>
<p>Vu MT., Adalı T., Ba D., Buzsáki G., Carlson D., Heller K., Liston C., Rudin C., Sohal VS., Widge AS., Mayberg HS., Sapiro G., Dzirasa K. (2018). A Shared Vision for Machine Learning in Neuroscience. <i>J Neurosci</i>. 2018 Feb 14;38(7):1601-1607. doi: 10.1523/JNEUROSCI.0508-17.2018. Epub 2018 Jan 26.</p>
<p>Wang, MN., He, Y., Sejnowski, T.J., & Yu, X. (2018). Brain-state dependent astrocytic Ca²⁺ signals are coupled to both positive and negative BOLD-fMRI signals. <i>Proc Natl Acad Sci U S A</i>. 2018 Feb 13;115(7):E1647-E1656. doi: 10.1073/pnas.1711692115. Epub 2018 Jan 30.</p>
<p>Wang, X., Pinto-Duarte, A., Behrens, M.M., Zhou, X., Sejnowski, T.J. (2018). Ketamine independently modulated power and phase-coupling of theta oscillations in Sp4 hypomorphic mice. <i>PLoS One</i>. 2018 Mar 7;13(3):e0193446. doi: 10.1371/journal.pone.0193446. eCollection 2018</p>
<p>Winchell, A., Mozer, M. C., Lan, A., Grimaldi, P., & Pashler, H. (2018). Can textbook annotations serve as an early predictor of student learning? Submitted for publication.</p>

2018 Conferences & Presentations

Jin, Y., Mousavi, M., & de Sa, V.R. (2018). [Adaptive CSP with subspace alignment for subject-to-subject transfer in motor imagery brain-computer interfaces](#). Proceedings of the 2018 6th IEEE International Winter Conference on Brain-Computer Interface.

Khajah, M. M., Mozer, M. C., Kelly, S., & Milne, B. (2018). [Boosting engagement with educational software using near wins](#). In C. Rosé et al. (Eds.), Nineteenth International Conference on Artificial Intelligence in Education (pp. 171-175). Springer.

Makeig, S. (2018). Mobile Brain/Body Imaging: A Decade of Emergence. Keynote talk abstract, 3rd International Mobile Brain/Body Imaging Conference, Berlin, Germany, July 2018.

Montero, S., Arora, A., Kelly, S., Milne, B., & Mozer, M. C. (2018). Does deep knowledge tracing model interactions among skills? In K. E. Boyer & M. Yudelson (Eds.), Proceedings of the 11th International Conference on Educational Data Mining (pp. 462-466). EDM Society Press.

Panqu Wang, Pengfei Chen, Ye Yuan, Ding Liu, Zehua Huang, Xiaodi Hou, Garrison Cottrell (2018) [Understanding convolution for semantic segmentation](#). In IEEE Winter Conference on Applications of Computer Vision (WACV-18).

Qin, Y., Kamnitsas, K., Ancha, S., Nanavati, J., Cottrell, G.W., Criminisi, A. and Aditya N. (to appear). Autofocus Layer for Semantic Segmentation. In Proceedings of the International Conference On Medical Image Computing & Computer Assisted Intervention (MICCAI '18).

Susam, B., Akcakaya, M., Nezamfar, H., Diaz, D., de Sa, V.R., Craig, K., Xiaojing, X., Huang, J., Goodwin, M. (2018) Automated Pain Assessment using Electrodermal Activity Data and Machine Learning. In Proceedings of the 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'18).

Wang, P., Chen, P., Yuan, Y., Liu, D., Huang, Z., Hou, X., Cottrell, G. (2018). [Understanding convolution for semantic segmentation](#). In IEEE Winter Conference on Applications of Computer Vision (WACV-18).

Winchell, A., Mozer, M. C., Lan, A., Grimaldi, P., & Pashler, H. (2018). Can textbook annotations serve as an early predictor of student learning? In K. E. Boyer & M. Yudelson (Eds.), Proceedings of the 11th International Conference on Educational Data Mining (pp. 431-437). EDM Society Press.

Xu, X., Craig, K., Diaz, D., Goodwin, M., Akcakaya, M., Susam, B., Huang, J. & de Sa, V.R. (2018) Automated Pain Detection in Facial Videos of Children using Human-Assisted Transfer Learning. In Proceedings of AIH 2018 (Joint Workshop on Artificial Intelligence in Health).

Xu, X., Susam, B. Nezamfar, H., Craig, K., Diaz, D., Huang, J., Goodwin, M., Akcakaya, M. & de Sa, V.R. (2018) Towards Automated Pain Detection in Children using Facial and Electrodermal Activity. In Proceedings of AIH 2018 (Joint Workshop on Artificial Intelligence in Health)

2018 Books/Chapters

Palmeri, T.J., & Gauthier, I. (in press). Object recognition. To appear in D.J. Calkins, V.A. Casagrande, J.D. Schall, & G.F. Woodman (Eds.), *The Visual System*, Sinauer Associates.

2017 Publications

TDLC Publications 2017
Acsady, L., & Harris, K. D. (2017). Synaptic scaling in sleep . SCIENCE, Science 03 Feb 2017: 355 (6324), 457. doi:10.1126/science.aam7917.
Annis, J., Miller, B.J., & Palmeri, T.J. (2017). Bayesian inference with Stan: A tutorial on adding custom distributions . Behav Res Methods. 2017 Jun;49(3):863-886. doi: 10.3758/s13428-016-0746-9. PMID: PMC5149118
Annis, J., & Palmeri, T.J. (2017). Bayesian statistical approaches to evaluating cognitive models . (WIRES) 9(2) e1458. Published Online: Nov. 28, 2017. DOI: 10.1002/wcs.1458.
Chukoskie, L., Guo, S., Ho, E., Zheng, Y., Chen, Q., Meng, V., Cao, J., Devgan, N., Wu, S., and Cosman, P.C. (In Press, 2017). Quantifying Gaze Behavior during Real World Interactions using Automated Object, Face, and Fixation Detection.
Collins, E. G., Dundas, E., Gabay, Y. and Behrmann, M. (2017). Hemispheric organization in neuro-developmental disorders . Visual Cognition (Special Issue on “Person Perception”). Epub ahead of print: doi: 10.1080/13506285.2017.1370430.
English, D.F., McKenzie, S., Evans, T., Kim, K., Yoon, K., E., Buzsáki, G. (2017). Pyramidal Cell-Interneuron Circuit Architecture and Dynamics in Hippocampal Networks . Neuron 96, 505–520, October 11, 2017. DOI: https://doi.org/10.1016/j.neuron.2017.09.033
Fernández-Ruiz A. , Oliva A. , Nagy GA. , Maurer AP. , Berényi A. , Buzsáki G. Neuron. (2017). Entorhinal-CA3 Dual-Input Control of Spike Timing in the Hippocampus by Theta-Gamma Coupling ; 93(5):1213-1226. DOI: https://doi.org/10.1016/j.neuron.2017.02.017 .

Freud, E. & Behrmann, M. (2017). The life-span trajectory of visual perception of 3D objects . Scientific Reports, ep 8;7(1):11034 (2017). doi:10.1038/s41598-017-11406-7
Gabay, Y., Dundas, E., Plaut, D., & Behrmann, M. (2017). Atypical perceptual processing of faces in developmental dyslexia . Brain and Language, Volume 173, October 2017, Pages 41-51. https://doi.org/10.1016/j.bandl.2017.06.004
Gauthier, I. (2017). Domain-specific and domain-general individual differences in visual object recognition . Current Directions in Psychological Science, 27(2), 97-102.
Gauthier, I. (2017). My lab's research comes under anti-science attack . Psychological Science Agenda, 31:7.
Gauthier, I. (2017). The Quest for the FFA led to the Expertise Account of its Specialization . https://arxiv.org/abs/1702.07038 A commentary on Kanwisher, N. (2017). The Quest for the FFA and Where It Led. Journal of Neuroscience, 37(5), 1056-1061. doi: 10.1523/JNEUROSCI.1706-16.2016.
Girardeau, G., Inema, I., & György Buzsáki, G. (2017). Reactivations of emotional memory in the hippocampus-amygdala system during sleep . Nature Neuroscience, 2017. doi:10.1038/nn.4637
Gosselin G, Skola D, Coufal NG, Holtman IR, Schlachetzki JCM, Sajti E, Jaeger BN, O'Connor C, Fitzpatrick C, Pasillas MP, Pena M, Adair A, Gonda DG, Levy ML, Ransohoff RM, Gage FH, Glass CK. (2017). An environment-dependent transcriptional network specifies human microglia identity Science, 2017 May 25; doi: 10.1126/science.aal3222
Khodagholy, D., Gelinás, J.N., Buzsáki, G. (2017). Learning-enhanced coupling between ripple oscillations in association cortices and hippocampus . Science 20 Oct 2017: Vol. 358, Issue 6361, pp. 369-372.

Kneusel, R. T., & Mozer, M. C. (2017). [Improving human-machine cooperative visual search with soft highlighting](#). ACM Transactions on Applied Perception. Accepted for Publication. Also arXiv:1612.08117.

Koyama, M.S., Ortiz-Mantilla, S., Roesler, C.P., Milham, M.P., Benasich, A.A. (2017). [A modulatory effect of brief passive exposure to nonlinguistic sounds on intrinsic functional connectivity: Relevance to cognitive performance](#). Cerebral Cortex. DOI: 10.1093/cercor/bhx266

Lafon, B., Henin, S., Huang, Y., Friedman, D., Melloni, L., Thesen, T., Doyle, W., Buzsáki, G., Devinsky, O., Parra, L.C., Liu, A. (2017). [Low frequency transcranial electrical stimulation does not entrain sleep rhythms measured by human intracranial recordings](#). Nature Communications 8 (1), 1199, 2017. doi:10.1038/s41467-017-01045-x

Levenstein D. , Watson BO., Rinzel J. , Buzsáki G. (2017). [Sleep regulation of the distribution of cortical firing rates](#). Curr Opin Neurobiol. 201744; 34-42. <https://doi.org/10.1016/j.conb.2017.02.013>.

Lisman, J., Buzsáki, G., Eichenbaum, H., Nadel, L., Ranganath, C., Redish, A.D. (2017). [Viewpoints: how the hippocampus contributes to memory, navigation and cognition](#). Nature Neuroscience 20 (11), 1434-1447, 2017.

Liu, T. T. and Behrmann, M. (2017). [Functional outcomes in patients with lesions in visual cortex: Implications for developmental plasticity of high-level vision](#). Neuropsychologia. 2017 Oct;105:197-214. doi: 10.1016/j.neuropsychologia.2017.06.030. Epub 2017 Jun 29.

McGugin, R.W., Ryan, K.F., Tamber-Rosenau, B.J., Gauthier, I. (2017). [The role of experience in the face-selective response in right FFA](#). Cereb Cortex. 2018 Jun 1;28(6):2071-2084. doi: 10.1093/cercor/bhx113.

Medrano, P., Nyhus, E., Smolen, A., Curran, T., Ross, R. (2017). [Individual differences in EEG correlates of recognition memory due to DAT polymorphisms](#). Brain and Behavior. 2017;7:e00870. <https://doi.org/10.1002/brb3.870>

Mousavi, M., Koerner, A.S., Zhang, Q., Noh, E., & de Sa, V.R. (2017) Improving motor imagery BCI with user response to feedback . BCI journal. Published online: 11 Apr 2017. Volume 4, 2017 - Issue 1-2. https://doi.org/10.1080/2326263X.2017.1303253 .
Mozer, M. C., Kazakov, D., & Lindsey, R. V. (2017). Discrete-event continuous-time recurrent networks . Submitted for publication.
Mozer, M. C., Lindsey, R. V., & Kazakov, D. (2017). Neural Hawkes process memories . Paper in preparation. [Slides from NIPS 2016 Symposium on Recurrent Neural Networks]
Mozer, M. C., Sukumar, S., Elliott-Williams, C., Hakimi, S., & Ward, A. F. (2017). Overcoming temptation: Incentive design for intertemporal choice . Draft manuscript.
Musacchia, G., Ortiz-Mantilla, S., Choudhury, N., Realpe-Bonilla, T., Roesler, C., & Benasich A.A. (2017). Active auditory exposure in infancy promotes brain plasticity in Theta and Gamma oscillations . Developmental Cognitive Neuroscience, 26, 9-19. DOI: 10.1016/j.dcn.2017.04.004
Nevins, M., Maxcey, A., Gauthier, I. (2017). A face scavenger hunt: why we see faces in objects without faces . Frontiers for Young Minds. 5:67. doi: 10.3389/frym.2017.00067
Palmeri, T.J., Love, B.C., & Turner, B.M. (2017). Model-based cognitive neuroscience . Journal of Mathematical Psychology, 76, 59-64. DOI: 10.1098/rstb.2016.0193.
Peters, S.E. and Benasich, A.A. (submitted, 2017). Sleep spindle topography in 6.5 month-old human infants is sexually dimorphic, correlated with language measures, and functionally left-lateralized.
Peyrache, A., Schieferstein, N., Buzsáki, G. (2017). Transformation of the head-direction signal into a spatial code . Nature Communications 8 (1), 1752, 2017. doi:10.1038/s41467-017-01908-3

Purcell, B.A., & Palmeri, T.J. (2017). Relating accumulator model parameters and neural dynamics . <i>Journal of Mathematical Psychology</i> , 76, 156-171. DOI: 10.1016/j.jmp.2016.07.001. PMID: PMC5381950
Richler, J.J., Wilmer, J.B., Gauthier, I. (2017). General object recognition is specific: evidence from novel and familiar objects . <i>Cognition</i> , 166: 42-55. https://doi.org/10.1016/j.cognition.2017.05.019
Ridgeway, K., Mozer, M. C., & Bowles, A. (2017). Forgetting of foreign language skills: A corpus-based analysis of online tutoring software . <i>Cognitive Science: A Multidisciplinary Journal</i> , 41(4), 924-949. DOI: 10.1111/cogs.12385
Riva, V., Cantiani, C., Benasich, A.A., Molteni, M., Piazza, C., Giorda, R., Dionne, G., & Marino, C. (2017). From CNTNAP2 to early expressive language in infancy: the mediation role of auditory processing . <i>Cerebral Cortex</i> , May 11, 2017, 1-9. DOI: 10.1093/cercor/bhx115
Roads, B. D., & Mozer, M. C. (2017). Improving human-machine cooperative classification via cognitive theories of similarity . <i>Cognitive Science: A Multidisciplinary Journal</i> , 41, 1394-1411. DOI: 10.1111/cogs.12400.
Robinson, A.K., Venkatesh, P., Boring, M.J., Tarr, M.J., Grover, P., Behrmann, M. (2017). Very high density EEG elucidates spatiotemporal aspects of early visual processing . <i>Scientific Reports</i> , 2017; 7 (1) DOI: 10.1038/s41598-017-16377-3.
Rosenthal, G., Tanzer, M., Simony, E., Hasson, U., Behrmann, M., & Avidan, G. (2017). Altered topology of neural circuits in congenital prosopagnosia . <i>eLife</i> . 2017; 6: e25069. Published online 2017 Aug 21. doi: 10.7554/eLife.25069
Roux L., Hu B., Eichler R., Stark E., Buzsáki G. (2017). Sharp wave ripples during learning stabilize the hippocampal spatial map . <i>Nat Neurosci</i> . 2017 Jun;20(6):845-853. doi: 10.1038/nn.4543. Epub 2017 Apr 10.i.

Saleem, A. B., Lien, A. D., Krumin, M., Haider, B., Rosón, M. R., Ayaz, A. Reinhold, K., Busse, L., Carandini, M., Harris, K. D. (2017). [Subcortical Source and Modulation of the Narrowband Gamma Oscillation in Mouse Visual Cortex](#). *Neuron*, 93 (2), 315-322. doi:10.1016/j.neuron.2016.12.028.

Santos R, Vadodaria KC, Jaeger BN, Mei A, Lefcochilos-Fogelquist S, Mendes APD, Erikson G, Shokhirev M, Randolph-Moore L, Fredlender C, Dave S, Oefner R, Fitzpatrick C, Pena M, Barron JJ, Ku M, Denli AM, Kerman BE, Charnay P, Kelsoe JR, Marchetto MC and Gage FH. (2017). [Differentiation of Inflammation-responsive Astrocytes from Glial Progenitors Generated from Human Induced Pluripotent Stem Cells](#). *Stem Cell Reports*, 2017 Jun 17; doi:10.1016/j.stemcr.2017.05.011

Schall, J.D. Palmeri, T.J., & Logan, G.D. (2017). [Models of inhibitory control](#). *Philosophical Transactions of the Royal Society B*, 372: 20160193. PMID: PMC5332852

Senzai Y., Buzsáki G. (2017). [Physiological Properties and Behavioral Correlates of Hippocampal Granule Cells and Mossy Cells](#). *Neuron*; 93(3):691-704 [News&Views – Nakazawa K. Dentate Mossy Cell and Pattern Separation.] DOI: <https://doi.org/10.1016/j.neuron.2016.12.011>.

Steinmetz, N., Buettnering, C., Lecoq, J., Lee, C. R., Peters, A. J., Jacobs, E. A. K., Coen, P., Carandini, MN., Harris, K. D. (2017). [Aberrant Cortical Activity In Multiple GCaMP6-Expressing Transgenic Mouse Lines](#). doi:10.1101/138511.

Stern, S., Santos, R., Marchetto, M.C., Mendes, A.P.D., Rouleau, G.A., Biesmans, S., Wang, Q-W., Yao, J., Charnay, P., Bang, A.G., Alda, M., and Gage, F.H. (2017) [Neurons derived from patients with bipolar disorder divide into intrinsically different sub-populations of neurons, predicting the patients' responsiveness to lithium](#). *Molecular Psychiatry*, (28 February 2017) | doi:10.1038/mp.2016.260.

Sunday, M.A., Donnelly, E., Gauthier, I. (2017). [Individual differences in perceptual abilities in medical imaging: The Vanderbilt Chest Radiograph Test](#). *Cognitive Research: Principles and Implications*, 2:36. DOI 10.1186/s41235-017-0073-4

Sunday, M.A., Richler, J.J. & Gauthier, I. (2017). [Limited evidence of individual differences in holistic processing in different versions of the part-whole paradigm](#). *Attention, Perception &*

Psychophysics, in press. *Atten Percept Psychophys*. 2017 Jul;79(5):1453-1465. doi: 10.3758/s13414-017-1311-z.

Tang, S., Jin, H., Fang, C., Wang, Z., & de Sa, V.R. (2017). [Trimming and improving skip-thought vectors](#).

Toda T, Hsu JY, Linker SB, Hu L, Schafer ST, Mertens J, Jacinto FV, Hetzer MW, Gage FH. (2017). [Nup153 interacts with Sox2 to enable bimodal gene regulation and maintenance of neural progenitor cells](#). *Cell Stem Cell*, 2017 Nov 2; doi:10.1016/j.stem.2017.08.012

Tran, R. & Pashler, H. (2017). [Learning to exploit a hidden predictor in skill acquisition: Tight linkage to conscious awareness](#). *PLoS One*. 2017; 12(6): e0179386. Published online 2017 Jun 20. doi: 10.1371/journal.pone.0179386

Tran, R., Vul, E., & Pashler, H. (2017). [How effective is incidental learning of the shape of probability distributions?](#) *R Soc Open Sci*. 2017 Aug 2;4(8):170270. doi: 10.1098/rsos.170270. eCollection 2017 Aug.

Turner, B.M., Forstmann, B.U., Love, B., Palmeri, T.J., & Van Maanen, L. (2017). [Approaches to analysis in model-based cognitive neuroscience](#). *Journal of Mathematical Psychology*, 76, 65-79. DOI: 10.1016/j.jmp.2016.07.001.

Vida, M. and Behrmann, M. (2017). [Subcortical facilitation of rapid responses to threat](#), *Scientific Reports*, 7:13087, DOI:10.1038/s41598-017-13203-8.

Vogelsang, M.D., Palmeri, T.J., Busey, T.A. (2017). [Holistic processing of fingerprints by expert forensic examiners](#). *Cognitive Research: Principles and Implications*, 2: 15. DOI: 10.1186/s41235-017-0051-x.

Wang, P., and Cottrell, G.W. (2017). [Central and peripheral vision for scene recognition: A neurocomputational modeling exploration](#). *Journal of Vision* 17(4):9, 1–22, doi:10.1167/17.4.9.

Watson, B.O., Ding, M., Buzsáki, G. (2017). [Temporal coupling of field potentials and action potentials in the neocortex](#). European Journal of Neuroscience, 2017 Dec 18. doi: 10.1111/ejn.13807.

Zhang, C., Idelbayev, Y., Roberts, N., Tao, Y., Nannapaneni, Y., Duggan, B.M., Min, J., Lin, E.C., Gerwick, E.C., Cottrell, G.W., & Gerwick, W.H. (2017). [Small Molecule Accurate Recognition Technology \(SMART\) to Enhance Natural Products Research](#). Scientific Reports. Scientific Reports 7, Article 14243. DOI: 10.1038/s41598-017-13923-x

2017 Conferences & Presentations

de Sa, V.R. (2017). [Improving information transfer rate in active BCIs](#). In Proceedings of the 7th Graz BCI Conference 2017. DOI: 10.3217/978-3-85125-533-1-23.

Ma, Q., Shen, L., Chen, E., Tian, S., Wang, J., and Cottrell, G.W. (2017). [WALKING WALKing walking: Action recognition from action echoes](#). In the Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence (IJCAI-17), pp. 2627-2633.

Maddula, R.K., Stivers, J., Mousavi, M., Ravindran, S., & de Sa, V.R. (2017). [Deep recurrent convolutional neural networks for classifying P300 BCI signals](#). In Proceedings of the 7th Graz BCI Conference 2017. DOI: 10.3217/978-3-85125-533-1-54.

Malmir, M., and Cottrell, G.W. (2017) [Belief tree search for active object recognition](#). In the 2017 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2017).

Maryanovsky, D., Mousavi, M., Moreno, N.G., & de Sa, V.R. (2017). [CSP-NN: A convolutional neural network implementation of common spatial patterns](#). In Proceedings of the 7th Graz BCI Conference 2017. DOI: 10.3217/978-3-85125-533-1-56.

Mozer, M. C., & Kazakov, D. (2017). State denoising recurrent neural networks. NIPS 2017 Workshop on Cognitively Informed Artificial Intelligence.

Mozer, M. C., Lindsey, R. V., & Kazakov, D. (2017). Neural Hawkes process memories. Paper in preparation. [Slides from NIPS 2016 Symposium on Recurrent Neural Networks].

Mousavi, M., & de Sa, V.R. (2017). [Towards elaborated feedback for training motor imagery brain computer interfaces](#). In Proceedings of the Graz BCI Conference 2017. DOI: 10.3217/978-3-85125-533-1-61.

Prasad, V., Cipollini, B., and Cottrell, G.W. (2017). [Categorical vs Coordinate Relationships do not reduce to spatial frequency differences](#). In Proceedings of the 39th Annual Conference of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Qin, Y., Song, D., Cheng, H., Cheng, W., Jiang, G., and Cottrell, G.W. (2017). [A dual-stage attention-based recurrent neural network for time series prediction](#). In the Proceedings of the Twenty-Sixth International Joint Conference on Artificial Intelligence (IJCAI-17), pp. 2457-2463.

Snell, J., Ridgeway, K., Liao, R., Roads, B. D., Mozer, M. C., & Zemel, R. S. (2017). [Learning to generate images with perceptual similarity metrics](#). IEEE International Conference on Image Processing. arXiv:1511.06409v3 [cs.LG].

Song, A., Linjie, L., Atalla, C., and Cottrell, G.W. (2017). [Learning to see people like people: Predicting the social perception of faces](#). In Proceedings of the 39th Annual Conference of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Stivers, J.M., & de Sa, V.R. (2017). [Spelling in parallel: Towards a rapid, spatially independent BCI](#). In Proceedings of the Graz BCI Conference 2017. DOI: 10.3217/978-3-85125-533-1-86.

Tang, S., Jin, H., Fang, C., Wang, Z., & de Sa, V.R. (2017). [Rethinking skip-thought: A neighborhood based approach](#). In Proceedings of the 2nd Workshop on Representation Learning for NLP (RepL4NLP).

Wang, Y., Lin, Z., Shen, X., Cohen, S., and Cottrell, G.W. (2017). [Skeleton Key: Image captioning by skeleton-attribute decomposition](#). In Computer Vision and Pattern Recognition (CVPR) 2017 pp. 1-8.

Wang, Y., Lin, Z., Shen, X., Mech, R., Miller, G., and Cottrell, G.W. (2017) [Recognizing and Curating Photo Albums via Event-Specific Image Importance](#). In the Proceedings of the British Machine Vision Conference (BMVC-2017).

2017 Books/Chapters

Mozer, M. C., & Lindsey, R. V. (2017). [Predicting and improving memory retention: Psychological theory matters in the big data era](#). In M. Jones (Ed.), Big Data in Cognitive Science (pp. 34-64). New York: Routledge.

2016 Publications

TDLc Publications 2016

Behrmann, M., Lee, A. C. H., Geskin, J. Z., Graham, K. S., and Barense, M. D. (2016). [Temporal lobe contribution to perceptual function: A tale of three patient groups](#). *Neuropsychologia*, 90, 33-45. PMID: 27150707. doi: 10.1016/j.neuropsychologia.2016.05.00.

Behrmann, M., Scherf, K. S. and Avidan, G. (2016). [Neural mechanisms of face perception, their emergence over development, and their breakdown](#). *Wiley Interdisciplinary Reviews: Cognitive Science*. 2016 May 19. doi: 10.1002/wcs.1388. [Epub ahead of print] Review. PMID: 27196333.

Benasich, A.A., Choudhury, N., Peters, S. & Ortiz-Mantilla, S. (2016). [Early Screening and Intervention of Infants at High Risk for Developmental Language Disorders: The Role of Nonlinguistic Rapid Auditory Processing](#). Special Issue: IDA Perspectives on Language and Literacy: Early Identification and Treatment of Dyslexia: A Brain-based Perspective.

Cantiani C, Choudhury NA, Yu YH, Shafer VL, Schwartz RG, Benasich AA. (2016). [From Sensory Perception to Lexical-Semantic Processing: An ERP Study in Non-Verbal Children with Autism](#). *Plos One*. 11: e0161637. DOI: [10.1371/journal.pone.0161637](https://doi.org/10.1371/journal.pone.0161637)

[Cantiani, C.](#), Riva, V., Piazza, C., Bettoni, R., Molteni, M., Choudhury, N., Marino, C., Benasich, A.A. (2016). [Auditory discrimination predicts linguistic outcome in Italian infants with and without familial risk for language learning impairment](#). *Developmental Cognitive Neuroscience*. 20: 23-34. PMID [27295127](https://pubmed.ncbi.nlm.nih.gov/27295127/) DOI: [10.1016/j.dcn.2016.03.002](https://doi.org/10.1016/j.dcn.2016.03.002)

Freud, E., Plaut, D. C. and Behrmann, M. (2016). "[What](#)" is happening in the dorsal visual pathway [Trends in Cognitive Sciences](#). 20(10):773-84, <http://dx.doi.org/10.1016/j.tics.2016.08.003>.

Haigh, S., Gupta, A., Barb, S., Glass, S. A., Minshew, N. J., Dinstein, I., Heeger, D., Eack, S. M. and Behrmann, M. (2016). [Differential sensory fMRI signatures in autism and schizophrenia: Analysis of](#)

[amplitude and trial-to-trial variability](#). Schizophrenia Research, 175(1-3): 12-9. doi: 10.1016/j.schres.2016.03.036. PMID: 27083780.

Haigh, S.M., Heeger, D. J., Heller, L., Gupta, A., Minshew, N. J. and Behrmann, M. (2016). [No Difference in Cross-Modal Attention or Sensory Discrimination Thresholds in Autism and Matched Controls](#). Vision Research.

Harris, H., Israeli, D., Minshew, N., Heeger, D., Behrmann, M. and Sagi, D. (2016). Commentary: Perceptual learning in autism: over-specificity and possible remedies. Front Integr Neurosci. 2016 Nov 9;10:36. PMID: 27881955.

Heeger, D., Behrmann, M. and Dinstein, I. (2016). [Vision as a beachhead](#). Biol Psychiatry. 2016 Sep 29. pii: S0006-3223(16)32855-4. doi: 10.1016/j.biopsych.2016.09.019. [Epub ahead of print] Review. PMID: 27884424.

Heim, S., Choudhury, N., & Benasich, A.A. (2016). [Electrocortical Dynamics in Children with a Language-Learning Impairment Before and After Audiovisual Training](#). Brain Topogr. 2016 May;29(3):459-76. doi: 10.1007/s10548-015-0466-y. Epub 2015 Dec 15.

Hernandez, M.E.; Snider, J.; Stevenson, C.; Cauwenberghs, G.; Poizner, H. (2016). [A Correlation-based Framework for Evaluating Postural Control Stochastic Dynamics](#). Neural Systems and Rehabilitation Engineering. IEEE Trans Neural Syst Rehabil Eng. 2016 May; 24(5): 551–561. Published online 2015 May 22. doi: 10.1109/TNSRE.2015.2436344.

Khajah, M., Roads, B. D., Lindsey, R. V., Liu, Y.-E., & Mozer, M. C. (2016). [Designing engaging games using Bayesian optimization](#). Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems, Pages 5571-5582.

Loo S, Lenartowicz A, S Makeig. (2016). [Use of EEG biomarkers in child psychiatry research: current state and future directions](#). Journal of Child Psychology and Psychiatry 57:1, 4-13 (2016).

Malmir, Mohsen, Sikka, Karan, Forster, Deborah, Fasel, Ian, Movellan, Javier R., and Cottrell, Garrison W. (2016) [Deep active object recognition by joint label and action prediction](#), Computer Vision and Image Understanding, Available online 20 October 2016, ISSN 1077-3142. <http://dx.doi.org/10.1016/j.cviu.2016.10.011>.

McGuire L.M., Telian G., Laboy-Juarez K.J., Miyashita T, Lee D.J., Smith K.A., Feldman DE. (2016). [Short Time-Scale Sensory Coding in S1 during Discrimination of Whisker Vibrotactile Sequences](#). PLoS Biol. 14(8): e1002549. doi: 10.1371/journal.pbio.1002549.

McGugin, R., Van Gulick, A., & Gauthier, I. (2016). [Cortical Thickness in Fusiform Face Area Predicts Face and Object Recognition Performance](#). J Cogn J Cogn Neurosci. 2016 Feb; 28(2): 282–294. Published online 2015 Oct 6. doi: 10.1162/jocn_a_00891.

Nestor A, Plaut DC, Behrmann M. (2016). [Feature-based face representations and image reconstruction from behavioral and neural data](#). PNAS January 12, 2016. 113 (2) 416-421; published ahead of print December 28, 2015. <https://doi.org/10.1073/pnas.1514551112>.

Ortiz-Mantilla S, Hämäläinen JA, Realpe-Bonilla T, Benasich AA. (2016). [Oscillatory Dynamics Underlying Perceptual Narrowing of Native Phoneme Mapping from 6 to 12 Months of Age](#). The Journal of Neuroscience : the Official Journal of the Society For Neuroscience. 36: 12095-12105. DOI: [10.1523/JNEUROSCI.1162-16.2016](https://doi.org/10.1523/JNEUROSCI.1162-16.2016).

Piazza C, [Cantiani C](#), Akalin-Acar Z, [Miyakoshi M](#), [Benasich AA](#), Reni G, Bianchi AM, [Makeig S](#). (2016). [ICA-derived cortical responses indexing rapid multi-feature auditory processing in six-month-old infants](#). Neuroimage. Volume 133, June 2016, Pages 75-87; PMID [26944858](https://pubmed.ncbi.nlm.nih.gov/26944858/) DOI: [10.1016/j.neuroimage.2016.02.060](https://doi.org/10.1016/j.neuroimage.2016.02.060)

Purcell, B.A., & Palmeri, T.J. (2016). [Relating accumulator model parameters and neural dynamics](#). J Math Psychol. 2017 Feb; 76(B): 156–171. Published online 2016 Aug 1. doi: 10.1016/j.jmp.2016.07.001.

Roads, B. D., & Mozer, M. C. (2016). [Improving human-machine cooperative classification via cognitive theories of similarity](#). Cognitive Science Journal, 41(5):1394-1411, July 2017. <https://doi.org/10.1111/cogs.12400>. First published: 22 July 2016.

Roads, B. D., Mozer, M. C., & Busey, T.A. (2016). Using highlighting to train attentional expertise . PLoS ONE 11(1): e0146266. doi:10.1371/journal.pone.0146266
Rohrer, D. & Pashler, H. (2016). Recent research on human learning challenges Conventional instructional strategies , Educational Researcher. Vol 39, Issue 5, 2010. First Published October 13, 2016 Review Article, https://doi.org/10.3102/0013189X10374770 .
Rokem, A. Takemura, H., Bock, A. Scherf, S., Bridge, H., Fine, I., Behrmann, M., Wandell, B., Van Essen, D., and Pestilli, F. (2016). The visual white matter matters: Innovation, data, methods and applications of diffusion MRI and fiber tractography . Journal of Vision, 17(2):4, 1-30. doi: 10.1167/17.2.4. PMID: 28196374.
Shan, H., Tong, M.H., and Cottrell, G.W. (2016) A single model explains both visual and auditory precortical coding . arXiv:1602.08486v2 [q-bio.NC].
Shen, J., & Palmeri, T.J. (2016). Modelling individual differences in visual categorization . Visual Cognition; Volume 24, 2016 - Issue 3. Nov. 2016. https://doi.org/10.1080/13506285.2016.1236053 .
Tanga, X., Kima, J., Zhoua, L., Wengertb, E., Zhanga, L., Wua, Z., Carromeuc, C., Muotric, A.R., Marchettod, M.C.N., Gage, F.H., & Chen, G. (2016). KCC2 rescues functional deficits in human neurons derived from patients with Rett syndrome . Published online before print January 5, 2016, doi: 10.1073/pnas.1524013113.
Uyar, F., Shomstein, S., Greenberg, A. and Behrmann, M. (2016). Retinotopic information interacts with categorization in human object selective cortex . Neuropsychologia, 92, 90-106.
Vida, M., Nestor, A., Plaut, D. and Behrmann, M. (2016). Visualizing the Spatio-temporal Dynamics of Neural Representations of Individual Face Identities , Proc. Nat. Academy of Sci (PNAS), 114, 2, 388-393. PMID: 28028220.

Wang, P., Gauthier, I., and Cottrell, G.W. (2016) [Are face and object recognition independent? A neurocomputational modeling exploration](#). *Journal of Cognitive Neuroscience* **28**:(4):558–574. doi:10.1162/jocn_a_00919.

Wang, Y., Lin, Z., Shen, X., Mech, R., Miller, G., and Cottrell, G.W. (2016). [Event-specific image importance](#). In *Computer Vision and Pattern Recognition (CVPR) 2016* pp. 1-8.

Wang, C.-C., Ross, D.A., & Gauthier, I., & Richler, J.J. (2016). [Validation of the Vanderbilt Holistic Face Processing Test](#). *Front Psychol.* 2016; 7: 1837. Published online 2016 Nov 23. doi: 10.3389/fpsyg.2016.01837

2016 Conferences & Presentations

Cippollini, B. and Cottrell, G.W. (2016) [Patchy connectivity and visual processing asymmetries: A neurodevelopmental hypothesis](#). In K. Twomey, A. Smith, G. Westermann, P. Monaghan (eds.), *Neurocomputational Models of Cognitive Development and Processing*, Proceedings of the 14th Neural Computation and Psychology Workshop. World Scientific.

Deák, G.O. (2016, January). The temporal dynamics of infant communication. Temporal Dynamics of Learning Center All-Hands Meeting, San Diego, CA, USA.

Deák, G.O. (2016, March). How do infants learn, and learn from, social interactions? University of California, Riverside, Department of Psychology, Riverside, CA.

Khajah, M., Lindsey, R. V., & Mozer, M. C. (2016). [How deep is knowledge tracing?](#) In T. Barnes, M. Chi, & M. Feng (Eds.), *Proceedings of the Ninth International Conference on Educational Data Mining* (pp. 94-101). Educational Data Mining Society Press. *Awarded Best Paper at EDM2016*

Khajah, M., Roads, B. D., Lindsey, R. V., Liu, Y.-E., & Mozer, M. C. (2016). [Designing engaging games using Bayesian optimization](#). In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 5571-5582). New York: ACM.

Mozer, M. C., Lindsey, R. V., & Kazakov, D. (2016). Neural Hawkes process memories. Paper in preparation. [Slides from NIPS 2016 Symposium on Recurrent Neural Networks].

Rao, S.J., Wang, Y. and Cottrell, G.W. (2016) [A deep Siamese neural network learns the human-perceived similarity structure of facial expressions without explicit categories](#). In *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Squire, L. R. (2016). Neurobiology of Learning and Memory: Future Prospects. Winter Conference on the Neurobiology of Learning and Memory, Park City, UT.

Swafford, A. & Serpell, Z. (2015). Student-life stressors and cognitive performance outcomes. Poster presented at the 9th World Congress on the Promotion of Mental Health, Columbia, SC.

Wang, P., and Cottrell, G.W. (2016) [Modeling the contribution of central versus peripheral vision in scene, object, and face recognition](#). In *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Wang, P., & Cottrell, G. W. (2016). [Basic level categorization facilitates visual object recognition](#), In *International Conference on Learning Representations (ICLR2016) Workshop*.

Wang, Y., Lin, Z., Shen, X., Mech, R., Miller, G., and Cottrell, G.W. (2016) Event-specific image importance. In *Computer Vision and Pattern Recognition (CVPR) 2016* pp. 1-8.

Wilson, K.H., Xiong, X., Khajah, M., Lindsey, R.V., Zhao, S., Karklin, Y., Van Inwegen, E.G., Han, B., Ekanadham, C., Beck, J.E., Heffernan, N., & Mozer, M.C. (2016). Estimating student proficiency: Deep learning is not the panacea. In R. G. Baraniak, J. Ngiam, C. Studer, P. Grimaldi, & A. S. Lan (Eds.), *Proceedings of the 2016 NIPS Workshop on Machine Learning for Education*. [slides from NIPS 2016 Machine Learning for Education workshop].

Wiraatmadja, S., and Cottrell, G.W. (2016) [Modeling the Visual Word Form Area using a deep convolutional neural network](#). In *Proceedings of the 38th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

2016 Books/Chapters

Aminoff, E. M. & Tarr, M. J. (2016). Perception and Cognition. In H. Miller (ed.), *SAGE Encyclopedia of Theory in Psychology*. SAGE Publications, Inc. (invited).

Mozer, M. C., & Lindsey, R. V. (2016). Predicting and improving memory retention: Psychological theory matters in the big data era. To appear in M. Jones (Ed.), *Big Data in Cognitive Science*. Taylor & Francis.

2015 Publications

TDLIC Publications 2015
Aminoff, E. M., Toneva, M., Shrivastava, A., Chen, X., Misra, I., Gupta, A., & Tarr, M. J. (2015). Applying artificial vision models to human scene understanding . <i>Frontiers in Computational Neuroscience</i> . 2015 Feb; 9(8):1-14.. doi: 10.3389/fncom.2015.00008.
Anastassiou, C.A., Perin, R., Buzsáki, G. , Markram, H., & Koch, C. (2015). Cell-type- and activity-dependent extracellular correlates of intracellular spiking . <i>Journal of Neurophysiology</i> . 2015 Jul;114(1):608-23. Epub 2015 May 20. doi: 10.1152/jn.00628.2014.
Avanzino, J., Robledo Gonzalez, M., & Deák, G.O. (2015). Language skills and speed of auditory processing in young children . <i>Center for Research in Language Technical Reports</i> , 28(1).
Barnes, S.A., into-Duarte, A., Kappe, A., Zembrzycki, A., Metzler, A., A Mukame, A., Lucero, J., Wang, X., Sejnowski, T.J., Markou, A., & Behrens, M.M. (2015). Disruption of mGluR5 in parvalbumin-positive interneurons induces core features of neurodevelopmental disorders . <i>Molecular Psychiatry</i> , 20, 1161–1172; doi:10.1038/mp.2015.113; published online 11 August 2015. doi: 10.1038/mp.2015.113.
Bartol, T.M., Bromer, C., Kinney, J., Chirillo, M.A., Bourne, J.N., Harris, K.M., Sejnowski, & T.J. (2015). Nanoconnectomic upper bound on the variability of synaptic plasticity . <i>eLIFE</i> , Published November 30, 2015, DOI: http://dx.doi.org/10.7554/eLife.10778 .
Beckage, N., Mozer, M. C., & Colunga, E. (2015). Predicting a child's trajectory of lexical acquisition . In D. C. Noelle et al. (Eds.), <i>Proceedings of the 37th Annual Conference of the Cognitive Science Society</i> (pp.196-201). Austin, TX: Cognitive Science Society.
Buzsáki G. (2015). Our skewed sense of space . <i>Science. Neuroscience.</i> , Feb; 347(6222):612-3. DOI: 10.1126/science.aaa6505.

Buzsáki, G., Peyrache, & A., Kubie, J. (2015). [Emergence of Cognition from Action](#). Cold Spring Harb Symp Quant Biol. 2014;79:41-50. doi: 10.1101/sqb.2014.79.024679. Epub 2015 Mar 9.

Buzsáki, G., & Schomburg, E.W. (2015). [What does gamma coherence tell us about inter-regional neural communication?](#) Nature Neuroscience. Feb (18):484–489 (2015); doi:10.1038/nn.3952.

Buzsáki G., Stark E. , Berényi A., Khodagholy D., Kipke D.R. , Yoon E., & Wise K.D. (2015). [Tools for probing local circuits: high-density silicon probes combined with optogenetics](#). Neuron. 2015; 86(1):92-105. doi: <http://dx.doi.org/10.1016/j.neuron.2015.01.028>.

Cantiani, C., Choudhury, N., Yu, Y., Shafer, V., Schwartz, R. & Benasich, A.A. (2015). [From Sensory Perception To Lexical-Semantic Processing: An ERP Study In Non-Verbal Children With Autism](#). PLoS One. <https://doi.org/10.1371/journal.pone.0161637>.

Cantiani, C., Riva, V., Piazza, C., Bettoni, R. Moltini, M., Choudhury, N., Marino, C. & Benasich, A.A. (2015). [Auditory discrimination predicts linguistic outcome in Italian infants with and without risk for language-learning impairment](#). Developmental Cognitive Neuroscience, Volume 20, August 2016, Pages 23-34. <https://doi.org/10.1016/j.dcn.2016.03.002>.

Cho, Sun-Joo, Wilmer, J., Herzmann, G., McGugin, R.W., Fiset, D., Van Gulick, A.E., Ryan, K., & Gauthier, I. (2015). [Item Response Theory Analyses of the Cambridge Face Memory Test \(CFMT\)](#). Psychol Assess. 2015 Jun; 27(2): 552–566. Published online 2015 Feb 2. doi: 10.1037/pas0000068.

Choudhury, N., Parascando, J.A. & Benasich, A. A. (2015). [Effects of presentation rate and attention on auditory discrimination: A comparison of long-latency auditory evoked potentials in school-aged children and adults](#). PLoS ONE 10(9): e0138160. doi:10.1371/journal.pone.0138160.

Chua, K.-W., Gauthier, I. (2015). [Category-Specific Learned Attentional Bias To Object Parts](#). Attention, Perception & Psychophysics. 2016 Jan; 78(1): 44–51. doi: 10.3758/s13414-015-1040-0.

Chua, K.-W., Richler, J.J., & Gauthier, I. (2015). [Holistic processing from learned attention to parts](#). *Journal of Experimental Psychology: General*, Vol 144(4), Aug 2015, 723-729. <http://dx.doi.org/10.1037/xge0000063>.

Church, B.A., Rice, C. L., Dovgopoly, A., Lopata, C., Thomeer, M. L., Nelson, A., & Mercado, E., III (2015). [Learning, plasticity, and atypical generalization in children with autism](#). *Psychonomic Bulletin & Review*. 2015 Jan., 22(5). doi: 10.3758/s13423-014-0797-9.

de Barbaro, K., Johnson, C.M., Forster, D., & Deák, G.O. (2015). [Sensorimotor decoupling contributes to triadic attention: A longitudinal investigation of mother-infant-object interactions](#). *Child Development*. doi: 10.1111/cdev.12464. Article first published online: 27 NOV 2015.

Deák, G.O. (2015). [When and where do infants follow gaze?](#) [Proceedings of International Conferences on Development and Learning and on Epigenetic Robotics](#). Providence, RI, USA.

Deák, G.O., & Wiseheart, M. (2015). [Cognitive flexibility in young children: A general or task-specific capacity?](#) *Journal of Experimental Child Psychology*, 138, 31-53. doi:10.1016/j.jecp.2015.04.003.

Dykstra, K., Salamanca, L., Lee, M., Carini, A., Salamanca, M., Forster, D., Littlewort, G., Reilly, J., Bartlett, M., & Whitehill, J. SDMath: A dataset to inform adaptive intelligent tutoring systems.

Earls, H., Curran, T., & Mittal, V.A. (2015). [Social deficits in early perceptual stages in schizophrenia: A systematic review of the P100 during face processing](#). *Schizophrenia Bulletin*. Advance Access published July 14, 2015, doi:10.1093/schbul/sbv096. doi:10.1093/schbul/sbv096.

Fan, C.C., Bartsch, H., Schork, A.J., Chen, C., Wang, Y., Lo, M., Brown, T.T., Kuperman, J.M., Hagler Jr., D.J., Schork, N.J., Jernigan, T.L., & Dale, A.M. (2015). [Modeling the 3D Geometry of the Cortical Surface with Genetic Ancestry](#). *Current Biology*, 25(15):1988–1992. 3 August 2015, doi: <http://dx.doi.org/10.1016/j.cub.2015.06.006>.

Folstein, J., Palmeri, T.J., Van Gulick, A.E., & Gauthier, I. (2015). [Category learning stretches neural representations in visual cortex](#). (2015). Current Directions in Psychology. 2015 Feb; 24(1):17-23. doi: 10.1177/0963721414550707.

Gilaie-Dotan, S., Saygin, A.P, Lorenzi, L.J., Rees, G., & Behrmann, M. (2015). [Ventral aspect of the visual form pathway is not critical for the perception of biological motion](#). PNAS 2015; Published online 2015 Jan 12. doi:10.1073/pnas.1414974112.

Gupta, R., & Deák, G.O. (2015). [Disarming smiles: Irrelevant happy faces slow post-error responses](#). Cognitive Processing. 2015, Nov;16(4):427-34. Epub 2015 Jul 21. doi: 10.1007/s10339-015-0664-2.

Hahamy, A., Behrmann, M., & Malach, R. (2015). [The idiosyncratic brain: distortion of spontaneous connectivity patterns in autism spectrum disorder](#). Nature Neuroscience. Published online 19 January 2015. doi:10.1038/nn.3919.

Hales, J., Broadbent, N., Velu, P., Squire, L.R., & Clark, R.E. (2015). [Hippocampus, perirhinal cortex, and complex visual discriminations in rats and humans](#). Learning & Memory, 22, 83-91. doi: 10.1101/lm.035840.114.

Heim, S., Benasich, A.A., Wirth, N., & Keil, A. (2015). [Tracking the attentional blink profile: a cross-sectional study from childhood to adolescence](#). Psychological Research. 2015 Jan; 79:19-27. doi: 10.1007/s00426-013-0530-8.

Hernandez, M.E., Snider, J., Stevenson, C., Cauwenberghs, G., & Poizner, H. (2015). [A Correlation-based Framework for Evaluating Postural Control Stochastic Dynamics](#). Neural Systems and Rehabilitation Engineering, IEEE Transactions on, vol.PP, no.99, pp.1-1. 2015 May 22. [Epub ahead of print]. doi: http://dx.doi.org/10.1109/TNSRE.2015.2436344.

Hill, O., Serpell, Z., & Faison, M. (2015). [The efficacy of the LearningRx cognitive training program: Modality and transfer effects](#). Journal of Experimental Education, 1-21. Published online: 29 Oct 2015. doi:10.1080/00220973.2015.1065218.

Isett, B.R., Feldman, D.E. (2015). Whisker-based encoding of grating stimuli in head-fixed mice. Soc Neurosci Abs. 156.08.
Khodagholy, D., Gelinás, J.N., Thesen, T., Doyle, W., Devinsky, O., Malliaras, G.G., & Buzsáki, G. (2015). NeuroGrid: recording action potentials from the surface of the brain . Nature Neuroscience 18, 310–315 (2015) doi:10.1038/nn.3905.
Kim, S., Dede, A. J. O., Hopkins, R. O., & Squire, L. R. (2015). Memory, scene construction, and the human hippocampus . Proceedings of the National Academy of Sciences, U. S. A., 2015 Apr 14; 112(15): 4767–4772. Published online 2015 Mar 30. doi: 10.1073/pnas.1503863112.
Krook-Magnuson E., Gelinás JN., Soltesz I., & Buzsáki (2015). Neuroelectronics and Biooptics: Closed-Loop Technologies in Neurological Disorders . JAMA Neurol. 2015 Jul;72(7):823-9. doi: 10.1001/jamaneurol.2015.0608.
Lainscsek, C., Hernandez, M.E., Poizner, H., & Sejnowski, T. (2015). Delay differential analysis of electroencephalographic data . Neural Computation. 2015 Mar; 27(3):615-27. doi: 10.1162/NECO_a_00656. Epub 2014 Aug 22. PMID: 25149701 [PubMed - in process].
Lee, W.-Y., Cho, S.-J., McGugin, R.W., Van Gulick, A.B., & Gauthier, I. (2015). Differential Item Functioning Analysis of the Vanderbilt Expertise Test for Cars (VETcar) . Journal of Vision, 15(13):23. Published online 2015 Sep 29. doi: 10.1167/15.13.23. PMID: PMC4588597.
Liao, Y., Acar, Z. A., Makeig, S., & Deák, G. O. (2015). EEG imaging of toddlers during dyadic turn-taking: Mu-rhythm modulation while producing or observing social actions . Neuroimage. 2015 May 15;112:52-60. doi: 10.1016/j.neuroimage.2015.02.055. Epub 2015 Feb 27.
Logan, G.D., Yamaguchi, M., & Schall, G.D., & Palmeri, T.J. (2015). Inhibitory control in mind and brain 2.0: A blocked-input model of saccadic countermanding . Psychological Review. 2015 Feb; 122, 115-147. http://dx.doi.org/10.1037/a0038893 . PMID: 25706403.
Mack, M.L., & Palmeri, T.J. (2015). The dynamics of categorization: Unraveling rapid categorization .

Journal of Experimental Psychology: 2015 Jun; 144(3): 551–569.. doi: 10.1037/a0039184.
Epub 2015 May 4.

Malmir, M., Sikka, K., Forster, D., Movellan, J., and Cottrell, G.W. (2015). [Deep Q-learning for Active Recognition of GERMS: Baseline performance on a standardized dataset for active learning](#). In Proceedings of the British Machine Vision Conference (BMVC), BMVA Press. 161.1-161.11.

Mercado, E., III. (2015). [Neural and cognitive plasticity. Emerging trends in the behavioral and social sciences](#): An interdisciplinary, searchable, and linkable resource, 1-13. doi: 10.1002/9781118900772.etrds0236.

Mercado, E., III, Church, B. A., Coutinho, M. V. C., Dovgopoly, A., Lopata, C., Toomey, J. A., & Thomeer, M. L. (2015). [Heterogeneity in perceptual category learning by high functioning children with autism spectrum disorder](#). Frontiers in Integrative Neuroscience, 9, 42. doi: 10.3389/fnint.2015.00042.

Mercado, E., III, & Orduña, V. (2015). [Regularities in responding during performance of a complex choice task](#). Learning & Behavior, 43, 323-341. doi: 10.3758/s13420-015-0182-1.

Mertens, J., Paquola, A., Ku, M., Hatch, E., Böhnke, L., Ladjevardi, S., McGrath, S., Campbell, B., Lee, H., Herdy, J.R., Gonçalves, J.T., Toda, T., Kim, Y., Winkler, J., Yao, J., Hetzer, M.W., & Gage, F. (2015). [Directly Reprogrammed Human Neurons Retain Aging-Associated Transcriptomic Signatures and Reveal Age-Related Nucleocytoplasmic Defects](#). Cell Stem Cell, 17, 1–14, Dec. 3, 2015. doi: <http://dx.doi.org/10.1016/j.stem.2015.09.001>.

Mullen, T.R., Kothe, C.A., Chi, Y.M., Ojeda, A., Kerth, T., Makeig, S., Jung, T.P., & Cauwenberghs, G. (2015). [Real-time neuroimaging and cognitive monitoring using wearable dry EEG](#). IEEE Trans Biomed Eng. 2015 Nov;62(11):2553-67. Epub 2015 Sep 23. doi: 10.1109/TBME.2015.2481482.

Musacchia, G., Ortiz-Mantilla, S., Realpe-Bonilla, T., Roesler, R., Benasich, A. A. (2015). [Infant Auditory Processing and Event-related Brain Oscillations](#). Journal of Visual Experiments (101), e52420, Published online 2015 Jul 1. doi: 10.3791/52420.

Nishimura, M., Scherf, K. S., Valentinos, Z., Tarr, M. J., & Behrmann, M. (2015). [Size Precedes View: Developmental Emergence of Invariant Object Representations in LOC](#), *Journal of Cognitive Neuroscience*. 27:3, pp. 474–491. ePub ahead of print, PMID: 25244115. doi:10.1162/jocn_a_00720.

Noble, K.G., Houston, S.M., Brito, N.H., Bartsch, H., Kan, E., Kuperman, J.M., Akshoomoff, N., Amaral, D.G., Bloss, C.S., Libiger, O., Schork, N.J., Murray, S.S., Casey, B.J., Chang, L., Ernst, T.M., Frazier, J.A., Gruen, J.R., Kennedy, D.N., Zijl, P.V., Mostofsky, S., Kaufmann, W.E., Kenet, T., Dale, A.M., Jernigan, T.L., & Sowell, E.R. (2015). [Family income, parental education and brain structure in children and adolescents](#). *Nature Neuroscience*. Published online 30 March, 2015. doi:10.1038/nn.3983.

Palmeri, T.J., & Mack, M.L. (2015). [How experimental trial context affects perceptual categorization](#). *Frontiers in Psychology*. *Front. Psychol.*, 2015 Feb; doi: 10.3389/fpsyg.2015.00180.

Pei, L., Mu, Y., Leblanc, M., Alaynick, W., Barish, G.D., Pankratz, M., Tseng, T.W., Kaufman, S., Liddle, C., Yu, R.T., Downes, M., Pfaff, S.D., Auwerx, J., Gage, F.H., & Evans, R.M. (2015). [Dependence of Hippocampal Function on ERRγ-Regulated Mitochondrial Metabolism](#). *Cell Metabolism*, 21(4):628–636, 7 April 2015. DOI: <http://dx.doi.org/10.1016/j.cmet.2015.03.004>.

Peyrache, A., Lacroix, M.M., Petersen, P.C., & Buzsáki, G. (2015). [Internally organized mechanisms of the head direction sense](#). *Nature Neuroscience*. 2015 March. 18(4):569-7. (Published online 02 March 2015). doi:10.1038/nn.3968.

Plank, M., Snider, J., Kaestner, E., Halgren, E., & Poizner, H. (2015). [Neurocognitive stages of spatial cognitive mapping measured during free exploration of a large-scale virtual environment](#). *Journal of Neurophysiology*, 2015 Feb 1; 113(3):740-53. ePub 2014 Nov 5. doi: 10.1152/jn.00114.2014.

Prescott, S.L., Srinivasan, R., Marchetto, M.C., Grishina, I., Narvaiza, I, Selleri, L, Gage, F.H., Swigut, T., & Wysocka, J. (2015). [Enhancer divergence and cis-regulatory evolution in the human and chimp neural crest](#). *Cell*, Available online 10 Sept 2015. doi:10.1016/j.cell.2015.08.036.

Richler, J.J., Floyd, R.J., & Gauthier, I (2015). [About-Face on Face Recognition Ability and Holistic](#)

[Processing](#). Journal of Vision, 15(9):15. Published online 2015 Jul 29. doi: 10.1167/15.9.15. PMID: PMC4581616.

Richler, J.J., Palmeri, T.J., & Gauthier, I. (2015). [Holistic processing does not require configural variability](#). Psychonomic Bulletin & Review, 22, 974-979. doi 10.3758/s13423-014-0756-5.

Ross, D.A. & Gauthier, I. (2015). [Holistic processing in the composite task depends on face size](#). Visual Cognition, 23(5):533-545. doi:10.1080/13506285.2015.1049678.

Ruvolo, P., Messinger, D., & Movellan, J. (2015). [Infants Time Their Smiles to Make Their Moms Smile](#). PLOS One; Sept. 23, 2015. doi: 10.1371/journal.pone.0136492.

Schultz, M.D., He, Y., Whitaker, J.W., Hariharan, M., Mukamel, E.A., Leung, D., Rajagopal, N., Nery, J.R., Urich, M.A., Chen, H., Lin, S., Lin, Y., Jung, I., Schmitt, A.D., Selvaraj, S., Ren, B., Sejnowski, T.J., Wang, W., & Ecker, J.R. (2015). [Human body epigenome maps reveal noncanonical DNA methylation variation](#). Nature, 523, 212–216 (09 July 2015). doi:10.1038/nature14465.

Shen, J., & Palmeri, T.J. (2015). [The perception of a face can be greater than the sum of its parts](#). Psychonomic Bulletin & Review, 22, 710-716. Published online: 2014 Sept 17. 10.3758/s13423-014-0726-y.

Sikka, K., Ahmed, A.A., Diaz, D., Goodwin, M.S., Craig, K.D., Bartlett, M.S., & Huang, J.S. (2015). [Automated Assessment of Children's Postoperative Pain Using Computer Vision](#). Pediatrics. Published online June 1, 2015, doi: 10.1542/peds.2015-0029.

Snider, J., Lee, D., Poizner, H., & Gepshtein, S. (2015). [Prospective Optimization with Limited Resources](#). PLoS Comput Biol, 11(9), e1004501. DOI: 10.1371/journal.pcbi.1004501.

Squire, L. R. & Wixted, J. T. (2015) [Remembering. Daedalus](#). Journal of the American Academy of Arts and Sciences, Winter 2015, 53-66.

Urgolites, Z. J., Smith, C. N., & Squire, L. R. (2015). True and false memories, parietal cortex, and confidence judgments . <i>Learning & Memory</i> , 22, 557-562. doi: 10.1101/lm.038349.115.
Van Gulick, A.E., McGugin, R.W., & Gauthier, I. (2015). Measuring non visual knowledge about object categories: The Semantic Vanderbilt Expertise Test . <i>Behavioral Research Methods</i> , 1-19. 2015 Aug 15. [Epub ahead of print]. 10.3758/s13428-015-0637-5.
Wang, P., Gauthier, I., & Cottrell, G. (2015). Are face and object recognition independent? A neurocomputational modeling exploration . <i>Journal of Cognitive Neuroscience</i> . 2016 Jan 7:1-17. [Epub ahead of print]. PMID: 26741802.
Wisniewski, M. G., Radell, M. L., Church, B.A., & Mercado, E., III (2015, submitted). Fading enhances perceptual learning when events are progressively differentiated.
Xu, B., & Tanaka, J. W. (2015). The cued recognition task: dissociating the abrupt onset effect from the social and arrow cueing effect . <i>Attention, Perception, & Psychophysics</i> . 2015 Jan; 77(1):97-110. doi: 10.3758/s13414-014-0763-7.

2015 Conferences & Presentations

Aminoff, E., Toneva, M., Gupta, A., & Tarr, M. (2015, May). Scene-space encoding within the functional scene-selective network. *Journal of Vision*, 15, 507. Poster presented at the annual meeting of the Vision Science Society, St. Pete, FL.

Bartlett, M. and Susskind, J. [Deep Learning Summit](#). (2015). Presented a session “Facial Recognition & Expression Analysis,” San Francisco, CA, Jan. 29-30.

Beckage, N., Mozer, M. C., & Colunga, E. (2015). Predicting a child's trajectory of lexical acquisition. In D. C. Noelle et al. (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp.196-201). Austin, TX: Cognitive Science Society.

Cantiani, C., Riva, V., Piazza, C. Bettoni, R., Molteni, M., Choudhury, N., Marino, C. & Benasich, A. A. (2015). Rapid auditory processing in Italian infants at risk for language and learning impairment. *Journal of Cognitive Neuroscience [Supplement]*, 26, A63. Presented at the Cognitive Neuroscience Meetings, March 28th-31st, San Francisco, CA.

Chang, L., de Barbaro, K., & Deák, G.O. (2015, August). To hear and to hold: Maternal naming and infant object exploration. 5th Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics, Providence, RI, USA.

Chang, L., de Barbaro, K., & Deák, G.O. (2015, March). To hear and to hold: Maternal naming and infant object exploration. Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.

Chang, L., Wade, S., Robenalt, C, Ziebol, T., & Deák, G.O. (2015, March). What in maternal speech to infants predicts later language skills? Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.

De Barbaro, K., Johnson, C.M., & Deák, G.O. (2015, March). Gaze alternations between hands, not faces, increase over first year. Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.

Deák, G.O. (2015). [When and where do infants follow gaze?](#) 5th Joint IEEE International Conference on Development and Learning and on Epigenetic Robotics, Providence, RI, USA.

Deák, G.O. (2015, August). The ontogeny of socially-guided attention: Methods, models, and questions for the 21st century. IEEE 5th International Conference on Development and Learning and Epigenetic Robotics, Providence, RI, USA.

Koyama, M.S., Ortiz-Mantilla, S., Helferstay, L. Parascando, J., Roesler, C., Morgan-Byrne, J., Milham, M.P. & Benasich, A. A. (2015). "Resting-state fMRI correlates of rapid brain plasticity following brief auditory exposure". (Program No. 351.30/BB40) Presented at the Society for Neuroscience Meetings in Chicago, IL, October 17th-21st, 2015.

Laboy-Juarez, K.J., Feldman, D.E. (2015). Representation of two-whisker sequences in L2/3 of mouse S1. Soc. Neurosci. Abs. 516.02.

Miller, B., Zandbelt, B., Logan, G.D., Schall, J.D., & Palmeri, T.J. (2015). Ensemble accumulator models of choice decision making. Presented at the Society for Mathematical Psychology meeting, Newport Beach, CA.

Musacchia, G., Ortiz-Mantilla, S., Roesler, C., Byrne, J., & Benasich, A. A. (2015). Speech encoding in quiet and background noise differs between infants and young adults: a complex auditory brainstem response (CABR) investigation. Journal of Cognitive Neuroscience [Supplement], 26, A54. Presented at the Cognitive Neuroscience Meetings, March 28th-31st, San Francisco, CA.

Ortiz-Mantilla, S., Hämäläinen, J. A., & Benasich, A. A. (2015). Power and phase synchrony of neural oscillations evolve over the first year of life and reflect phonetic perceptual narrowing. Journal of Cognitive Neuroscience, [Supplement], 26, A55. Presented at the Cognitive Neuroscience Meetings, March 28th-31st, San Francisco, CA.

Ortiz-Mantilla, S., Realpe-Bonilla, T., Roesler, C., Morgan-Byrne, Choudhury, N. & Benasich, A. A. (2015). "Power and phase synchronization underlie a left speech processing advantage in

7-month-old infants with active auditory experience". (Program No. 439.16/AA34) Presented at the Society for Neuroscience Meetings in Chicago, IL, October 17th-21st, 2015.

Palmeri, T.J. (2015). What the science of visual cognition tells us about visual learning and visual performance. Presented at Perception Experiment Workshop, Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, VA.

Peters, S. Ortiz-Mantilla, S. & Benasich, A. A. (2015). Sleep oscillations and their relationship to cognition in 3.5 and 6.5 month old napping infants. *Journal of Cognitive Neuroscience* [Supplement], 26, A102. Presented at the Cognitive Neuroscience Meetings, March 28th-31st, San Francisco, CA.

Piazza, C., Cantiani, C., Akalin-Acar, Z., Miyakoshi, M., Benasich, A.A., Reni, G., Bianchi, A.M., & Makeig, S. (2015). ICA derived cortical responses to auditory pitch and duration deviance in six-month-old infants. Presented at the 7th Mismatch Negativity Conference in Leipzig, Germany, September 8th-11th, 2015.

Ross, D.A., Tamber-Rosenau, B.J., Palmeri, T.J., Xu, Y., Jie Dong, Z., & Gauthier, I. (2015). High resolution fMRI reveals holistic car representations in the anterior FFA of car experts. Presented at the Vision Sciences Society meeting, St. Petersburg, FL.

Shen, J., Annis, J., & Palmeri, T.J. (2015). Modeling the dynamics of visual object categorization. Presented at the Vision Sciences Society meeting, St. Petersburg, FL.

Smith, C.N. (2015). Recognition memory signals in the human hippocampus as revealed by single-unit recordings from depth electrodes in epilepsy patients. Western Neurosurgical Society Annual Meeting, Kauai, HI.

Smith, C.N., Clark, R.E., & Squire, L.R. Brain activity and functional connectivity in humans change as a function of the age of memory. (2015) Temporal Dynamics of Learning Center Trainee Fellows Retreat, San Diego, CA. Smith, C.N., Clark, R.E., & Squire, L.R. Brain activity and functional connectivity in humans change as a function of the age of memory. (2015) Lew Judd Junior Faculty Psychiatry Research Symposium. San Diego, CA.

Smith, C.N. & Squire, L.R. (2015). Differential eye movements for old and new scenes under free viewing conditions reflect nondeclarative (unaware), hippocampus-independent memory. Presentation at the Society for Neuroscience Conference, Chicago, IL.

Smith, C.N. & Squire, L.R. (2015). What do you expect? How an expectation of memory testing can determine which kind of memory supports differential eye movements for old and new scenes. Presentation at the International Society for Behavioral Neuroscience Conference, Kona, HI.

Swafford, A. & Serpell, Z. (2015). Student-life stressors and cognitive performance outcomes. Poster presented at the 9th World Congress on the Promotion of Mental Health, Columbia, SC.

Tamber-Rosenau, B.J., Palmeri, T.J., Xu, Y., Jie Dong, Z., & Gauthier, I. (2015). High resolution fMRI reveals holistic car representations in the anterior FFA of car experts. Presented at the Vision Sciences Society meeting, St. Petersburg, FL.

2015 Books/Chapters

Hill, O., Serpell, Z. & Faison, M. (2015). Improving minority student mathematics performance through cognitive training. In L.A. Flowers, J. Moore, and L. O. Flowers (Eds.), *The Evolution of Learning: Science, Technology, Engineering, and Mathematics Education at Historically Black Colleges and Universities*, University Press of America.

Logan, G.D., Schall, J.D., & Palmeri, T.J. (2015). Inhibitory control in mind and brain: The mathematics and neurophysiology of the underlying computation. In B. Forstmann & E.J. Wagenmakers (Eds.), [An Introduction to Model-Based Cognitive Neuroscience](#), Springer Neuroscience. XI, 371 p. ISBN 978-1-4939-2235-2.

Mercado, E., III. (2015). [Neural and cognitive plasticity. Emerging trends in the behavioral and social sciences: An interdisciplinary, searchable, and linkable resource](#), 1-13. doi: 10.1002/9781118900772.etrds0236. *Emerging Trends in the Social and Behavioral Sciences*. Edited by Robert Scott and Kosslyn. © 2015 John Wiley & Sons, Inc. ISBN 978-1-118-90077-2.

Nosofsky, R.M. and Palmeri, T.J. (2015). Exemplar-based random walk model of categorization and recognition. To appear in J.R. Busemeyer, J. Townsend, Z.J. Wang and A. Eidels (Eds.), *Oxford Handbook of Computational and Mathematical Psychology*, Oxford University Press.

Palmeri, T.J., & Gauthier, I. (2015). Object recognition. To appear in D.J. Calkins, V.A. Casagrande, J.D. Schall, & G.F. Woodman (Eds.), *The Visual System*, Sinauer Associates.

Palmeri, T.J., Schall, J.D. & Logan, G.D. (2015). Neurocognitive modeling of perceptual decision making. To appear in J.R. Busemeyer, J. Townsend, Z.J. Wang, & A. Eidels (Eds.), *Oxford Handbook of Computational and Mathematical Psychology*, Oxford University Press.

Polse, L., Lai, P. and Reilly, J. (2015). Gradients of plasticity: Language and emotion in children with unilateral perinatal stroke, in *Emotion in Language*, Ulrike Luedtke (Ed.), John Benjamins Publishing Company, Amsterdam, NL.

Reilly, J., Bernicot, J., Olive, T., Favart, M., Wulfeck, B. and Appelbaum, A. (in press, 2014). Written narratives from French and English speaking children with Language Impairment. In Arfé, Dockrell, j, Berninger, V. (Eds). Handbook of Writing development and instruction in children with hearing, speech and oral language difficulties. Oxford: Oxford University Press.

Reilly, JS & Polse, L. (2015). Neuroplasticity: Language and Emotional Development in Children with Perinatal Stroke. In Miozzo, M., de Zubicaray & Schiller (Eds.), Handbook of Neurolinguistics, Oxford University Press.

Richler, J.J. and Gauthier, I. (2015). Cognitive Phenotypes in Face Perception. In S.L. Santangelo and V. Jagaroo (Eds.), [Cognitive and Behavioral Phenotypes](#): New Trends for Research, Classification and Diagnosis in Neuropsychology and Psychiatry. ISBN 978-1-4614-3845-8. Due: August 14, 2015.

Sigurdardottir, H. M. and Gauthier, I. (2015). Expertise and object recognition. In A. W. Toga (Ed.), [Brain Mapping: An Encyclopedic Reference](#). Oxford, UK: Elsevier. March 10, 2015. ISBN-13: 978-0123970251 ISBN-10: 0123970253.

Squire, L. R. & Dede, A. J. O. (2015). Conscious and Unconscious Memory Systems. In E. Kandel, Y. Dudai, & M. Mayford (Eds.) Perspectives in Biology: Learning and Memory. Cold Spring Harbor Laboratory Press, 1-14.

Squire, L. R., Genzel, L., Wixted, J. T., Morris, R. G. (2015). Memory Consolidation. In E. Kandel, Y. Dudai, & M. Mayford (Eds.) Cold Spring Harbor Perspectives in Biology: Learning and Memory. Cold Spring Harbor Laboratory Press, 7, 1-21.

Tarr, M. J., & Pyles, J. A. (2015). Neural Representations of Objects. In J. D. Wright (ed.), International Encyclopedia of the Social and Behavioral Sciences, 2nd Edition. Oxford, UK: Elsevier. (invited).

2014 Publications

TDLIC Publications 2014

Agarwal G, Stevenson IH, Berényi A, Mizuseki K, Buzsáki, G, Sommer FT. (2014). [Spatially distributed local fields in the hippocampus encode rat position](#). Science. 2014 May 9;344(6184):626-30.

Alfonso, S., Kessels, H.W., Banos, C.C., Chan, T.R., Kumaravel, G., Scannevin, R.H., Rhodes, K.J., Hugarir, R., Guckian, K.M., Dunah, A.W., & Malinow, R. (2014). [Synapto-depressive effects of amyloid beta require PICK1](#). European Journal of Neuroscience. 2014 April 8; 39(7): 1225-1233. DOI: 10.1111/ejn.12499.

Avidan, G. and Behrmann, M. (2014). [Structural and functional impairment of the face processing network in congenital prosopagnosia](#). Frontiers in Bioscience, (special issue entitled: 'Familiar people recognition disorders'), 6, 236-257.

Avidan, G., Hadj-Bouziane, F., Liu, N., Ungerleider, L. and Behrmann, M. (2014). [Selective dissociation between core and extended regions in the face processing network in congenital prosopagnosia](#). Cerebral Cortex. 2014 Jun;24(6):1565-78. doi: 10.1093/cercor/bht007. ePub 2013 Jan 31.

Bartlett, M.S., Littlewort, G.C., Frank, M.G. and Lee, K. (2014). [Automatic decoding of facial movements reveals deceptive pain expressions](#). Current Biology. 2014 Mar 31;24(7):738-743. doi: 10.1016/j.cub.2014.02.009.

Benasich, A., Choudhury, N.A., Realpe-Bonilla, T., and Roesler, C.P. (2014). [Plasticity in Developing Brain: Active Auditory Exposure Impacts Prelinguistic Acoustic Mapping](#). The Journal of Neuroscience. 2014 Oct. 1; 34(40):13349 –13363. doi: 10.1523/JNEUROSCI.0972-14.2014.

Brennand, K., Savas, J.N., Kim, Y., Tran, N., Simon, A., Hashimoto-Torii, K., Beaumont, K.G., Kim, H.J., Topol, A., Ladran, I., Abdelrahim, M., Matikainen-Ankney, B., Chao, S-h., Mrksich, M., Rakic, P., Fang, G., Zhang, B., Yates, J.R., and Gage, F.H. (2014). [Phenotypic differences in](#)

<p>hiPSC NPCs derived from patients with schizophrenia. Molecular Psychiatry advance online publication 2014 Apr 1; doi: 10.1038/mp.2014.22.</p>
<p>Broccard, F., Mullen, T., Chi, M, Peterson, D., Iversen, J., Arnold, M., Kreutz-Delgado, K., Jung, T.P., Makeig, S., Poizner, H., Sejnowski, T., Cauwenberghs, G. (2014). Closed-loop brain-machine-body interfaces for noninvasive rehabilitation of movement disorders. Annals of Biomedical Engineering. 42, 1573-1593.</p>
<p>Buzsáki, Mizuseki (2014). The log-dynamic brain: how skewed distributions affect network operations. Nat Rev Neurosci. 2014 Apr;15(4):264-78. doi: 10.1038/nrn3687. Epub 2014 Feb 26.</p>
<p>Chen, X., Liu, A., McKeown, M.J., Poizner, H. and Wang, Z.J. (2014). An EEMD-IVA framework for concurrent multidimensional EEG and unidimensional kinematic data analysis, IEEE Transactions in Biomedical Engineering. 61(7):2187-98. doi: 10.1109/TBME.2014.2319294.</p>
<p>Cheung, O., Gauthier, I. (2014). Visual appearance interacts with conceptual knowledge in object recognition. Frontiers in Psychology-Cognition. 2014 July 29; 5:793. doi: 10.3389/fpsyg.2014.00793.</p>
<p>Chua, K-W., Richler, J.J., and Gauthier, I. (2014). Becoming a Lunari or Taiyo expert: Learned attention to parts drives holistic processing. 2014 Jun; 40(3):1174-82. doi: 10.1037/a0035895. ePub 2014 Mar 3.</p>
<p>Clancy, K.B., Koralek, A.C., Costa, R.M., Feldman, D.E., & Carmena, J.M. (2014). Volitional modulation of optically recorded calcium signals during neuroprosthetic learning. Nat. Neurosci., 2014 Apr 2; 17(6): 807-9. doi:10.1038/nn.3712. Published online 2014 Apr 13.</p>
<p>Curby, K.M. & Gauthier, I. (2014). Interference between face and non-face domains of perceptual expertise: a replication and extension. Frontiers in Psychology & Cognition. 2014 Sept 10; 5:595. doi: 10.3389/fpsyg.2014.00955.</p>
<p>Deák, G.O., Krasno, A., Triesch, J., Lewis, J. and Sepeda, L. (2014). Watch the hands: Human</p>

[infants can learn gaze-following by watching their parents handle objects](#). Developmental Science. 2014; 17(2):270-281. doi: 10.1111/desc.12122.

Dipietro, L., Poizner, H., Krebs, H.I. (2014). [Spatiotemporal dynamics of online motor correction processing revealed by high-density electroencephalography](#). Journal of Cognitive Neuroscience. 2014 Sep; 26(9):1966-80. doi: 10.1162/jocn_a_00593. Epub 2014 Feb 24.

Dundas, E., Plaut, D. C. and Behrmann, M. (2014). [An ERP investigation of the co-development of hemispheric lateralization of face and word recognition](#). Neuropsychologia. 2014 Aug; 61, 315-323. 10.1016/j.neuropsychologia.2014.05.006. Epub 2014 Jun 13.

Dundas, E., Plaut, D. C. and Behrmann, M. (2014). [Variable left-hemisphere language and orthographic lateralization reduces right-hemisphere face lateralization](#). Journal of Cognitive Neuroscience. 2014 Nov; 12:1-13. [Epub ahead of print] PMID: 25390197.

Dykstra, K., Salamanca, L., Lee, M., Carini, A., Salamanca, M., Forster, D., Littlewort, G., Reilly, J., Bartlett, M. and Whitehill, J. (2014). SDMath: A dataset to inform adaptive intelligent tutoring systems. In preparation.

Folstein, J.R., Palmeri, J., Gauthier, I. (2014). [Perceptual advantage for category-relevant perceptual dimensions: The case of shape and motion](#). Frontiers in Psychology. 2014 Dec; 5:1394:1-7. doi: 10.3389/fpsyg.2014.01394.

Gabay, S. and Behrmann, M. (2014). [Attentional modulation mediated by subcortical mechanisms. Attention Perception and Psychophysics](#). 10.3758/s13414-014-0725-0. Attention Perception and Psychophysics. 2014 Nov; 76(8):2375-2388. doi: 10.3758/s13414-014-0725-0.

Gabay, S., Burlingham, C. and Behrmann, M. (2014). [The nature of face representations in subcortical regions](#). Neuropsychologia. 2014 July. 59:35-46. doi:10.1016/j.neuropsychologia.2014.04.010.

Gauthier, I., McGugin, R.W., Richler, J.J., Herzmann, G., Speegle, M. & VanGulick, A.E. (2014). [Experience moderates overlap between object and face recognition, suggesting a common ability](#).

Journal of Vision. 2014 Jul 3;14(8):7. doi: 10.1167/14.8.7.
Gabay, S., Nestor, A., Dundas, E. and Behrmann, M. (2014). Monocular Advantage for Face Perception Implicates Subcortical Mechanisms in Adult Humans . Journal of Cognitive Neuroscience. 2014 May. 26(5):927-937. doi:10.1162/jocn_a_00528.
Gordon, I., Pierce, M., Barlett, M. and Tanaka, J.W. (2014). Training facial expression production in children on the autism spectrum . Journal of Autism Developmental Disorders. 2014 Oct; 44(10), p. 2486-98. doi: 10.1007/s10803-014-2118-6.
Gordon, I., Pierce, M., Bartlett, M. and Tanaka, J.W. (2014). Training facial expression production in children on the autism spectrum . Journal of Autism Developmental Disorders. doi: 10.1007/s10803-014-2118-6. Accepted.
Haar, S., Berman, S., Behrmann, M., and Dinstein, I. (2014). Anatomical abnormalities in autism? Cerebral Cortex. 2014 Oct 14. Epub ahead of print. doi: 10.1093/cercor/bhu242, PMID: 25316335, pii: bhu242.
Habekost, T., Petersen, A., Starrfelt, R., and Behrmann, M. (2014). Perceptual and post-perceptual processing of letters and words in pure alexia. Cognitive Neuropsychology. 7:1-24.
Haigh, S., Dinstein, I. Heeger, D. and Behrmann, M. (2014). Cortical variability in the sensory-evoked response in autism , Journal of Autism and Developmental Disorders . Published online: 2014 Oct 19. ePub ahead of print, doi: 10.1007/s10803-014-2276-6, PMID: 25326820.
Hales, J.B., Schlesiger, M.I., Leutgeb, J.K., Squire, L.R., Leutgeb, S., Clark, R.E. (2014). Medial Entorhinal Cortex Lesions Only Partially Disrupt Hippocampal Place Cells and Hippocampus-Dependent Place Memory . Cell Reports. 2014 Nov 6; 9(3):893–901. doi: http://dx.doi.org/10.1016/j.celrep.2014.10.009 .
Halliday, D. W., MacDonald, S. W., Sherf, S. K., & Tanaka, J. W. (2014). A Reciprocal Model of Face Recognition and Autistic Traits: Evidence from an Individual Differences Perspective . PloS one, 2014

May 22; 9(5), e94013.

Harrison, S., Gauthier, I., Hayward, W., Richler, J.J. (2014). [Other-race effects manifest in overall performance, not qualitative processing style](#). Visual Cognition. 2014 May; 22(6): 843-864, doi: 10.1080/13506285.2014.918912.

Heard, A.W., Masson, M.E.J. and Bub, D.N. (2014). [Time course of action representations evoked during sentence comprehension](#). Acta Psychologica (Amst). 2014 Feb 18; pii: S0001-6918(14)00028-6. doi: 10.1016/j.actpsy.2014.01.017.

Heim, S., Tallal, P. and Keil, A. (2014). Early Electrocortical Indices of Selective Attention in ADHD: Temporal Dynamics of Stimulus Competition. Cognitive Sciences. 7, 1.

Howell, K.K., Monk, B.R., Carmack, S.A., Mrowczynski, O.D., Clark, R.E. and Anagnostaras, S.G. (2014). [Inhibition of PKC disrupts addiction-related memory](#). Frontiers in Behavioral Neuroscience. 2014 Mar 7; 8:70. doi: 10.3389/fnbeh.2014.00070.

Iversen, J., Ojeda, A., Mullen, T., Plank, M., Snider, J. Cauwenberghs, G., Poizner, H. (2014). [Causal analysis of cortical networks involved in reaching to spatial targets](#). Conference Proceedings IEEE EMBS Society. 2014 Aug; 4399-4402.

Jang, Y., Pashler, H., & Huber, D. (2014). [Manipulations of choice familiarity in multiple-choice testing support a retrieval practice account of the testing effect](#). Journal of Educational Psychology. 2014 May; 106(2):435-447. <http://dx.doi.org/10.1037/a0035715>.

Kang, S., Linsey, R., Mozer, M. and Pashler, H. (2014). [Retrieval Practice Over the Long Term: Should Spacing Be Expanding or Equal-Interval?](#) This manuscript was accepted for publication in Psychonomic Bulletin & Review. 2014 Apr 18. [Epub ahead of print]. doi: 10.3758/s13423-014-0636-z.

Kang, S. H. K., & Pashler, H. (2014). [Is the benefit of retrieval practice modulated by motivation?](#) Journal of Applied Research in Memory and Cognition. Available online 2014 June 10; 3:183-188.

<http://dx.doi.org/10.1016/j.jarmac.2014.05.006>.

Ketz, N., O'Reilly, R.C. and Curran, T. (2014). [Classification aided analysis of oscillatory signatures in controlled retrieval](#). NeuroImage. 2014 Jan 15;85(2):749-760. doi: 10.1016/j.neuroimage.2013.06.077.

Khajah, M.M., Lindsey, R.V. and Mozer, M.C. (2014). [Maximizing students' retention via spaced review: Practical guidance from computational models of memory](#). Topics in Cognitive Science. 2014 Jan 30; 6:157–169. doi: 0.1111/tops.12077.

Lainscsek, C., Hernandez, M.E., Poizner, H. and Sejnowski, T.J. (2014). Multivariate Time-Domain Frequency Analysis and Higher-Order Statistics: Application to Electroencephalography data. Submitted to Neural Computation.

Lee, S.H., Kwan, A.C., Dan, Y. (2014). [Interneuron subtypes and orientation tuning](#). Nature. Published online 2014 April 2; 508, E1-2. doi:10.1038/nature13128.

Lee, D., Poizner, H., Corcos, D. and Henriques, D.Y.P. (2014). [Unconstrained reaching modulates eye-hand coupling](#). Experimental Brain Research. 2014 Jan; 232(1):211-223. PMID: 24121521 [PubMed - in process].

Leeds, D. D., Pyles, J. A., & Tarr, M. J. (2014). [Exploration of complex visual feature spaces for object perception](#). Front. Comput. Neurosci. 2014 Sept 12; 8(106). doi: 10.3389/fncom.2014.00106 (refereed).

Lindsey, R., Shroyer, J., Pashler, H. and Mozer, M.C. (2014). [Improving long-term knowledge retention through personalized review](#). Psychological Science. 2014 Jan 20; 25(3):639-647. doi: 10.1177/0956797613504302.

Liu, T. and Behrmann, M. (2014). [Impaired holistic processing of left-right composite faces in congenital prosopagnosia](#). Frontiers in Psychology. 2014 Sept 29; 8(750). doi: 10.3389/fnhum.2014.00750, PMID: 25324755.

Liu, T., Hayward, W., Oxner, M., and Behrmann, M. (2014). Holistic processing for left-right composite faces in Chinese and Caucasian observers . Visual Cognition. 2014 Oct; 22(8):1050-1071. doi: 10.1080/13506285.2014.944613.
McGugin, R.W., Newton, A.T., Gore, J.C., Gauthier, I. (2014). Robust expertise effects in right FFA . Neuropsychologia. 2014 Oct.; 63:135-144. doi:10.1016/j.neuropsychologia.2014.08.029.
McGugin, R.W., Van Gulick, A.E. & Gauthier, I. (2015). Cortical Thickness in Fusiform Face Area Predicts Face and Object Recognition Performance . J Cogn Neurosci. 2016 Feb; 28(2): 282–294. Published online 2015 Oct 6. doi: 10.1162/jocn_a_00891.
McGugin, R.W., Van Gulick, A.E., Tamber-Rosenau, B.J., Ross, D.A. and Gauthier, I. (2014). Expertise effects in face selective areas are robust to clutter and diverted attention but not to competition . Cerebral Cortex. 2014 Mar 28. PMID: 24682187.
Mercado, E., III. (2015). Neural and cognitive plasticity. Emerging trends in the behavioral and social sciences: An interdisciplinary, searchable, and linkable resource, 1-13. doi: 10.1002/9781118900772.etrds0236.
Mercado, E., III. (2014). Relating cortical wave dynamics to learning and remembering . AIMS Neuroscience. 2014 Dec 1; 1(3):185-209. doi: 10.3934/Neuroscience.2014.3.185.
Mercado, E., III, Mantell, J. T., Pfordresher, P. Q. (2014). Imitating sounds: A cognitive approach to understanding vocal imitation . Comparative Cognition & Behavior Reviews. 9:17-74. doi: 10.3819/ccbr.2014.90002.
Miller, M., Chukoskie, L. Zinni, M., Townsend, J. and Trauner, D. (2014). Dyspraxia, Motor Function and Visual-Motor Integration in Autism . Behavioural Brain Research. 2014 Aug 1;269:95-102. doi: 10.1016/j.bbr.2014.04.011. ePub 2014 Apr 15. PMID: 24742861 [PubMed - in process].

Mizuseki, Diba, Pastalkova, Teeters, Sirota, Buzsáki (2014). [Neurosharing: large-scale data sets \(spike-LFP\) recorded from the hippocampal-entorhinal system in behaving rats](#). F1000Res. 2014 Apr 30; 3:98. doi: 10.12688/f1000research.3895.1. eCollection 2014.

Neumann, Y., Epstein, B., Yu., Y.H., Benasich, A.A., Shafer, V. (2014). [An electrophysiological investigation of discourse coherence in healthy adults](#). Clinical Linguistics & Phonology. 2014 Nov; 28(11):812-25. doi: 10.3109/02699206.2014.910555. Epub 2014 Apr 29.

Noh, E., Herzmann, G., Curran, T. and de Sa, V. (2014). [Using single-trial EEG to predict and analyze subsequent memory](#). NeuroImage. 2014 Jan 1; 84(1):712-723. doi: 10.1016/j.neuroimage.2013.09.028.

O'Hearn, K., Tanaka, J., Lynn, A., Fedor, J., Minshew, N., & Luna, B. (2014). [Developmental plateau in visual object processing from adolescence to adulthood in autism](#). Brain and cognition. 2014 Oct; 90, 124-134. doi:10.1016/j.bandc.2014.06.004.

Palmeri, T.J. (2014). [An exemplar of model-based cognitive neuroscience](#). Trends in Cognitive Science, 2014 Feb; 18(2):67-69. doi: <http://dx.doi.org/10.1016/j.tics.2013.10.014>.

Park, C., Plank, M., Snider, J., Kim, S., Huang, H.C., Gepshtein, S., Hillyard, S., Coleman, T., Poizner, H. (2014). [EEG gamma band oscillations differentiate the planning of spatially directed movement of the arm versus eye: multivariate empirical mode decomposition analysis](#). IEEE Transactions on Neural Systems and Rehabilitation Engineering. 22(5):1083-96.

Radell, M. L., & Mercado, E., III (2014). [Modeling possible effects of atypical cerebellar processing on eyeblink conditioning in autism](#). Cognitive, Affective, and Behavioral Neuroscience, 14(3):1142-1164. doi: 10.3758/s13415-014-0263-1. Published online: 2014 Mar 4.

Rangel, L.M., Alexander, A.S., Aimone, J.B., Wiles, J., Gage, F.H., Chiba, A.A. and Quinn, L.K. (2014). [Temporally selective contextual encoding in the dentate gyrus of the hippocampus](#). Nature Communications. 2014 Feb 12; (5):3181. doi:10.1038/ncomms4181.

<p>Richler, J.J., Floyd, R.J., & Gauthier, I. (2014). The Vanderbilt Holistic Face Processing Test: a short and reliable measure of holistic face processing. Journal of Vision. 2014 Sept 16; 14(11): 10, 1-14. doi: 10.1167/14.11.10.</p>
<p>Richler, J.J. & Gauthier, I. (2014). A meta-analysis and review of holistic processing. Psychological Bulletin, 2014 Sept; 140(5):1281-302. doi: 10.1037/a0037004. Epub 2014 Jun 23.</p>
<p>Richler, J.J. and Palmeri, T.J. (2014). Visual category learning. Wiley Interdisciplinary Reviews in Cognitive Science. 2014 Jan/Feb; 5(1):75-94. doi: 10.1002/wcs.1268. ePub 2013 Nov 26.</p>
<p>Rissling, A.J., Miyakoshi, M., Sugar, C.A., f, Braff, D.L., Makeig, S., Light, G.A. (2014). Cortical substrates and functional correlates of auditory deviance processing deficits in schizophrenia. NeuroImage: Clinical. 2014; 6:424–437. doi:10.1016/j.nicl.2014.09.006.</p>
<p>Rogowsky, B.A., Calhoun, B.M., & Tallal, P. (2014, July 28). Matching Learning Style to Instructional Method: Effects on Comprehension. Journal of Educational Psychology. 2014 Jul 28; http://dx.doi.org/10.1037/a0037478.</p>
<p>Ross, D.A., Deroche, M. and Palmeri, T.J. (2014). Not just the norm: Exemplar-based models also predict face aftereffects. Psychonomic Bulletin & Review. 2014 Feb; 21(1):47-70. doi: 10.3758/s13423-013-0449-5.</p>
<p>Ross, D. A., Richler, J.J., & Gauthier, I. (2014). Reliability of Composite Task Measurements of Holistic Face Processing. Behavioral Research Methods, 22(6), 1-8. 10.3758/s13428-014-0497-4.</p>
<p>Roux L, Stark E, Sjulson L, Buzsáki G. In vivo optogenetic identification and manipulation of GABAergic interneuron subtypes. (2014). Current Opinion Neurobiology. 2014 Jan 14; 26C:88-95. doi: 10.1016/j.conb.2013.12.013. [ePub ahead of print] PMID:24440414.</p>
<p>Sathyanarayana, S., Satzoda, R.K., Carini, A., Lee, M., Salamanca, L., Reilly, J., Forster, D., Bartlett, M., Littlewort, G. (2014). Towards Automated Understanding of Student-Tutor Interactions using</p>

[Visual Deictic Gestures](#). IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops. 2014; 474-481.

Schomburg, E., Fernández-Ruiz, A., Mizuseki, K., Berényi, A., Anastassiou, C.A., Koch, C., Buzsáki, G. (2014). [Theta Phase Segregation of Input-Specific Gamma Patterns in Entorhinal-Hippocampal Networks](#). *Neuron*. 2014 Oct. 22; 84(2):470-485. doi:10.1016/j.neuron.2014.08.051. [Epub ahead of print].

Sejnowski, T.J., Poizner, H., Lynch, G., Gepshtein, S. and Greenspan, R. (2014). [Prospective optimization](#), *Proceedings of the IEEE on Cognitive Dynamic Systems*. 2014 May; 102(5). doi: 10.1109/JPROC.2014.2314297.

Shen, J., Mack, M.L., & Palmeri, T.J. (2014). [Studying real-world perceptual expertise](#). *Frontiers in Cognition*. 2014 Aug 6: Vol. 5; Article 857. doi: 10.3389/fpsyg.2014.00857.

Sigurdardottir, H.M., Michalak, S.M. and Sheinberg, D.L. (2014). [Shape beyond recognition: Form-derived directionality and its effects on visual attention and motion perception](#), *Journal of Experimental Psychology: General*. 2014 Feb; 143(1):434-54. doi: 10.1037/a0032353. ePub 2013 Apr 8.

Smith, C.N. (2014). [Retrograde memory for public events in mild cognitive impairment and its relationship to anterograde memory and neuroanatomy](#). *Neuropsychology*. 2014 Nov; 28(6):959-72. doi: 10.1037/neu0000117. Epub 2014 Jul 28. 28(6), 959-972.

Smith, C.N., Jeneson, A., Frascino, J.C., Kirwan, C.B., Hopkins, R.O., & Squire, L.R. (2014). [When recognition memory is independent of hippocampal function](#). *Proceedings of the National Academy of Sciences, U. S. A.*, 111, 9935-9940. PMID: PMC4103374. Published online 2014 Jun 23. doi: 10.1073/pnas.1409878111.

Smith, C. N., Urgolites, Z. J., Hopkins, R. O., and Squire, L. R. (2014). [A comparison of explicit and incidental learning strategies in memory-impaired patients](#). *Proceedings of the National Academy of Sciences, U. S. A.*, 111, 475-479. PMID: PMC3890873. Published online 2013 Dec 23. doi: 10.1073/pnas.1322263111.

Snider, J., Lee, D., Harrington, D. and Poizner, H. (2014). [Scaling and coordination deficits during dynamic object manipulation in Parkinson's disease](#). Journal of Neurophysiology. April; 112:300-325. doi: 10.1152/jn.00041.2014.

Stewart Bartlett, M., Littlewort, G.C., Frank, M.G., Lee, K. (2014). [Automatic Decoding of Facial Movements Reveals Deceptive Pain Expressions](#). Current Biology, 24(7):738–743, 2014 Mar 31. doi: <http://dx.doi.org/10.1016/j.cub.2014.02.009>

Sullivan, D., Mizuseki, K., Sorigi, A., Buzsáki, G. (2014). [Comparison of sleep spindles and theta oscillations in the hippocampus](#). J Neurosci. 2014 Jan 8; 34(2):662-74. doi: 10.1523/JNEUROSCI.0552-13.2014.

Tanaka, J.W., Kaiser, M.D., Hagen & Pierce, L.J. (2014). [Losing face: Impaired discrimination of featural and configural information in the mouth region of an inverted face](#). Attention, Perception & Psychophysics, 76, 1000-1014. Published online 2014 Jan 30. 10.3758/s13414-014-0628-0.

Tanaka, J.W., Quinn, P., Xu, B., Maynard, K., Huxtable, Kang, L. & Pascalis, O. (2014). [The effects of information type \(features versus configuration\) and location \(eyes versus mouth\) on the development of face perception](#). Journal of Experimental Child Psychology, 2014; 124, 36-49. Available online 2014 Apr 18. <http://dx.doi.org/10.1016/j.jecp.2014.01.001>.

Till, B. C., Masson, M. E. J., Bub, D. N., & Driessen, P. F. (2014). [Embodied effects of conceptual knowledge continuously perturb the hand in flight](#). Psychological Science, 25, 1637-1648. doi: 10.1177/0956797614538842.

Torres, L., Cole, J., Poizner, H. (2014). [Motor output variability, deafferentation, and putative deficits in kinesthetic reafference in Parkinson's disease](#). Frontiers in Human Neuroscience, 8:823. PMC4204460. Published online 2014 Oct 21. doi: 10.3389/fnhum.2014.00823

Van Gulick, A.E, Gauthier, I. (2014). [The perceptual effects of learning object categories that predict perceptual goals](#). Journal of Experimental Psychology: Learning, Memory, and Cognition, 40(5): 1307-20. Advance online publication. <http://dx.doi.org/10.1037/a0036822>.

Vandecasteele, M., Varga, V., Berényi, A., Papp, E., Barthó, P., Venance, L., Freund, T., Buzsáki, G.. (2014). [Optogenetic activation of septal cholinergic neurons suppresses sharp wave ripples and enhances theta oscillations in the hippocampus](#). Proc Natl Acad Sci U S A. 2014 Sep 16; 111(37):13535-40. doi: 10.1073/pnas.1411233111. Epub 2014 Sep 2.

Velu, P., Mullen, T., Noh, E., Valdivia, M., Poizner, H., Baram, Y. abd de Sa, V. (2014) [Effect of visual feedback on the occipital-parietal-motor network in Parkinson's disease with freezing of gait](#). Frontiers in Neurology. 2014 Jan 9; 4:209,1-6. doi: 10.3389/fneur.2013.00209. eCollection 2014.

Wang, P., Gauthier, I., Cottrell, G. (2014). [Experience Matters: Modeling the relationship between face and object recognition](#). 36th Annual Conference of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Weyhenmeyer, J., Hernandez, M., Lainscsek, C., Sejnowski, T.J., Poizner, H. (2014). [Muscle Artifacts in Single Trial EEG data Distinguish Patients with Parkinson's Disease from Healthy Individuals](#). Conference Proceedings IEEE EMBS Society, 2014 Aug;2014:3292-3295. doi: 10.1109/EMBC.2014.6944326.

Whitehill, J., Serpell, Z., Lin, Y, Foster, A., and Movellan, J.R. (2014). [The Faces of Engagement: Automatic Recognition of Student Engagement From Facial Expressions](#). IEEE Transactions on Affective Computing. 10 April 2014; 5(1)86-98. doi: 10.1109/TAFFC.2014.2316163.

Wisniewski, M. G., Church, B.A., & Mercado, E., III (2014). [Individual differences during acquisition predict shifts in generalization](#). Behavioural Processes. 2014 May; 104:26-34. doi: 10.1016/j.beproc.2014.01.007 . Epub 2014 Jan 18.

Wisniewski, M.G., Liu, E.L., Church, B.A. and Mercado, E., III. (2014). [Learning to discriminate frequency modulation rate can benefit and worsen pitch acuity](#). Journal of the Acoustical Society of America. 2014; 135, EL55-60. doi: 10.1121/1.4862886.

Wisniewski, M. G., Mercado, E., III, Church, B. A., Gramann, K., & Makeig, S. (2014). [Brain dynamics that correlate with effects of learning on auditory distance perception](#). Frontiers in Neuroscience.

2014 Dec 9; 8(396). doi: 10.3389/fnins.2014.00396.
Wong, C., Olafsson, V., Plank, M., Snider, J., Halgren, E., Poizner, H., Liu, T. (2014). Resting-state fMRI activity predicts unsupervised learning and memory in a virtual reality environment . PLoS ONE. Oct 6; 9(10):e109622. doi: 10.1371/journal.pone.0109622. eCollection 2014.
Wong, Y.K., Peng, C., Fratus, K.N., Woodman, G.F. and Gauthier, I. (2014). Perceptual expertise and top-down expectation of musical notation engages the primary visual cortex . J Cogn Neurosci. 2014 Aug; 26(8): 1629–1643. Published online 2014 Mar 25. doi: 10.1162/jocn_a_00616.
Xu, B., & Tanaka, J. W. (2014). The cued recognition task: dissociating the abrupt onset effect from the social and arrow cueing effect . Attention, Perception, & Psychophysics, 1-14. Published online 2014 Sept 5. 10.3758/s13414-014-0763-7.
Yang, L., Leung, H., Peterson, D., Sejnowski, T. and Poizner, H. (2014). Toward a Semi-Self-Paced EEG Brain Computer Interface: Decoding Initiation State from Non-Initiation State in Dedicated Time Slots . PLoS ONE. 2014 February 21;9(2): e88915. doi: 10.1371/journal.pone.0088915.
Zachariou, V., Klatzky, R. and Behrmann, M. (2014). Ventral and Dorsal Visual Stream Contributions to the Perception of Object Shape and Object Location , Journal of Cognitive Neuroscience, (1):189-209.
Zandbelt, B.B., Purcell, B.A., Palmeri, T.J., Logan, G.D. and Schall, J.D. (2014). Response times from ensembles of accumulators . Proceedings of the National Academy of Sciences 2014. doi: 10.1073/pnas.1310577111. ePub 2014 Feb 4.
Zhang, S., Xu, M., Kamigaki, T., Hoang, J.P., Chang, W.C., Jenvay, S., Miyamichi, K., Luo, L., Dan, Y. (2014). Long-range and local circuits for top-down modulation of visual cortex processing . Science. 345, 660-665. doi: 10.1126/science.1254126.

2014 Conference Presentations

- Aminoff, E., Toneva, M., Gupta, A., & Tarr, M. (2014, November). High-dimensional encoding of scenes in the PPA, RSC, and OPA. Poster presented at the annual meeting of the Society for Neuroscience, Washington, D.C.
- Aminoff, E. & Tarr, M. (2014, May). Anterior to posterior parahippocampal organization of scene information. *Journal of Vision*, 14, 1079. Poster presented at the annual meeting of the Vision Science Society, St. Pete, FL.
- Avidan, G., Tanzer, M. and Behrmann, M. (2014). Structural and functional impairment of the face processing network in congenital prosopagnosia. Vision Sciences Society, Florida.
- Bartlett, M. (2014). Emotion Aware Machines. TEDx presentation at "[Transformation Through Us](#)" event held at San Diego State University, Oct. 11, 2014.
- Behrmann, M. (2014). Speaker, Big Data and Neurodevelopmental Disorders, World Economic Forum, Tianjian China.
- Behrmann, M. (2014). Keynote speaker, Cognitive Neuroscience Society, April, Boston.
- Behrmann, M. (2014). Keynote speaker, Lake Ontario Visual Conference (LOVE), Niagara Falls, February.
- Benasich, A.A. (2014). CASBS Game Changing Lecture, Stanford University, "Setting up Language: Brain waves, oscillations and precise timing impact early acoustic mapping," Center for Advanced Study in the Behavioral Sciences, Stanford University, February 25.
- Chang, L., Robenalt, C., Wade, S., & DeÁk, G. (2014, April). Maternal speech content at 9 and 12 months: Lexical diversity, discourse types, and infant language outcomes. Jean Piaget Society Meeting, San Francisco, CA.
- Choudhury, N., Ortiz-Mantilla, Parascando, J. & Benasich, A.A. (2014). "Theta oscillations during processing of rapid frequency change differ between infants with a family history of Specific Language Impairment and controls". (Program No. 556.19/TT63) Presented at the Society for Neuroscience Meetings in Washington, DC, November 15th-19th, 2014.
- Cipollini, B. and Cottrell, G.W. (2014). A developmental approach to long-distance connectivity. Presentation at NCPW14, Lancaster, UK,
- Cipollini, B. and Cottrell, G.W. (2014). A Developmental Model of Hemispheric Asymmetry of Spatial Frequencies. Presented in Cognitive Science Society Annual Meeting, Quebec City, Canada.
- De Barbaro, K., Johnson, C., & Deák, G. (2014, July). Development of joint attention in naturalistic interactions: The role of the hands. International Conference on Infant Studies Biennial meeting, Berlin, DDR.
- De Barbaro, K., Johnson, C., Deák, G., & Forster, D. (2014, April). The emergence of communication within mother-infant sensory-motor coordination. Jean Piaget Society Meeting, San Francisco, CA.
- Deák, G.O., Liao, Y., & Makeig, S. (2014, September). Measuring brain activity during social interactions: EEG imaging and motion capture of toddler-parent dyads. Developmental Methodology conference, San Diego, CA.
- Deák, G. (2014). Interviewed on [Hangout On Air](#). August 5, 2014.

- Dundas, E., Gabay, Y., Plaut, D. C. and Behrmann, M. (2014). Altered hemispheric organization for faces and words in developmental dyslexia. Vision Sciences Society, 2014.
- Gage, F. (2014). Keynote Address at the [USC Stem Cell Symposium](#) (11/17/14)
- Gordon, I., Pierce, M., Bartlett, M. and Tanaka, J.W. (2014). Facemaze: An Intervention for Facial Expression Production in Autism Spectrum Disorder. International Meeting for Autism Research (IMFAR), Atlanta, GA, May 14-17.
- Haar, S., Berman, S., Behrmann, M. and Dinstein, I. (2014). Anatomical MRI Abnormalities in Autism? IMFAR, 2014.
- Hahamy, A., Behrmann, M. and Malach, R. (2014) Idiosyncratic inter-hemispheric functional connectivity patterns in autism. Human Brain Mapping.
- Harris, H., Egan, R., Gupta, A., Minshew, N. J., Bonneh, Y., Heeger, D., Sagi, D. and Behrmann, M. (2014). Visual learning in autism. Vision Sciences Society, 2014.
- Kanan, C. (2014). Fine-Grained Object Recognition with Gnostic Fields. In Proceedings of the IEEE Winter Applications of Computer Vision Conference (WACV-2014), Steamboat Springs, CO, March 24-26.
- Kanan, C.M., Ray, N.A., Bseiso, D.N.F., Hsiao, J.H. and Cottrell, G.W. (2014). Predicting an observer's task using Multi-Fixation Pattern Analysis. In Proceedings of the Annual Eye Tracking Research & Applications Symposium (ETRA 2014), Safety Harbor, FL, March, 24-26.
- Khajah, M., Wing, R. M., Lindsey, R. V., & Mozer, M. C. (2014) Incorporating latent factors into knowledge tracing to predict individual differences in learning. Proceedings of the Seventh International Conference on Educational Data Mining. [Awarded Best Paper of Conference].
- Kobelsky, C., Bub, D. N., & Masson, M. E. J. (November, 2014). Time course of evoked action representations. Annual meeting of the Psychonomic Society, Long Beach, CA.
- Kumar, R., Masson, M. E. J., & Bub, D. N. (November, 2014). Form follows function: The time course of hand action representations evoked by handled objects. Annual meeting of the Psychonomic Society, Long Beach, CA.
- Logan, G.D., Palmeri, T.J., & Schall, J.D. (2014). A gated accumulator model of cognitive control. Presented at the Association for Psychological Science, San Francisco, CA.
- Musacchia, G., Choudhury, N., Ortiz-Mantilla, Realpe-Bonilla, T., Lovering, H., Shell, R. & Benasich, A.A. (2014). "Spatial and temporal neural dynamics in infant development with early auditory experience". (Program No. 556.24/TT68) Presented at the Society for Neuroscience Meetings in Washington, DC, November 15th-19th, 2014.
- Nestor, A., Liu, T., Patterson, C. and Behrmann, M. (2014). Recovery of high-level visual functions in patients with hemispherectomy. Society for Neurosciences, Washington, November.
- Nestor, A., Plaut, D. C. and Behrmann, M. (2014). Facial identity: An investigation of neural encoding and image reconstruction. Vision Sciences Society, 2014.
- Ortiz-Mantilla, S. Hämmäläinen, J.A. & Benasich, A.A. (2014). "Neural dynamics of perceptual narrowing for phonemes in infants". (Program No. 556.26/TT70) Presented at the Society for Neuroscience Meetings in Washington, DC, November 15th-19th, 2014.

Palmeri, T.J. (2014). Linking sequential sampling models with neurons. Presented at Workshop on Sequential Sampling Models for Cognitive and Perceptual Decision Making, Cognitive Science Society meeting, Quabec City, Quabec, Canada.

Palmeri, T.J., Umakantha, A., & Purcell, B.A. (2014). On making connections between cognitive models and neural data. Presented at the Society for Mathematical Psychology meeting, Quebec City, Quebec, Canada.

Peters, S., Musacchia, G., Ortiz-Mantilla, S., Choudhury, N. & Benasich, A. A. (2014), "Spontaneous brain oscillations in 4- and 7-month old infants", March 2014, Inter-Science of Learning Meeting, Philadelphia, PA.

Peterson, D. A., Sejnowski, T. J. (2014). Toward a computational model of dopamine-modulated STDP at the corticostriatal synapse. Presentation at Gordon Research Conference, Mechanisms of Neural Development, Circuit Assembly, Synaptic Plasticity and Neuropsychiatric Disorders, Hong Kong.

Peterson, D. A., Sejnowski, T. J. (2014). A theoretical model for the pathogenesis of adult onset dystonia due to GNAL mutations. Presentation at Annual Meeting of the Society for Neuroscience, Washington, D.C.

Reilly, J. & Polse, L. (2014). Neuroplasticity: Spoken and Written Discourse after Perinatal Stroke, Talk presented at SIG Writing, Amsterdam, August 2014.

Rosenthal, G. Tanzer, M., Behrmann, M. and Avidan, G. Mapping the Topology of the Face Processing Network in Congenital Prosopagnosia (2014). Society for Neurosciences, Washington, November.

Scherf, S., Behrmann, M., Thomas, C., Avidan, G. and Elbich, D. (2014). Structural properties of white matter circuits necessary for face perception. Vision Sciences Society, Florida.

Sejnowski, T. and Eldar Trio. (2014). Presentation at the [Salk Science & Music Series](#). November 2.

Sejnowski, T., & Oakley, B. (2014). Presented a Coursera "Learning How to Learn: Powerful Mental Tools to Help You Master Tough Subjects." (Aug. 2014, Oct. 2014).

Shomstein, S., Uyar, F., Greenberg, A. S. and Behrmann, M. (2014). Sensory Processing with Varying Degrees of Attention: Lessons from Parietal Lobe Damage, Society for Neurosciences, Washington, November.

Smith, C.N., Clark, R.E., Squire, L.R. (2014). Hippocampal brain activity and functional connectivity in humans change as material is forgotten across one month. Presentation at the Annual Meeting of the Society for Neuroscience, Washington, DC, November 2014.

Smith, C. N., Jeneson, A., Frascino, J. C., Kirwan, C. B., Hopkins, R. O., & Squire, L. R. (2014). When recognition memory is independent of hippocampal function. International Society for Behavioral Neuroscience Annual Meeting, Amsterdam, June 2014.

Susskind J, Bartlett M, Neiman M, Wazny, M., Tanaka, J., Xu B. (2014). Emotion detection: Through the looking glass. Demo, Vision Science Society.

Toneva, M., Aminoff, E., Gupta, A., & Tarr, M. (2014, May). Towards a model for mid-level feature representation of scenes. *Journal of Vision*, 14, 363. Poster presented at the annual meeting of the Vision Science Society, St. Pete, FL.

Umakantha, A., Purcell, B.A., & Palmeri, T.J. (2014). Relating a spiking neural network model and the diffusion model of decision making to investigate neural mechanisms of speed-accuracy tradeoffs. Presented at the Society for Neuroscience meeting, Washington, DC.

Umakantha, A., Purcell, B.A., & Palmeri, T.J. (2014). Inferring neural mechanisms from cognitive model parameters: Relations between the diffusion model and a spiking neural network model of perceptual decision making. Presented at the Society for Mathematical Psychology meeting, Quebec City, Quebec, Canada.

Wade, S., Chang, L., Robenalt, C., & Deak, G. (2014, July). Maternal speech content during toy play at 9 and 12 months: Longitudinal stability and prediction of infant language. International Conference on Infant Studies Biennial meeting, Berlin, DDR.

Yang, L., Leung, H., Plank, M., Snider, J. and Poizner, H. (2014). Alpha and beta band power changes predict reaction time and endpoint error during planning reaching movements. 7th International Congress on Image and Signal Processing (CISP 2014), Dalian, China (accepted). 7th International Conference on BioMedical Engineering and Informatics (BMEI 2014). IEEE 978-1-4799-5838.

Yang, Y., Tarr, M. J., & Kass, R. E. (2014). Estimating learning effects: A short-time fourier transform regression model for MEG source localization. In Springer Lecture Notes on Artificial Intelligence: MLINI 2014: Machine learning and interpretation in neuroimaging. (refereed).

2014 Books/Chapters

Aminoff, E. M. & Tarr, M. J. (2014). Perception and Cognition. In H. Miller (ed.), *SAGE Encyclopedia of Theory in Psychology*. SAGE Publications, Inc. (invited), DOI: <http://dx.doi.org/10.4135/9781483346274.n227>.

Behrmann, M. and Minshew, N. (2014). Sensory processing in autism. In M. Leboyer and P. Chaste (Eds.) *Autism Spectrum Disorders: Phenotypes, mechanisms and treatments*. Karger Medical and Scientific Publishers. Basel, Switzerland.

Behrmann, M., Richler, J. J., Avidan, G. and Kimchi, R. (2014) Holistic Face Perception. In J. Wagemans (Ed.) *Handbook of Perceptual Organization*. Oxford Handbooks Online. 10.1093/oxfordhb/9780199686858.013.010

Chukoskie, L., Snider, J., Mozer, M.C., Krauzlis, R.J., and Sejnowski, T.J. (2014). Chapter 14: Learning where to look for a hidden target. National Research Council. In *Light of Evolution, Volume VII: The Human Mental Machinery*, Washington, DC: The National Academies Press.

Deák, G.O. (2014). Interrelations of language and cognitive development. *Encyclopedia of Language Development*, (pp. 284-291). P. Brooks & V. Kampe, Eds. Thousand Oaks, CA: SAGE.

Deák, G.O. (2014). Slow mapping in lexical development. *Encyclopedia of Language Development* (pp. 544-547). P. Brooks & V. Kampe, Eds. Thousand Oaks, CA: SAGE.

Deák, G.O. (2014). Development of adaptive tool-use in early childhood: Sensory-motor, social, and conceptual factors. In J. Benson (Ed.), *Advances in Child Development and Behavior*, 46, 149-181.

Nosofsky, R.M. and Palmeri, T.J. (2015). Exemplar-based random walk model. To appear in J.R. Busemeyer, J. Townsend, Z.J. Wang and A. Eidels (Eds.), *Mathematical and Computational Models of Cognition*, Oxford University Press.

Reilly, J., Bernicot, J., Olive, T., Favart, M., Wulfeck, B. and Appelbaum, A. (in press, 2014). Written narratives from French and English speaking children with Language Impairment. In Arfé, Dockrell, j, Berninger, V. (Eds). *Handbook of Writing development and instruction in children with hearing, speech and oral language difficulties*. Oxford: Oxford University Press.

Reilly, JS & Polse, L. (2014). Neuroplasticity: Language and Emotional Development in Children with Perinatal Stroke. In Miozzo, M., de Zubicaray & Schiller (Eds.), *Handbook of Neurolinguistics*, Oxford University Press.

Whitehill, J., Bartlett, M., and Movellan, J.R. (2014). Automatic Facial Expression Recognition. In J. Gratch and S. Marsella, editors, *Social Emotions in Nature and Artifact*. Oxford University Press, 2014.

2013 Publications

TDLIC Publications 2013

Alivisatos, A.P., Chun, M., Church, G.M., Deisseroth, K., Donoghue, J.P., Greenspan R.J., McEuen, P.L., Roukes, M.L., Sejnowski, T.J., Weiss, P.S. and Yuste, R. (2013). [The Brain Activity Map](#), Science. 2013 Mar 15; 339(6125): 1284–1285. Published online 2013 Mar 7. doi: 10.1126/science.1236939.

Avidan, G., Hadj-Bouziane, F., Liu, N., Ungerleider, L., & Behrmann, M. (2013). [Selective dissociation between core and extended regions in the face processing network in congenital prosopagnosia](#). Cereb Cortex. 2014 Jun; 24(6): 1565–1578. Published online 2013 Jan 31. doi: 10.1093/cercor/bht007.

Behrmann, M. and Plaut, D.C. (2013). [Distributed circuits, not circumscribed centers, mediate visual recognition](#). Trends in Cognitive Science. 2013 May;17(5):210-9. doi: 10.1016/j.tics.2013.03.007. ePub 2013 Apr 20.

Broadbent N.J. and Clark R.E. (2013). [Remote context fear conditioning remains hippocampus-dependent irrespective of training protocol, training-surgery interval, lesion size, and lesion method](#). Neurobiology of Learning and Memory. 2013 Nov;106:300-8. doi: 10.1016/j.nlm.2013.08.008. ePub 2013 Aug 27.

Bub, D., Masson, M. & Lin, T. (2013). [Features of hand actions contribute to naming graspable objects](#). Psychological Science, 24(7) 1269-1276, DOI: 10.1177/0956797612472909.

Choe, M.S., Ortiz-Mantilla, S., Makris, N., Gregas, M., Bacic J., Kennedy, D., Pienarr, R., Caviness, V.S., Benasich, A.A. and Grant, P.E. (2013). [Regional infant brain development: An MRI-based morphometric analysis in 3 to 13 month-olds](#). Cereb Cortex. 2013 Sep; 23(9): 2100–2117. Published online 2012 Jul 6. doi: 10.1093/cercor/bhs197.

Chukoskie, L., Snider, J., Mozer, M., Krauzlis, R., Sejnowski, T. (2013). [Learning where to look for a hidden target](#), Proceedings of the National Academy of Sciences USA, 110, 10438–10445, 2013 PMID:PMC3690606.

Church, B.A., Mercado, E., Wisniewski, M.G. and Liu, E.H. (2013). [Temporal dynamics in auditory perceptual learning: Impact of sequencing and incidental learning](#). Journal of Experimental Psychology: Learning, Memory and Cognition. 2013 Jan;39(1):270-6. doi: 10.1037/a0028647. ePub 2012 May 28.

Clark, R.E. (2013). [Recognition memory: an old idea given new life](#). Current Biology. 2013 Sep 9;23(17):R725-7. doi: 10.1016/j.cub.2013.07.037.

Clark, R.E. (2013). [The neurobiology of remote memory in the experimental animal](#). Neurobiology of Learning and Memory. 2013 Nov;106:292–293. doi: 10.1016/j.nlm.2013.11.001. ePub 2013 Dec 16.

Clarke, A.M., Greczkowski, L., Mast, F.W., Gauthier, I. and Herzog, M. (2013). [Deleterious effects of roving on learned tasks](#). Vision Research. 2014 Jun;99:88-92. doi: 10.1016/j.visres.2013.12.010. ePub 2013 Dec 30. In press.

Clark R.E. and Sutherland R.J. (2013). [Neurobiology of Learning and Memory](#). 2013 Nov;106:292-3. doi: 10.1016/j.nlm.2013.11.001

Cowell, R.A. and Cottrell, G.W. (2013). [What evidence supports special processing for faces? A cautionary tale for fMRI interpretation](#). Journal of Cognitive Neuroscience. 2013 Nov;25(11):1777-93. doi: 10.1162/jocn_a_00448. ePub 2013 Jul 16.

De Barbaro, K., Johnson, C. and Deák, G.O. (2013). [Twelve-month ‘social revolution’ emerges from mother-infant sensory-motor coordination: A longitudinal investigation](#). Human Development. 2013;56:223-248. doi: 10.1159/000351313.

De Barbaro, K., Forster, K., Johnson, C.M. and Deák, G.O. (2013). [Methodological considerations for bridging micro- and macro-behavioral data in studies of social interaction](#). IEEE Transactions on Autonomous Mental Development. 2013 Sept;5(3):258-270. doi: 10.1109/TAMD.2013.2276611.

Depue, B.E., Ketz, N., Mollison, M.V., Nyhus, E., Banich, M.T. and Curran, T. (2013). [ERPs and Neural Oscillations during Volitional Suppression of Memory Retrieval](#). Journal of Cognitive Neuroscience. 2013 Oct;25(10):1624-33. doi: 10.1162/jocn_a_00418. ePub 2013 May 6.

Dovgopoly, A. and Mercado, E., III (2013). [A connectionist model of category learning by individuals with high-functioning autism spectrum disorder](#). Cognitive, Affective, and Behavioral Neuroscience. 2013;133:371-389. doi: 10.3758/s13415-012-0148-0.

Dundas, E., Plaut, D. and Behrmann, M. (2013). [The joint development of hemispheric lateralization for words and face](#). Journal of Experimental Psychology: General. 2013;142(2):348-58. doi: 10.1037/a0029503. PMID: 22866684.

Ellis, E., Robledo, M. and Deák, G.O. (2013). [Contingency learning in infancy and its relation to later vocabulary](#). Language Learning and Development. 2013;1-15. doi: 10.1080/15475441.2013.799988.

Folstein, J., Palmeri, T.J. and Gauthier, I (2013). [Category learning increases discriminability of relevant object dimensions in visual cortex](#). Cerebral Cortex. 2013 Apr;23(4):814-23. doi: 10.1093/cercor/bhs067. ePub 2012 Apr 5.

Gaspelin, N., Ruthruff, E. and Pashler, H. (2013). [Divided attention: An undesirable difficulty in memory retention](#). Memory & Cognition. 2013 Oct;41(7):978-88. doi: 10.3758/s13421-013-0326-5.

Gepshtein, S., Li, X., Snider, J., Plank, M., Lee, D. and Poizner, H. (2013). [Dopamine function and the efficiency of human movement](#). Journal of Cognitive Neuroscience. 2014 Mar;26(3):645-57. doi: 10.1162/jocn_a_00503. ePub 2013 Oct 21.

Gilae-Dotan, S., Saygin, A.P., Lorenzi, L., Egan, R., Rees, G. and Behrmann, M. (2013). [The role of human ventral visual cortex in motion perception](#). Brain. 2013;136:2784-2798. doi:10.1093/brain/awt214.

Harris K.D. (2013). [Top-down control of cortical state](#). Neuron. 2013 Aug 7;79(3):408-10. doi: http://dx.doi.org/10.1016/j.neuron.2013.07.034.

Harris, C.R., Coburn, N., Rohrer, D. and Pashler, H. (2013). [Two failures to replicate high-performance-goal priming effects](#). PLoS ONE. 2013 Aug 16;8(8):e72467. doi: 10.1371/journal.pone.0072467.

Harris, K.D. and Mrsic-Flogel, T. (2013). [Cortical connectivity and sensory coding](#). Nature. 2013 Nov 7;503(7474):51-8. doi: 10.1038/nature12654.

Heim, S., Keil, A., Choudhury, N., Thomas Friedman, J. and Benasich A.A. (2013). [Early gamma oscillations during rapid auditory processing in children with a language-learning impairment: Changes in neural mass activity after training](#). Neuropsychologia. 51(5):990-1001. doi: 10.1016/j.neuropsychologia.2013.01.011.

Herzmann, G., Bird, C. W., Freeman, M. and Curran, T. (2013). [Effects of oxytocin on behavioral and ERP measures of recognition memory for own-race and other-race faces in women and men](#). Psychoneuroendocrinology. 2013 Oct;38(10):2140-2151. doi: 10.1016/j.psyneuen.2013.04.002.

Herzmann G. and Curran, T. (2013). [Neural Correlates of the In-Group Memory Advantage on the Encoding and Recognition of Faces](#). PLoS ONE. 2013 Dec 17;8(12):e82797. doi: 10.1371/journal.pone.0082797.

Hsiao, J.H., Cipollini, B. and Cottrell, G.W. (2013). [Hemispheric asymmetry in perception: A differential encoding account](#). Journal of Cognitive Neuroscience. 2013 Jul;25(7):998-1007. doi: 10.1162/jocn_a_00377. Epub 2013 Feb 28.

Jones, M., Curran, T., Mozer, M.C. and Wilder, M.H. (2013). [Sequential effects in response time reveal](#)

[learning mechanisms and event representations](#). Psychological Review. 2013;120(3): 628-666. doi: 10.1037/a0033180.

Kanan, C. (2013). [Recognizing Sights, Smells, and Sounds Using Gnostic Fields](#). PLoS ONE. 2013 Jan 24; 8(1):e54088. doi: 10.1371/journal.pone.0054088.

Kanan, C. (2013). [Active Object Recognition with a Space-Variant Retina](#). ISRN Machine Vision. 2013 Oct:138057. doi: 10.1155/2013/138057.

Khalil, A.K., Mincev, V.H., McLoughlin, G. and Chiba, A. (2013). [Group rhythmic synchrony and attention in children](#). Front Psychol. 2013; 4: 564. Published online 2013 Sep 2. doi: 10.3389/fpsyg.2013.00564.

Lainscsek, C., Hernandez, M., Weyhenmeyer, J., Sejnowski, T.J. and Poizner, H. (2013). [Non-linear dynamical analysis of EEG time series distinguishes patients with Parkinson's disease from healthy individuals](#). Frontiers in Neurology. 2013;4(200):1-8. doi: 10.3389/fneur.2013.00200.

Lainscsek, C., Hernandez, M., Weyhenmeyer, J., Poizner, H. and Sejnowski, T.J. (2013). [Non-linear dynamical classification of short time series of the Rössler system in high noise regimes](#). Frontiers in Neurology. 4:182. doi: 10.3389/fneur.2013.00182.

Leeds, D.D., Seibert, D.A., Pyles, J.A. and Tarr, M.J. (2013). [Comparing visual representations across human fMRI and computational vision](#). Journal of Vision. 2013 Nov 22;13(13). doi: 10.1167/13.13.25.

Lindsey, R.V., Mozer, M.C., Huggins, W.J. and Pashler, H. (2013). [Optimizing instructional policies](#). In C.J.C. Burges et al. (Eds.), Advances in Neural Information Processing Systems 26. La Jolla, CA: NIPS Foundation. [Among the 20 of 1420 submissions accepted for oral presentation]. NIPS 2013: 2778-2786.

Luczak, A., Bartho, P. and Harris, K.D. (2013). [Gating of sensory input by spontaneous cortical activity](#). Journal of Neuroscience. 2013 Jan 23;33(4):1684-1695; doi: <http://dx.doi.org/10.1523/JNEUROSCI.2928-12.2013>.

Lukos, J., Snider, Hernandez, M., Tunik, E., Hillyard, S. and Poizner, H. (2013). [Parkinson's disease patients show impaired corrective grasp control and eye-hand coupling when reaching to grasp virtual objects](#). Neuroscience. 2013 Dec 19;254:205-221. doi: [10.1016/j.neuroscience.2013.09.026](https://doi.org/10.1016/j.neuroscience.2013.09.026). (Article featured on the cover).

Masson, M.E.J., Bub, D.N. and Lavelle, H. (2013). [Dynamic evocation of hand action representations during sentence comprehension](#). Journal of Experimental Psychology: General. 2013 Aug;142(3):742-62. doi: [10.1037/a0030161](https://doi.org/10.1037/a0030161). ePub 2012 Oct 1.

McDaniel, M.A., Fadler, C. and Pashler, H. (2013). [Effects of spaced versus massed training in function learning](#). Journal of Experimental Psychology: Learning, Memory, & Cognition. 2013 Sept;39(5):1417-1432. doi: [10.1037/a0032184](https://doi.org/10.1037/a0032184).

Minces, V.H., Alexander, A.S., Datlow, M., Alfonso, S.I. and Chiba, A.A. (2013). [The role of visual cortex acetylcholine in learning to discriminate temporally modulated visual stimuli](#). Frontiers in Behavioral Neuroscience. 2013 Mar 20;7:16. doi: [10.3389/fnbeh.2013.00016](https://doi.org/10.3389/fnbeh.2013.00016). eCollection 2013.

Miyashita T. & Feldman, D.E. (2013). [Behavioral detection of passive whisker stimuli requires somatosensory cortex](#). Cereb Cortex. 2013 Jul; 23(7): 1655–1662. Published online 2012 Jun 1. doi: [10.1093/cercor/bhs155](https://doi.org/10.1093/cercor/bhs155).

Musacchia, G., Choudhury, N.A., Ortiz-Mantilla, S., Realpe-Bonilla, T., Roesler, C.P. and Benasich, A.A. (2013). [Oscillatory support for rapid frequency change processing in infants](#). Neuropsychologia, Volume 51, Issue 13, November 2013, Pages 2812-2824. <https://doi.org/10.1016/j.neuropsychologia.2013.09.006>.

Nestor, A., Behrmann, M. & Plaut, D. C. (submitted) [The neural basis of visual word form processing - a multivariate investigation](#). Cereb Cortex. 2013 Jul;23(7):1673-84. doi: [10.1093/cercor/bhs158](https://doi.org/10.1093/cercor/bhs158). Epub 2012 Jun 12.

Nestor, A., Plaut, D.C. and Behrmann, M. (2013). Face space architecture: independent component analysis accounts for the structure of human face representations . Psychological Science. 2013 May 13;1;24(7):1294-300. doi: 10.1177/0956797612464889.
Ortiz-Mantilla, S. and Benasich, A.A. (2013). Neonatal electrophysiological predictors of cognitive and language development . Developmental Medicine & Child Neurology. 2013 Jun 27;55(9):781-2. doi: 10.1111/dmcn.12207.
Ortiz-Mantilla, S. Hämäläinen, J.A., Mussachia, G. and Benasich, A.A. (2013). Enhancement of Gamma oscillations signals preferential processing of native over foreign phonemic contrasts in infants . Journal of Neuroscience. 2013 Nov 27;33(48):18746-18754. doi: 10.1523/JNEUROSCI.3260-13. 2013.
Pashler, H., Kang, S.H.K. and Ip, R. (2013). Does multitasking impair studying? Depends on timing . Applied Cognitive Psychology. 2013 Sept/Oct;27(5):593-599. doi: 10.1002/acp.2919. ePub 2013 Mar 18.
Pashler, H., Kang, S. and Mozer, M.C. (2013). Reviewing erroneous information facilitates memory updating . Cognition. 2013 Sep;128(3):424-30. doi: 10.1016/j.cognition.2013.05.002. ePub 2013 Jun 15.
Pashler, H. and Mozer, M.C. (2013). When does fading help perceptual category learning? Journal of Experimental Psychology: Learning, Memory, and Cognition. 2013 Jul;39(4):1162-73. doi: 10.1037/a0031679. ePub 2013 Feb 18.
Peterson, D.A., Berque, P., Jabusch, H.C., Altenmuller, E. and Frucht, S.J. (2013). Rating scales for musician's dystonia: the state of the art . Neurology. 2013 Aug 6;81(6):589-98. doi: 10.1212/WNL.0b013e31829e6f72. ePub 2013 Jul 24.
Pyles, J. A., Verstynen, T. D., Schneider, W. and Tarr, M. J. (2013). Explicating the face perception network with white-matter connectivity . PLoS ONE. 2013 Apr 22;8(4):e61611. doi:10.1371/journal.pone.0061611.

Rangel, L.M., Quinn, L.K., Chiba, A.A., Gage, F.H. and Aimone, J.B. (2013). A hypothesis for temporal coding of young and mature granule cells . <i>Frontiers in Neuroscience</i> . 2013 May 14;7:75. doi: 10.3389/fnins.2013.00075. eCollection 2013.
Richler, J.J. and Gauthier, I. (2013). When intuition fails to align with data: A reply to Rossion . <i>Visual Cognition</i> . 2013 May 10; 21(2). doi: 10.1080/13506285.2013.796035 .
Richler, J.J., Palmeri, T.J. and Gauthier, I. (2013). Reconciling contradictory effects of naming on visual recognition memory. <i>Journal of Memory and Language</i> . 68:10-25.
Richler, J.J., Palmeri, T.J. and Gauthier, I. (2013). The effects of varying configuration in the composite task support an attentional account of holistic processing . <i>Visual Cognition</i> . 2013;21(6): 711-715. doi: 10.1080/13506285.2013.844968. ePub 14 Oct 2013.
Richler, J.J., Palmeri, T.J. and Gauthier, I. (2013). How does using object names influence visual recognition memory? <i>Journal of Memory and Language</i> . 2013 Jan;68(1):10-25. doi: 10.1016/j.jml.2012.09.001.
Robinson, A. E. and de Sa, V.R. (2013). Dynamic brightness induction causes flicker adaptation, but only along the edges: evidence against the neural filling-in of brightness . <i>Journal of Vision</i> . 2013 May 31;13(6)17:1-14. doi: 10.1167/13.6.17.
Rogowsky, B.A., Papamichalis, P., Villa, L., Heim, S. and Tallal, P. (2013) Neuroplasticity-based cognitive and linguistic skills training improves reading and writing skills in college students . <i>Frontiers in Psychology</i> . 2013 Mar 25;4:137. doi: 10.3389/fpsyg.2013.00137.
Rohlfing, K.J. and Deák, G.O. (2013). Microdynamics of interaction: Capturing and modeling infants' social learning . <i>IEEE Transactions on Autonomous Mental Development</i> . 2013 Sept;5(3)189-191. doi: 10.1109/TAMD.2013.2278456.

Roos, L.E., Lebrecht, S., Tanaka, J.W. and Tarr, M.J. (2013). [Can singular examples change implicit racial attitudes in the real-world?](#) *Frontiers in Psychology*. 2013 Sep 5;4:594. doi: 10.3389/fpsyg.2013.00594.

Saleem, A.B., Ayaz, A., Jeffery, K., Harris, K.D. and Carandini, M. (2013). [Integration of visual motion and locomotion in mouse visual cortex](#). *Nature Neuroscience*, 2013;16(12):1864-9. doi:10.1038/nn.3567. ePub 2013 Nov 3.

Scherf, K.S., Thomas, C., Avidan, G. and Behrmann, M. (2013). [Structural connectivity and functional consequences in face recognition: A developmental account](#). *Cerebral Cortex*. doi: 10.1093/cercor/bht152. ePub 2013 Jun13.

Shao, Y.R., Isett, B.R., Miyashita, T., Chung, J., Pourzia, O., Gasperini, R.J. and Feldman, D.E. (2013). [Plasticity of recurrent I2/3 inhibition and gamma oscillations by whisker experience](#). *Neuron*. 2013 Oct 2;80(1):210-22. doi: 10.1016/j.neuron.2013.07.026.

Smith, C.N., Frascino, J.C., Hopkins, R.O. and Squire, L.R. (2013). [The nature of anterograde and retrograde memory impairment after damage to the medial temporal lobe](#). *Neuropsychologia*, 2013 Nov;51(13), 2709-2714. doi: 10.1016/j.neuropsychologia.2013.09.015.

Snider, J., Ahmed, O., Halgren, E., Poizner, H. and Cash, S. (2013). [Human intracranial recordings during spatial exploration of a 3D virtual environment](#). *Neural Engineering (NER)*, 2013 6th International IEEE/EMBS Conference on Neural Engineering. 2013 Nov 6-8;464-467. doi: 10.1109/NER.2013.6695972.

Snider, J., Plank, M., Lee, D. and Poizner, H. (2013). [Simultaneous neural and movement recordings in large-scale immersive virtual environments](#). *IEEE Transactions on Biomedical Circuits and Systems*. 2013 Oct;7:713-721. doi: 10.1109/TBCAS.2012.2236089.

Snider, J., Plank, M., Lynch, G., Halgren, E. and Poizner, H. (2013). [Human cortical theta during free exploration encodes space and predicts subsequent memory](#). *Journal of Neuroscience*. 2013 Sept 18;33(38):15056-15068. doi: 10.1523/JNEUROSCI.0268-13.2013.

Strobach, T., Schubert, T., Pashler, H. and Rickard, T. (2013). [The specificity of learned parallelism in dual memory retrieval](#). Memory and Cognition. 2014 May;42(4):552-69. doi: 10.3758/s13421-013-0382-x.

Tanaka, J.W. and Sejnowski, T.J. (2013). [Computing reaching dynamics in motor cortex using Cartesian spatial coordinates](#). Journal of Neurophysiology. Feb;109(4):1182-201. doi: 10.1152/jn.00279.2012. ePub 2012 Oct 31.

Tarr, M. J. (2013). [Perception isn't so simple: Commentary on Bernard, Gervais, Allen, Campomizzi, and Klein](#). Psychological Science. 2013 Jun;24(6):1069-1070. doi: 10.1177/0956797612474669.

Vyazovskiy, V.V. and Harris, K.D. (2013). [Sleep and the single neuron: the role of global slow oscillations for individual cell rest](#). Nature Reviews Neuroscience. 2013;14: 443-451. doi:10.1038/nrn3494. ePub 2013 May 2.

Wilder, M.H., Jones, M., Ahmed A.A., Curran, T. and Mozer, M.C. (2013). [The persistent impact of incidental experience](#). Psychonomic Bulletin and Review. 2013 Dec;20(6):1221-31. doi: 10.3758/s13423-013-0406-3.

Williams, L.E., Blackford, J.U., Luksik, A., Gauthier, I. and Heckers, S. (2013). [Reduced habituation in patients with schizophrenia](#). Schizophrenia Research. 2013 Nov 6;151(1-3):124-132. doi: 10.1016/schres.2013.10.017.

Wilder, M.H., Jones, M., Ahmed, A., Curran, T., & Mozer, M.C. (2013). [The persistent impact of incidental experience](#). Psychonomic Bulletin & Review. 2013 Dec;20(6):1221-31. doi: 10.3758/s13423-013-0406-3.

Wisniewski, M.G., & Liu, E.H. (2013). [Temporal dynamics in auditory perceptual learning: Impact of sequencing and incidental learning](#). J Exp Psychol Learn Mem Cogn. 2013 Jan;39(1):270-6. doi: 10.1037/a0028647.

Xu, B. and Tanaka, J.W. (2013). [Does face inversion qualitatively change face processing: An eye movement study using a face change detection task.](#) Journal of Vision. 2013 Feb 18;13(2):1-16. doi: 10.1167/13.2.22.

Yger, P. and Harris, K.D. (2013). [The Convallis rule for unsupervised learning in cortical networks.](#) PLoS Computational Biology. 2013 Oct 24;9(10):e1003272. doi:10.1371/journal.pcbi.1003272.

2013 Conferences

Aminoff, E. & Tarr, M. (2013, May). Spatial and identity associative processing in scene selective cortex. Journal of Vision, 13, 1319. Poster presented at the annual meeting of the Vision Science Society, Naples, FL.

Aminoff, E. & Tarr, M. (2013, November). Associative processing scene selective cortex. Poster presented at the annual meeting of the Society for Neuroscience, San Diego, CA.

Kim, J. Aminoff, E., Behrmann, M., & Kastner, S. (2013, November). The neural basis of developmental topographic disorientation. Poster presented at the annual meeting of the Society for Neuroscience, San Diego, CA.

Middlebrooks, P.G., Zandbelt, B.B., Schall, J.D., Palmeri, T.J., & Logan, G.D. (2013). Modeling response time and accuracy during a visual discrimination stop-signal task. Presented at the Vision Sciences Society meeting, St. Petersburg, FL.

Nishimura, M., Scherf, K.S., Zachariou, V., Tarr, M.J. & Behrmann, M. (2013). Development of size- and view-invariance in LOC: an fMRI-adaptation study. Vision Sciences Society, Florida.

Salamanca, L. (2013). Behavioral indices of problem solving and learning. Presentation to the Visual Language and Visual Learning Center meeting, San Diego, CA.

Smith, C.N. & Squire, L.R. (2013). Severe retrograde amnesia in amnesic mild cognitive impairment is related to damage in lateral temporal cortex. Presentation at the 2013 Lewis Judd Junior Faculty and Postdoctoral Fellows Research Symposium, San Diego, CA.

Wisniewski, M.G. (2013). EEG correlates of auditory learning: Past and proposed research. Paper presented at the Air Force Research Laboratory, Dayton, OH, Jan 2013.

2013 Books/Book Chapters

Deak, G.O., Triesch, J., Krasno, A., de Barbaro, K., & Robledo, M. (2013). Learning to share: The emergence of joint attention in human infancy. In B. Kar (Ed.), *Cognition and Brain Development: Converging Evidence from Various Methodologies* (pp. 173-210). Washington, DC: American Psychological Association.

Deak, G.O. (2013). Word learning. In H. Pashler (Ed.), *Encyclopedia of the Mind*. SAGE Publications, Jan. 2013; online March 1 2013.

Nosofsky, R.M. & Palmeri, T.J. (2013). Exemplar-based random walk model. To appear in J.R. Busemeyer, J. Townsend, Z.J. Wang, & A. Eidels (Eds.), *Mathematical and Computational Models of Cognition*, Oxford University Press.

Palmeri, T.J., Schall, J.D. & Logan, G.D. (2013). Neurocognitive modelling of perceptual decisions. To appear in J.R. Busemeyer, J. Townsend, Z.J. Wang, & A. Eidels (Eds.), *Mathematical and Computational Models of Cognition*, Oxford University Press.

Polse, L., Lai, P., & Reilly, J. (2013). Gradients of plasticity: Language and emotion in children with unilateral perinatal stroke, in *Emotion in Language*, Ulrike Luedtke (Ed.), John Benjamins Publishing Company, Amsterdam, NL.

2012 Publications

Bub, D. & Masson, M. (2012). On the dynamics of actions representations evoked by names of manipulable objects. *Journal of Experimental Psychology: General*, 141(3), 502-517. <http://dx.doi.org/10.1037/a0026748>.

Bub, D.N., & Masson, M.E.J. (2012). On the dynamics of action representations evoked by names of manipulable objects. *J Exp Psychol Gen.* 2012 Aug;141(3):502-17. doi: 10.1037/a0026748. Epub 2011 Dec 26.

Buzsaki, G. & Silva, F.L. (2012). High frequency oscillations in the intact brain. *Neurobiol.* 2012 Sep; 98(3): 241–249. Published online 2012 Mar 17. doi: 10.1016/j.pneurobio.2012.02.004.

Choe, M.S., Ortiz-Mantilla, S., Makris, N., Gregas, M., Bacic, J., Pienaar, R., Caviness Jr. V., Benasich, A.A., & Grant, P.E. (2012). Regional infant brain development: An MRI-based morphometric analysis in 3-13 month-old infants. *Cerebral Cortex*.

Doshi, A., Tran, C., Wilder, M., Mozer, M. C., & Trivedi, M. (2012). Sequential effects in driving. *Cognitive Science*, 36, 948-963.

Dundas, E., Plaut, D., & Behrmann, M. (2012). The joint development of hemispheric lateralization for words and face, in press, *Journal of Experimental Psychology: General*. Aug 6, ePub ahead of print.

Dykstra, K., Whitehill, J. Salamanca, L., Lee, M., Carini, A., Reilly, J. & Bartlett, M. (2012). Modeling one-on-one tutoring sessions. *Proceedings of the 2012 IEEE International Conference on Development and Learning and Epigenetic Robotics (ICDL-EpiRobo)*, 1-2.

Feldman, D.E. (2012). The spike-timing dependence of plasticity. *Neuron* 75: 556-571.

Folstein, J., Gauthier, I., & Palmeri, T.J. (2012). Not all morph spaces stretch alike: How category learning affects object perception. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.

Folstein, J.R., Gauthier, I., & Palmeri, T.J. (2012). How category learning affects object representations: Not all morph spaces stretch alike. *Journal of Experimental Psychology: Learning, Memory & Cognition*.

Heim, S., Tallal, P. & Keil, A. (2012). Early Electro-cortical Indices of Selective Attention in ADHD: Temporal Dynamics of Stimulus Competition. *Cognitive Sciences; Hauppauge Vol. 7, Iss. 1, (2012): 27-51*.

Herzmann, G., Young, B., Bird, C.W., & Curran, T. (2012). Oxytocin can impair memory for social and non- social visual objects: A within-subject investigation of oxytocin's effects on human memory. *Brain Research* , 1451, 65-73.

- Kanan, C. & Cottrell, G.W. (2012). Color-to-Grayscale: Does the method matter in image recognition? PLoS ONE 7(1): e29740. doi:10.1371/journal.pone.0029740.
- Kang, S.H.K, & Pashler, H. (2012). Learning painting styles: Spacing is advantageous when it promotes discriminative contrast. *Applied Cognitive Psychology*, 26, 97-103.
- Kantner, J. & Tanaka, J.W. (2012). Experience produces the atypicality bias in object perception, *Perception*, 41, 556-568.
- Lainscsek, C., Rowat, P., Letellier, C., & Poizner, H. (2012). Finger tapping movements of Parkinson's disease patients automatically rated using nonlinear Delay Differential Equations. *Chaos*, 2012, 22, 013119; doi: 10.1063/1.3683444. [Epub ahead of print].
- Lebrecht, S., Bar, M., Barrett, L.F., & Tarr, M.J. (2012). Micro-valences: Affective valence in neutral everyday objects. *Front Psychol.* 2012; 3: 107. Published online 2012 Apr 17. doi: 10.3389/fpsyg.2012.00107.
- Lee, H., Mozer, M.C., Kramer, A.F., & Vecera, S.P. (2012). Object-based control of attention is sensitive to recent experience. *Journal of Experimental Psychology: Human Perception and Performance*, 38, 314-325. doi 10.1037/a0025597
- McGugin, R.W., Gatenby, C., Gore, J.C., & Gauthier, I. (2012). High-resolution imaging of expertise reveals reliable object selectivity in the FFA related to perceptual performance. *Proc Natl Acad Sci U S A.* 2012 Oct 16;109(42):17063-8. doi: 10.1073/pnas.1116333109. Epub 2012 Oct 1.
- McGugin, R.W., Richler, J.J., Herzmann, G., Speegle, M. & Gauthier, I. (2012). The Vanderbilt expertise test reveals domain-general and domain-specific sex effects in object recognition. *Vision Research*, 69:10-22.
- Mordatch, I., Popovic, Z. & Todorov, E. (2012). Contact-invariant optimization for hand manipulation. *Eurographics/ACM SIGGRAPH Symposium on Computer Animation*.
- Mruczek, R.E.B. & Sheinberg, D.L. (2012). Stimulus selectivity and response latency in putative inhibitory and excitatory neurons of the primate inferior temporal cortex, *J Neurophys*, 108, 2725-2736.
- Nestor, A., Vettel, J.M., & Tarr, M.J. (2012). Internal representations for face detection: An application of noise-based image classification to BOLD responses. *Human Brain Mapping*. doi:10.1002/hbm.22128.
- Orduña, I., Liu, E., H.-M., Church, B. A., Eddins, A. C., & Mercado, E., III. (2012). Evoked-potential changes following discrimination learning involving complex sounds. *Clinical Neurophysiology*, 123, 711719.

- Ortiz-Mantilla, S. Hamalainen, J.A., & Benasich, A.A. (2012). Time course of ERP generators to syllables in infants: A source localization study using age-appropriate brain templates. *NeuroImage*, 59, 3275-3287. (doi:10.1016/j.neuroimage.2011.11.048).
- Phillips, J.S., Greenberg, A.S., Pyles, J.A., Pathak, S.K., Behrmann, M., Schneider, W., & Tarr, M.J. (2012). Co-analysis of brain structure and function using fMRI and diffusion-weighted imaging. *J. Vis. Exp.* (69), e4125, doi:10.3791/4125.
- Poizner, H., Lancaster, J., Tunik, E., Narayana, S., Franklin, C., Rogers, W., Li, X., Fox, P.T., & Robin, D.A. (2012). Towards a healthy human model of neural disorders of movement, *Transactions on Neural Systems and Rehabilitation Engineering*, 2012 Jan 23. [Epub ahead of print].
- Purcell, B.A., Schall, J.D., Logan, G.D., & Palmeri, T.J. (2012). From Saliency to Saccades: Multiple-Alternative Gated Stochastic Accumulator Model of Visual Search. *J Neurosci.* 2012 Mar 7; 32(10): 3433–3446. doi: 10.1523/JNEUROSCI.4622-11.2012
- Righi, G., Peissig, J.J., & Tarr, M.J. (2012). Recognizing disguised faces. *Visual Cognition*, 20(2), 143-169.
- Robinson, A.E. & de Sa, V.R. (2012). Spatial properties of flicker adaptation. *Vision Research* 70(1): 2-6, Oct 2012.
- Salamanca, L.P., Carini, A.R., Lee, M.A., Dykstra, K., Whitehill, J., Angus, D., Wiles, J., Reilly, J.S., & Bartlett, M.S. (2012). Characterizing the temporal dynamics of student-teacher discourse. In *Development and Learning and Epigenetic Robotics (ICDL)*, 2012 IEEE International Conference on (pp. 1-2). IEEE, Nov 2012.
- Tallal, P. (2012) Improving neural response to sound improves reading. *Proceedings of the National Academy of Science.* 109(41)16406-16407. Doi 10.1073.
- Tanaka, J.W., Kaiser, M.D., Butler, S. & Le Grand, R. (2012). Mixed emotions: The holistic and analytic perception of facial expressions. *Cognition & Emotion*, 26, 961-77.
- Tanaka, J. W., Kantner, J. & Bartlett, M. S. (2012). How category structure influences the perception of object similarity: The atypicality bias. *Frontiers in Perception Science*, 3, 1-11.
- Tanaka, J.W., Wolf, J.M, Klaiman, C., Koenig, K., Cockburn, J., Herlihy, L., Brown, C., Stahl, S., South, M., McPartland, J., Kaiser, M.D. & Schultz, R.T. (2012) The perception and identification of facial emotions in individuals with Autism Spectrum Disorders using the Let's Face It! emotion skills battery. *Journal of Child Psychology and Psychiatry.* 53, 1259-1267.
- Tsuchida, T. & Cottrell, G.W. (2012) Auditory saliency using natural statistics. In N. Miyake, D. Peebles, & R.P. Cooper (Eds.), *Proceedings of the 34th Annual Conference of the Cognitive Science Society*. Austin, TX: Cognitive Science Society.

Whitehill, J. & Movellan, J.R. (2012). Discriminately decreasing discriminability with learned image filters. Proceedings of the 2012 IEEE Conference on Computer Vision and Pattern Recognition, Providence, RI.

Wisniewski, M.G., Mercado, E., Gramann, K., & Makeig, S. (2012). Familiarity with speech affects cortical processing of auditory distance cues and increases acuity. PLoS ONE, 7, e41025.

Wisniewski, M.G., Radell, M.L., Guillette, L.M., Sturdy, C.B., & Mercado, E., III (2012). Predicting shifts in generalization gradients with perceptrons. Learn Behav. 2012 Jun;40(2):128-44. doi: 10.3758/s13420-011-0050-6.

Woloszyn, L. & Sheinberg, D.L (2012). Effects of long-term visual experience on responses of distinct classes of single units in inferior temporal cortex, Neuron, 74 (1): 193-205.

Wong, Y.K. & Gauthier, I. (2012). Music-reading expertise alters visual spatial resolution for musical notation. Psychon Bull Rev. 2012 Aug;19(4):594-600. doi: 10.3758/s13423-012-0242-x.

Wong, Y.K., Folstein, J.R., & Gauthier, I. (2012). The nature of experience determines object representations in the visual system. J Exp Psychol Gen. 2012 Nov; 141(4): 682–698. Published online 2012 Apr 2. doi: 10.1037/a0027822.

Yang, R. & Cottrell, G.W. (2012). The influence of risk aversion on visual decision making. In N. Miyake, D. Peebles, & R. P. Cooper (Eds.), Proceedings of the 34th Annual Conference of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

2012 Conference Presentations

Aminoff, E., Kim, J., Kastner, S., & Behrmann, M. (2012, October). Psychological and neural mechanisms underlying congenital topographagnosia. Poster presented at the annual meeting of the Society for Neuroscience, New Orleans, LA.

Aminoff, E., Miller, M., Grafton, S., & Tarr, M. (2012, May). Early visual areas recruited in automatic contextual processing of words. Journal of Vision, 12, 1112. Talk presented at the annual meeting of the Vision Science Society, Naples, FL.

Avidan, G., Tanzer, M., Hadj-Bouziane, F., Liu, N. Ungerleider, L. & Behrmann, M. (2012). Selective dissociation between core and extended regions of the face processing network in congenital prosopagnosia. Symposium presentation, Society for Neurosciences, New Orleans.

Behrmann, M., Plaut, D., & Dundas, W. (2012). The Joint Development of Hemispheric Lateralization for Words and Faces. Meeting of the Psychonomic Society, Minneapolis.

Chukoskie, L., Miller, M.J., Kanan, C., Dorai, M., Townsend, J. & Trauner, D.A. (2012). Did you see that change? A study of dyspraxia, eye movement and visual perception in autism, International Meeting for Autism Research 11268.

Chukoskie, L., Mullen, T., Bodenhamer, J.R., Brocklehurst, W.T., Lam, C., Wedeen, M., Townsend, J., & Westerfield, M. (2012). Characterizing network interactions in E#EG sources during saccade tasks. Program No. 373.23. Neuroscience 2012 Abstracts. New Orleans, LA: Society for Neuroscience, 2012. Online.

Cipollini, B., Hsiao, J.H-W., & Cottrell, G.W. (2012) Connectivity asymmetry can explain visual hemispheric asymmetries in local/global, face, and spatial frequency processing. In N. Miyake, D. Peebles, & R.P. Cooper (Eds.), Proceedings of the 34th Annual Conference of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

de Sa, V.R. (2012). An interactive control strategy is more robust to non-optimal classification boundaries. Conference Proceedings, ICMI'12 pp 579-586 October 22-26, 2012, Santa Monica, California, USA DOI 10.1145/2388676.2388798.

Deak, G.O. (2012). Play time: How we learn to share and take turns. University of California, Riverside, Developmental Brown Bag. Riverside, CA, Oct. 2012.

De Barbaro, K., Johnson, C., Forster, D., & Deak, G.O. (2012). A 12-month social “revolution” emerges from changes in infant sensorimotor coordination: A longitudinal study of micro-behavioral patterns. International Conference on Infancy Studies, Minneapolis, MN, June, 2012. De Barbaro, K., Johnson, C.M., Forster, D., & Deak, G. (2012). Sensorimotor dynamics of mother-infant-object interactions: longitudinal changes in micro-behavioral patterns across the first year. Poster presented at the International Conference on Development and Learning, San Diego, CA, Nov 2012.

de Sa, V.R. (2012). An interactive control strategy is more robust to non-optimal classification boundaries. Conference Proceedings, ICMI'12 pp 579-586 October 22-26, 2012, Santa Monica, California, USA DOI 10.1145/2388676.2388798.

Deriso, D., Susskind, J., Krieger, L., & Bartlett, M.S. (2012). Emotion Mirror: A novel intervention for autism based on real-time expression recognition. Demo, European Conference on Computer Vision. In: A Fitzgibbon, S Lazebnik, P Perona, Y Sato, and C Schmid (Eds), Lecture Notes in Computer Science, Computer Vision ECCV 2012, Vol 7585, Springer, p. 671-674. Best Demo Award.

Folstein, J.R., Newton, A., Van Gulick, A.B., Palmeri, T.J., & Gauthier, I. (2012). Category learning causes long-term changes to similarity gradients in the ventral stream: A multivoxel pattern analysis at 7T. Paper presented at the 12th Annual Meeting of the Vision Science Society, Naples, FL.

Folstein, J.R., Newton, A., Van Gulick, A.B., Palmeri, T.J., & Gauthier, I. (2012). Category learning causes long-term enhancement of relevant object dimensions: a multivoxel pattern analysis at 7T. Paper presented at the Society for Neuroscience meeting.

Hagen, S. & Tanaka, J. (2012). The role of attention in face perception: Cuing to spatial location versus type of information. Poster presented at the Vision Science Society, Naples, FL, May 2012.

Herzmann, G. & Curran, T. (2012). Oxytocin and recognition memory: Behavioral and ERP effects on own-race and other-race faces, sub-processes of memory, and participant's sex. Poster presented at the annual meeting of the Society for Neuroscience, New Orleans, USA.

Huang, H., Plank, M., Snider, J., Lee, D., Gepshtein, S., Hillyard, S., & Poizner, H., (2012). Target predictability and eye-hand coordination in a rapid reaching task, Vision Science Society, Naples, FL., May, 2012.

Jao, R.J. & Deak, G.O. (2012). The development of referential gaze-following and perspective-taking from 14 to 18 months. International Conference on Infancy Studies, Minneapolis, MN, June 2012.

Johnson, D., Lebrecht, S., & Tarr, M. J. (2012). The visual perception of affective valence in the material properties of objects. (Poster presented at the Eastern Psychological Association Annual Meeting, March 2012.

Kanan, C. & Cottrell, G.W. (2012). A Neural Network Model of the Primate Visuo-Motor System. Computational and Systems Neuroscience (COSYNE 2012).

Krishnamurthy, D. & Todorov, E. (2012). Linearly-solvable Markov games. In American Control Conference.

Leeds, D.D., Seibert, D.A., Pyles, J.A., & Tarr M.J. (2012). Uncovering the visual components of cortical object representation. Poster session presented at Statistical Analysis of Neural Data, Pittsburgh, PA, May 2012.

Li, R. & Cottrell, G.W. (2012) A new angle on the EMPATH model: Spatial frequency orientation in recognition of facial expressions. In N. Miyake, D. Peebles, & R.P. Cooper (Eds.), Proceedings of the 34th Annual Conference of the Cognitive Science Society. Austin, TX: Cognitive Science Society.

Liao, Y., Makeig, S., Acar, Z., & Deak, G. (2012). EEG imaging of toddlers during "live" dyadic turn-taking: Mu-rhythm modulation and source-clusters in natural action observation and execution. International Conference on Infancy Studies, Minneapolis, MN, June 2012.

Liao, Y., Makeig, S., Acar, Z., & Deak, G. (2012). EEG imaging of toddlers during "live" dyadic turn-taking: Mu-rhythm modulation and source-clusters in natural action observation and execution. Human Brain Mapping, Beijing, China, June 2012.

Mack, M.L. & Palmeri, T.J. (2012). Uncovering the time course of categorization with object-substitution masking. Paper presented at the 12th Annual meeting of the Vision Science Society, Naples, FL.

Mollison, M.V. & Curran, T. (2012) Familiarity in source memory. Annual Summer Interdisciplinary Conference (ASIC). Cala Gonone, Dorgali, Italy.

Nestor, A., Plaut, D. & Behrmann, M. (2012). Face space: an investigation of its neural basis. Society for Neurosciences, New Orleans, LA.

Ortiz-Mantilla, S., Hamalainen, J.A., & Benasich, A.A. (2012). Infants show increased phase locking of oscillatory brain activity in the theta frequency band during speech perception. Presented at Cognitive Neuroscience Annual Meeting, Chicago, IL.

Palmeri, T.J., Purcell, B.A., Schall, J.D., & Logan, G.D. (2012). From salience to saccades: Multiple-alternative gated stochastic accumulator model of visual search. Paper to be presented at the Eleventh Annual Summer Interdisciplinary Conference, Cala Gonone, Sardinia, Italy.

Plank, M., Snider, J., Halgren, E., & Poizner, H. (2012). EEG Correlates of Unsupervised Spatial Learning in Immersive, Large-Scale Virtual Environments, Cognitive Neuroscience Society Annual meeting, Chicago, Illinois, April, 2012.

Pyles, J.A. & Tarr, M.J. (2012) Neural mechanisms of dynamic object perception. Nanosymposium talk presented at the Annual Meeting of the Society for Neuroscience, New Orleans, LA, Oct 2012.

Pyles, J.A. & Tarr, M.J. (2012) Neural coding of dynamic articulating objects. Poster presented at the Annual Meeting of the Vision Sciences Society, Naples, FL.

Quinn L, Rangel LM, Sullivan D, Buzsaki G, Chiba AA (2012) Theta and Beta oscillatory dynamics in the Dentate Gyrus of the Hippocampus during associative learning. 2012 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2012.

Reilly, J. Lai, J. & Polse, L. (2012). Language and emotion in written narratives in children with autism. Talk presented at the 13th International Conference of SIG Writing, University of Porto, Portugal.

Salamanca, L., Lee, M., Carini, A., Dykstra, K., Whitehill, J., Bartlett, M., & Reilly, J. (2012). Profiling Student-Teacher Eye Gaze Behaviors. Poster presentation, Southern California Cognitive Neuroscience Meeting at San Diego State, March 2, 2012.

Scherf, K. S., Luna, B. & Behrmann, M. (2012). Developmental changes in the functional organization of neural networks supporting face and object processing. Symposium presentation, Society for Neurosciences, New Orleans, LA.

Seibert, D., Leeds, D., Pyles, J.A. & Tarr, M.J. (2012) Exploring computational models of visual object perception. Poster presented at the Annual Meeting of the Vision Sciences Society, Naples, FL

Tanaka, J., Webster, B., Gordon, I., & Meixner, T. (2012). A test of the perceptual expertise hypothesis with novel race faces. Poster presented at the Vision Science Society, Naples, FL, May 2012.

Urgen, B., Plank, M., Kutas, M., Poizner, H., & Saygin, A. (2012). Temporal Characteristics of Neural Processing During Action Perception: The Role of Biological Form and Biological Motion, Vision Science Society, Naples, FL., May, 2012.

Urgen, B., Plank, M., Kutas, M., Poizner, H., & Saygin, A. (2012). ERP Signatures associated with biological form and biological motion processing during action perception, Cognitive Neuroscience Society Annual meeting, Chicago, Illinois, April, 2012.

Victoria, L.W., Pyles, J.A. & Tarr, M.J. (2012). The neural representation of visual and semantic object categories. Poster Presentation at the Society for Neuroscience Annual Meeting, New Orleans, LA, Oct 2012.

Victoria, L.W., Pyles, J.A., & Tarr, M.J. (2012) The neural representation of visual and semantic object categories. Poster presented at the Annual Meeting of the Vision Sciences Society, Naples, FL, May 2012.

Victoria, L.W. & Tarr, M.J. (2012). Visual and semantic contributions to object perception. Poster presentation at the Vision Sciences Society Annual Meeting, Naples, FL, May 2012.

Wiles, J., Heath, S., Ball, D., Quinn, L., & Chiba, A. (2012). Rat meets iRat. In Proceedings of the International Conference on Development and Learning and Epigenetic Robotics (ICDL), 2012. IEEE. Conference poster, Nov 2012.

Wisniewski, M.G. (2012). Predicting individual differences in generalization. Poster presented at the 5th Annual Inter-Science of learning Center (iSLC) Student and Post-Doc Conference, San Diego, CA, April 2012.

Wisniewski, M.G. (2012). A case for representational reorganization in learning about sounds on a continuum. Paper presented at the SUNY Buffalo Behavioral and Brain Sciences Symposium, Buffalo, NY, June 2012.

Wisniewski, M.G., Church, B.A., & Mercado, E. (2012). Individual learning proficiencies predict dynamics of shifts in generalization. Paper presented at the 104th Annual Meeting of the Southern Society for Philosophy and Psychology, Savannah, GA, March 2012.

Wisniewski, M.G., Church, B.A., & Mercado, E. (2012). Auditory learning-related shifts in generalization: A case for distortions of representation. Poster presented at the 11th Annual Auditory Perception, Cognition & Action Meeting, Minneapolis, MN, Nov 2012.

Wisniewski, M.G., Mercado, E., & Church, B.A. (2012). Variations in learning trajectories predict generalization. Poster presented at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN, Nov 2012.

Xu, B., Tanaka, J., & Mineault, K. (2012). The head turn cueing effect is sustained at longer SOA's in the presence of an object distractor. Poster presented at the Vision Science Society, Naples, FL, May 2012.

Yamaguchi, M., Logan, G.D., Palmeri, T.J., & Schall, J.D. (2012). On the site and source of saccadic countermanding: Reformulations of the interactive race model. Paper to be presented at Computational and Systems Neuroscience (COSYNE) 2012, Salt Lake City, UT.

Zandbelt, B.B., Purcell, B.A., Palmeri, T.J., Logan, G.D., & Schall, J.D. (2012). E pluribus unum: Out of many accumulators one response time. Paper presented at the Society for Neuroscience Meeting.

Zavala, C., de Barbaro, K., Chiba, A., Khandrika, S., & Deak, G. (2012). Infants' attention patterns to people and objects: Longitudinal relations to cortisol and $\hat{I}\pm$ -Amylase. International Conference on Infancy Studies, Minneapolis, MN, June 2012.

2012 Books/Chapters

Behrmann, M. and Hammer, M. (2012). Agnosia. In A. Ettinger & D. Weisbrot (Eds.) Neurological differential diagnosis. Cambridge University Press.

Benasich, A.A. & Fitch, R.H. (Eds.). (2012). Developmental dyslexia: Early precursors, neurobehavioral markers and biological substrates (The Extraordinary Brain Series). Baltimore, MD: Brookes Publishing Co.

Deriso, D., Susskind, J., Tanaka, J., Winkielman, P., Herrington, J., Schultz, R., & Bartlett, M. (2012). Exploring the facial expression perception-production link using real-time automated facial expression recognition. In A Fitzgibbon, S. Lazebnik, P. Perona, Y. Sato, & C. Schmid (Eds), Lecture Notes in Computer Science, Computer Vision - ECCV 2012, Vol 7584, Springer, p. 270-279.

Stiles, J., Reilly, J., Levine, S., Trauner, D., Nass, R. (2012). Neural Plasticity and Cognitive Development: Insights from Children with Perinatal Brain Injury. Oxford University Press.

2011 Publications

Avidan, G., Tanzer, M., & Behrmann, M. (2011). Impaired holistic processing in congenital prosopagnosia, *Neuropsychologia*, 49, 9, 2541-2552.

Butko, N.J., Theocharous, G., Philipose, M., & Movellan, J.R. (2011). Automated facial affect analysis for one-on-one tutoring applications. *Proceedings of the 9th IEEE Conference on Automatic Face and Gesture Recognition*, p. 382-387.

Cheung, O., Richler, J., Phillips, W.S., Gauthier, I. (2011). Does temporal integration of face parts reflect holistic processing? *Psychon Bull Rev*, 18:476-483

Choudhury, N. & Benasich, A.A. (2011). Maturation of auditory evoked potentials from 6 to 48 months: Prediction to 3 and 4 year language and cognitive abilities. *Clin Neurophysiol*. 2011 Feb;122(2):320-38. doi: 10.1016/j.clinph.2010.05.035. Epub 2010 Aug 3.

Curran, T., & Doyle, J. (2011). Picture superiority doubly dissociates the ERP correlates of recollection and familiarity. *J Cogn Neurosci*. 2011 May;23(5):1247-62. doi: 10.1162/jocn.2010.21464. Epub 2010 Mar 29.

de Barbaro, K., Chiba, A., & Deak, G.O. (2011). Micro-analysis of infant looking in a naturalistic social setting: Insights from biologically based models of attention. *Developmental Science*, 14, 1150-1160.

Dipietro, L., Poizner, H., & Krebs, H.I. (2011). EEG correlates of submovements. *Conference Proceedings of the IEEE Engineering in Medicine and Biology Society*, 2011, 7429-7432.

Fujisawa, S. & Buzsaki, G. (2011). *Neuron*. Oct 6;72(1):153-65. PMID:21982376. A 4 Hz oscillation adaptively synchronizes prefrontal, VTA, and hippocampal activities.

Gou, Z., Choudhury, N. & Benasich, A.A. (2011). Resting frontal gamma power at 16, 24 and 36 months predicts individual differences in language and cognition at 4 and 5 years. *Behavioral Brain Research*, 220, 2, 263-70. (doi:10.1016/j.bbr.2011.01.048).

Hamalainen, J.A., Ortiz-Mantilla, S., & Benasich, A.A. (2011). Source localization of event-related potentials to pitch change mapped onto age-appropriate MRIs at 6 months of age. *NeuroImage*, 54, 3, 1910-1918. (doi:10.1016/j.neuroimage.2010.10.016).

Heim, S., Friedman, J.T., Keil, A., & Benasich, A.A. (2011). Reduced sensory oscillatory activity during rapid auditory processing as a correlate of language-learning impairment. *Journal of Neurolinguistics*, 24, 5, 539-555. (doi:10.1016/j.jneuroling.2010.09.006).

Herzmann, G. & Curran, T. (2011). Experts' memory: An ERP study of perceptual expertise effects on encoding and recognition. *Memory & Cognition*, 39, 412-432.

- Herzmann, G., Willenbockel, V., Tanaka, J.W., & Curran, T. (2011). The neural processes underlying memory encoding and recognition of own-race and other-race faces. *Neuropsychologia*, 31, 3103-3115.
- Itskov, V., Curto, C., Pastalkova, E., & Buzsaki, G. (2011). *Neurosci.* Feb 23;31(8):2828-34. PMID:21414904. Cell assembly sequences arising from spike threshold adaptation keep track of time in the hippocampus.
- Jiang, F., Dricot, Weber, J., Righi, G., Tarr, M.J., Gobel, R., & Rossion, B. (2011). Face categorization in visual scenes may start in a higher order area of the right fusiform gyrus: evidence from dynamic visual stimulation in neuroimaging. *Journal of Neurophysiology*, 106, 2720-2736. e-print, doi:10.1152/jn.00672.2010.
- Kang, S.H.K., Pashler, H., Cepeda, N.J., Rohrer, D., Carpenter, S.K., & Mozer, M.C. (2011). Does incorrect guessing impair fact learning? *Journal of Educational Psychology*, 103, 48-59.
- Kang, S.H.K, McDaniel, M.A., & Pashler, H. (2011). Effects of testing on learning of functions *Psychonomic Bulletin and Review*, 18, 998-1005.
- Konen, C., Behrmann, M., Nishimura, M. & Kastner, S. (2011). The functional neuroanatomy of object agnosia: a case study, *Neuron*, 71, 49-60.
- Krishnamurthy, D. & Todorov, E. (2011). A unifying framework for linearly-solvable control. In *Uncertainty in Artificial Intelligence*.
- Link, B.V., Kos, B., Wager, T.D., & Mozer M.C. (2011). Past experience influences judgment of pain: Prediction of sequential dependencies. In L. Carlson, C. Hoelscher, & T. F. Shipley (Eds.), *Proceedings of the 33d Annual Conference of the Cognitive Science Society* (pp. 1248-1253). Austin, TX: Cognitive Science Society.
- Littlewort, G., Bartlett, M., Phan, L., & Reilly, J. (2011). Automated measurement of children's facial expressions in problem solving. *Proceedings of the Institute of Electrical and Electronics Engineers, Computer Vision and Pattern Recognition workshop on computer vision and pattern recognition for human communicative behavior*. DOI: 10.1109/FG.2011.5771418.
- Littlewort, G.C., Salamanca, L.P., Reilly, J.S., & Bartlett M.S. (2011). Automated measurement of children's facial expressions during problem solving tasks. *Proc. IEEE International Conference on Automatic Face and Gesture Recognition*, p. 30-35.
- Littlewort, G., Whitehill, J., Wu, T., Fasel, I., Frank, M., Movellan, J., & Bartlett, M (2011) *The Computer Expression Recognition Toolbox (CERT)*. *Proc. IEEE International Conference on Automatic Face and Gesture Recognition*, p. 298-305.
- Liu, E., H.-M., Mercado, E., III, & Church, B.A. (2011). Multidimensional processing of dynamic sounds: More than meets the ear. *Attention, Perception, and Psychophysics*, 73, 2624-2638.

Mack, M.L., & Palmeri, T.J. (2011). The timing of visual object categorization. *Frontiers in Perception Science*.

Mack, M.L., Richler, J.J., Gauthier, I., & Palmeri, T.J. (2011). Indecision on decisional separability. *Psychonomic Bulletin & Review*, 18, 1-9.

Masson, M.E.J., Bub, D.N., & Breuer, A.T. (2011). Priming of reach and grasp actions by handled objects. *Journal of Experimental Psychology: Human Perception and Performance*, 37, 1470-1484.

McGugin, R. W., Tanaka, J.W., Lebrecht, S., Tarr, M.J. & Gauthier, I. (2011). Race-specific perceptual discrimination improvement following short individuation training with faces. *Cogn Sci*. 2011 Mar; 35(2): 330–347. Published online 2010 Nov 8. doi: 10.1111/j.1551-6709.2010.01148.x.

Mercado, E., III (2011). Mapping individual differences in learning capacity. *International Journal of Comparative Psychology*. Volume 24, Issue 1.

Nestor, A., Plaut, D. C. & Behrmann, M. (2011). Unraveling the distributed neural code of facial identity through spatiotemporal pattern analysis, *PNAS*, 108, 24, 9998-10003.

Peterson DA, Lotz DT, Halgren E, Sejnowski TJ, Poizner H (2011) Choice modulates the neural dynamics of prediction error processing during rewarded learning. *NeuroImage* 54(2):1385-1394.

Pierce, L. J., Scott, L., Boddington, S., Droucker, D., Curran, T., & Tanaka, J. (2011). The N250 brain potential to personally familiar and newly learned faces and objects. *Frontiers in Human Neuroscience*, 5, 1-13.

Plaut, D. & Behrmann, M. (2011). Complementary neural representations for faces and words: A computational exploration. *Cognitive Neuropsychology*, 28, 251-275.

Pouget, P., Logan, G.D., Palmeri, T.J., Boucher, L., & Schall, J.D. (2011). Neural basis of adaptive response time adjustment. *The Journal of Neuroscience*.

Remington, R., Wu, S., & Pashler, H. (2011). What determines saccade timing in eye-hand sequences? *Psychonomic Bulletin and Review*, 18, 538-543.

Richler, J.J., Cheung, O.S. & Gauthier, I. (2011). Beliefs alter holistic face processing: If response bias is not taken into account. *Journal of Vision*, 11(13):17.

Richler, J.J., Gauthier, I., & Palmeri, T.J. (2011). Automaticity of basic-level categorization accounts for labeling effects in visual recognition memory. *Journal of Experimental Psychology: Learning, Memory & Cognition*, 37(6): 1579-87. PMID: 21767063.

Richler, J.J., Mack, M.L., Palmeri, T.J., & Gauthier, I. (2011). Inverted faces are (eventually) processed holistically. *Vision Research*, 51, 333-342.

Richler, J., Wong, Y., Gauthier, I. (2011). Perceptual Expertise as a Shift From Strategic Interference to Automatic Holistic Processing. *Current Directions in Psychological Science*, 20: 129.

Schall, J.D., Purcell, B.A., Heitz, R.P., Logan, G.D., & Palmeri, T.J. (2011). Neural mechanisms of saccade target selection: Gated accumulator model of visual-motor cascade. *European Journal of Neuroscience*.

Scherf, K. S., Behrmann, M. & Dahl, R. (in press 2011). Facing changes & changing faces in adolescence: Investigating the neural basis of key developmental shifts in social-information processing, *Developmental Cognitive Neuroscience*.

Scherf, K.S., Luna, B., Avidan, G., & Behrmann, M. (2011). “What” precedes “which”: Developmental neural tuning in face- and place-related cortex, *Cerebral Cortex*, 21, 1963-1980.

Simpkins, A., Kelley, M. & Todorov, E. (2011). Modular bio-mimetic robots that can interact with the world the way we do. In *International Conference on Robotics and Automation*.

Simpkins, A. & Todorov, E. (2011). Complex object manipulation with hierarchical optimal control. In *IEEE Adaptive Dynamic Programming and Reinforcement Learning*.

Smith, CN, Clark, RE, & Squire, LR (2011). Brain activity in humans in medial temporal lobe and neocortex as a function of the age of memory (1 hour to 1 month). *Temporal Dynamics of Learning Center All Hands Meeting, San Diego, CA*.

Snider, J., Plank, M., Lee, D., & Poizner, H. (in press 2011). Simultaneous neural and movement recording in large-scale immersive virtual environments, *Proceedings of the IEEE Biomedical Circuits & Systems Conference*.

Snider, J., Plank, M., May, L., Liu, T., & Poizner, H. (2011). Adaptation of a haptic robot in a 3T fMRI, *Journal of Visual Experiments, J. Vis. Exp.* (56), e3364, DOI: 10.3791/3364.

Starrfelt, R. & Behrmann, M. (2011). Number reading in pure alexia: A review, *Neuropsychologia*, 49, 9, 2283-2298.

Tanaka, J., Meixner, T., & Kantner, J. (2011). Exploring the perceptual spaces of faces, cars and birds in children and adults. *Developmental Science*, 14:4, pp 762-768.

Torres, E., Heilman, K.M., & Poizner, H. (2011). Impaired endogenously evoked automated reaching in Parkinson’s Disease, *Journal of Neuroscience*, Dec. 7, 2011, 31(49), 17848-17863.

Whitehill, J., Serpell, Z., Foster, A., Lin, Y.C., Pearson, B., Bartlett, M., et al. (2011). Toward an optimal affect-sensitive instructional system of cognitive skills. *Proceedings of the IEEE*

Conference on Computer Vision and Pattern Recognition Workshop on Human Communicative Behavior, (pp. 20 - 25).

Wong, Y.K., Folstein, J.R. & Gauthier, I. (2011). Task-irrelevant perceptual expertise, *Journal of Vision*, 11(14):3.

Wong, A., Qu, Z., McGugin, R., & Gauthier, I. (2011). Interference in character processing reflects common perceptual expertise across writing systems. *Journal of Vision*, 11(1), 1-8. 1b.

2011 Conference Presentations

Behrmann, M. (2011). Invited keynote speaker, Human Brain Mapping, Quebec City, June.
Brooks, D.L., Dai, J., & Sheinberg, D.L. (2012). Contextual Cueing in Visual Search Through Naturalistic Scenes by Primates: Behavioral and Eye Movement Analysis, Comparative Cognition Society.

Bub, D. (2011) Facing the challenge of variation in neuropsychological populations: Lessons from biology. *Cogn Neuropsychol*. 2011 Oct;28(7):445-50; discussion 515-20. doi: 10.1080/02643294.2012.671766.

Deak, G. (2011, June). The REAL social network: Re-integrating brain and body into social neuroscience. Southwest China University, School of Psychology, Chongqing, China.

Deak, G. (2011, July). Cognitive flexibility in children: Cue comprehension or inhibitory control? Southwest China University, School of Psychology, Chongqing, China.

Deak, G. (2011, March). Perspectives on embodied, emergent social development in infancy. UCSD/Osaka Joint Meeting on Autonomous Mental Development, San Diego, CA.

de Barbaro, K., Johnson, C.M., Forster, D., & Deak, G.O. (2011, April). Infants' multimodal object exploration in a dyadic context: Longitudinal changes in micro-behavioral patterns. Biennial Meeting of the Society for Research in Child Development, Montreal, Canada.

Deriso, D., Susskind, J., Tanaka, J., Herrington, J., Schultz, R., & Bartlett, M. (2011). The Emotion Mirror: A Novel Intervention for Facial Expression Production and Perception. Demo, Vision Sciences Society Conference, Naples, FL, May.

Dipietro, L., Poizner, H., & Krebs, H.I. (2011). EEG Correlates of Submovements, IEEE Engineering in Medicine and Biology Conference, Boston, MA, September, 2011.

Folstein, J.R., Gauthier, I., & Palmeri, T.J. (2011). Integral dimensions can be differentiated in dimensional but not polar morphspaces. Paper presented at the 11th Annual meeting of the Vision Science Society, Naples, FL.

Gilae-Dotan, S., Sagin, A., Rees, G., Lorenzi, L. & Behrmann, M. (2011). The involvement of the ventral stream in structure from motion and motion perception. Society for Neurosciences, Washington, DC.

Gordon, D., Bartlett, M., & Tanaka, J. (2011). Face expression production and learning: Studies from both physiological and social perspectives. Talk, IEEE Conference on Automatic Face and Gesture Recognition, workshop on the Psychology of Face and Gesture Recognition.

Gordon, I., Tanaka, J., Pierce, M. & Bartlett, M. (2011) Facial Expression Production and Training. Journal of Vision, Proc. Vision Science Society, Naples, Florida.

Greenberg, A.S. & Behrmann, M. (2011). Perceptual grouping gives rise to object perception: Evidence from psychophysical reverse correlation. Vision Sciences Society, Naples, Florida, May.

Harrison, S.A., Richler, J.J., Mack, M.L., Palmeri, T.J., Hayward, W., & Gauthier, I. (2011). The complete design lets you see the whole picture: Differences in holistic processing contribute to other-race and face inversion effects. Paper presented at the 11th Annual meeting of the Vision Science Society, Naples, FL.

Heim, S., Friedman, J.T., Keil, A., & Benasich, A.A. (2011). Reduced sensory oscillatory activity during rapid auditory processing as a correlate of language-learning impairment. J Neurolinguistics. 2011 Sep;24(5):539-555.

Herzmann, G., Willenbockel, V., Tanaka, J. W., & Curran, T. (2011, May). The neural processes underlying memory encoding and retrieval of own-race and other-race faces. Poster presented at the annual meeting of the Vision Science Society, Naples, USA.

Holt, A.E., & Deak, G.O. (2011, April). Predicting educationally relevant flexibility: The role of executive functions in implicit task-switching. Biennial Meeting of the Society for Research in Child Development, Montreal, Canada.

Huang, H., Plank, M., Snider, J., Lee, D., Gepshtein, S., Hillyard, S., & Poizner, H., (2011). Modeling eye-hand coordination during rapid reaching. Program Number 82.26, 2011 Neuroscience Meeting Planner. Washington, D.C: Society for Neuroscience, Washington, D.C. 2011. Online.

Kanan, C. (2011). A Training Program in Grantsmanship. NSF Science of Learning Center 2011 PI Meeting.

Kanan, C. & Cottrell, G. (2011). Recognizing objects, faces, and flowers using fixations. Vision Sciences Society Annual Meeting (VSS 2011), Naples, FL. (selected for a talk).

Lee, D., Snider, J., Poizner, H., & Gepshtein, S. (2011). Prospective optimization under risk and uncertainty. (2011). Program Number 82.27, 2011 Neuroscience Meeting Planner. Washington, D.C: Society for Neuroscience, Washington, D.C. 2011. Online.

Leeds, D., Seibert, D., Pyles, J., & Tarr, M. (2011 May). Unraveling the visual and semantic components of object representation. Poster presented at the annual meeting of the Vision Science Society, Naples, Florida, USA.

Liao, Y., Danly, J., Vankov, A., Makeig, S., & Deak, G. (2011). Adult-like changes in mu rhythm activity in young children accompany action observation and execution in a social context. Society for Neuroscience, Washington, DC.

Lukos, J., Snider, J., Hillyard, S., Tunik, E., & Poizner, H. Hand-eye adaptation and cortical responses to object perturbations in Parkinson's disease. (2011). Program Number 82.28, 2011 Neuroscience Meeting Planner. Washington, D.C: Society for Neuroscience, Washington, D.C. 2011. Online.

Mack, M.L. & Palmeri, T.J. (2011). Unraveling ultra-rapid categorization. Paper presented at the 11th Annual meeting of the Vision Science Society, Naples, FL.

Narasimham, G., Cepeda, N.J., & Deak, G.O. (2011, April). Development of rule-switching flexibility: Comparing preschoolers' performance on standard, complex & computerized card-sort tests. Biennial Meeting of the Society for Research in Child Development, Montreal, Canada.

Nestor, A., Plaut, D. & Behrmann, M. (2011). Orthographic form processing - a multivariate investigation of its neural basis. Society for Neurosciences, Washington, DC.

Nestor, A., Plaut, D. & Behrmann, M. (2011). An investigation of the neural basis of face individuation through spatiotemporal pattern analysis. Vision Sciences Society, Naples, Florida, May.

Ozden, I., Wang, J., Borton, D.A., Wagner, F.B.P., Brush, B.R.M., Agha, N.S., Brooks, D.I., Dai, J., Diagnes, M., Sheinberg, D.L., & Nurmikko, A.V. (2011). A versatile tool for optogenetic neuromodulation in non-human primates: The single coaxial optrode, Society for Neuroscience Abstracts.

Peterson, D.A., Littlewort, G., Orona, A., Bartlett, M., Martino, D., & Defazio, G. (2011). Rating blepharospasm severity with computer-aided video processing. Fifth International Dystonia Symposium, Barcelona, Spain. October 20-22.

Plank, M., Hillyard, S., Huang, C., Alzano, D., Gepshtein, S., & Poizner, H. (2011). Eye-Hand Coordination and EEG Microstates Associated with Rapid Pointing under Risk and Uncertainty. (2011). Cognitive Neuroscience Society Annual Meeting, San Francisco, April, 2011.

Plank, M., Hillyard, S., Huang, H., Snider, J., Gepshtein, S., & Poizner, H. (2011). EEG correlates of spatially directed eye and hand movements during rapid reaching under risk and uncertainty. Program Number 82.24, 2011 Neuroscience Meeting Planner. Washington, D.C: Society for Neuroscience, Washington, D.C. 2011. Online.

Purcell, B.A., Heitz, R.P., Schall, J.D., Logan, G.D., & Palmeri, T.J. (2011). Multiple-accumulator model of decision making during visual search. Paper presented at Computational and Systems Neuroscience (COSYNE) 2011, Salt Lake City, UT.

Purcell, B.A., Schall, J.D., Logan, G.D., & Palmeri, T.J. (2011) Gated stochastic accumulator model of visual search. Talk at the Sixteenth Annual Meeting of the European Conference on Eye Movements, Marseille, France.

Ross, D.A., Deroche, M., & Palmeri, T.J. (2011). Exemplar-based and norm-based accounts of face adaptation. Paper presented at the 52nd annual meeting of the Psychonomic Society, Seattle, WA.

Ross, D.A., Deroche, M., & Palmeri, T.J. (2011). Face adaptation: Comparing norm-based and exemplarbased models. Paper presented at the 11th Annual meeting of the Vision Science Society, Naples, FL.

Salomonczyk, D., Cressman, E., Constantin, A., Miyasaki, J., Moro, E., Chen, R., Strafella, A., Fox, S., Marras, C., Lang, A., Poizner, H., & Henriques, D. (2011). Visuomotor adaptation and proprioceptive recalibration are retained in Parkinson's disease. Program Number 696.09, 2011 Neuroscience Meeting Planner. Washington, D.C: Society for Neuroscience, Washington, D.C. 2011. Online.

Serpell, Z., Whitehill, J., Movellan, J., Foster, A., Lin, Y., Pearson, B., & Bartlett, M. (2011). Sensitivity to Non-verbal Behavior Influences Cognitive Training of Minority Students. Presentation at American Psychological Association conference, May 2011, Washington, DC.
Sigurdardottir, H.M., Michalak, S., & Sheinberg, D.L (2012). Shape: Beyond Recognition, Vision Sciences Society.

Smith, C.N., Clark, R.E., & Squire, L.R. (2011). Brain activity in humans in medial temporal lobe and neocortex as a function of the age of memory (1 hour to 1 month). Presentation at the Society for Neuroscience Meeting, Washington, DC.

Snider, J., Lee, D. Plank, M., Lukos, J. Halgren, E., & Poizner, H. (2011). Object recognition and EEG in an immersive virtual environment with free movement. Program Number 82.24, 2011 Neuroscience Meeting Planner. Washington, D.C: Society for Neuroscience, Washington, D.C. 2011. Online.

Van Gulick, A. & Gauthier, I. (2011). Category learning for a (perceptual) purpose. Talk given at Object Perception, Attention, and Memory Meeting, Seattle, WA.

Vettel, J.M., Lau, T., Bird, C., McDowell, K., Tarr, M.J., & Curran, T. (2011, November). Network dynamics of multisensory integration of real-world environmental events. Talk given to the Annual Society for Neuroscience Conference, Washington, DC.

Woloszyn, L. & Sheinberg, D.L. (2011). Effects of long-term visual experience on single neuron responses in the inferior temporal cortex, Society for Neuroscience Abstracts.

Zachariou, V., Klatzky, R. & Behrmann, M. (2011). Perceptual interactions between object shape and object location. Human Brain Mapping, Quebec City, June.

2011 Books/Chapters

Bartlett, M. & Whitehill, J. (2011). [Automated facial expression measurement: Recent applications to basic research in human behavior, learning, and education](#). In Handbook of Face Perception, Andrew Calder, Gillian Rhodes, James V. Haxby, & Mark H. Johnson (Eds). Oxford University Press. Invited chapter, peer reviewed.

2009 - 2010 Publications

- Aimone, J. B., J. Wiles, et al. (2009). "Computational influence of adult neurogenesis on memory encoding." *Neuron* 61(2): 187-202.
- Armel, K.C., Pulido, C., Wixted, J.C., & Chiba, A.A. (2009) The Smart Gut: Tracking affective associative learning with measures of "liking", facial electromyography, and preferential looking. *Learning and Motivation*.
- Anastassiou, C.A., Montgomery, S.M., Barahona, M., Buzsaki, G., & Koch, C. (2010). The effect of spatially inhomogeneous extracellular electric fields on neurons. *J Neurosci*. 2010 Feb 3;30(5):1925-36. doi: 10.1523/JNEUROSCI.3635-09.2010.
- Bartho, P., Curto, C., Luczak, A., Marguet, S.L., & Harris, K.D. (2009). Population coding of tone stimuli in auditory cortex: dynamic rate vector analysis. *Eur J. Neurosci*, 30:1767-1778.
- Bava S., Thayer R., Jacobus J., Ward M., Jernigan T.L., Tapert S.F. (2010). Longitudinal characterization of white matter maturation during adolescence. *Brain Res*. 2010 Apr 23;1327:38-46.
- Behrens, M.M. & Sejnowski, T.J. (2009). Does schizophrenia arise from oxidative dysregulation of parvalbumin-interneurons in the developing cortex? *Neuropharmacology*, 57: 193-200, 2009.
- Blais, C., Fiset, D., Jolicoeur, P., Arguin, M., Bub, D. & Gosselin, F. (2009). Reading between eye saccades. *PLoS ONE*, 4(7), e6448, doi:10.1371/journal.pone.0006448.
- Broadbent, N.J., Squire, L.R., & Clark, R.E. (2010). Sustained dorsal hippocampal activity is not obligatory for either the maintenance or retrieval of long-term spatial memory. *Hippocampus*. 2010 Dec; 20(12): 1366–1375. doi: 10.1002/hipo.20722.
- Broadbent, N.J., Gaskin, S., Squire, L.R., & Clark, R.E. (2010). Object recognition memory and the rodent hippocampus. *Learning and Memory* 17: 5-11.
- Bub, D.N., & Masson, M.E. (2010). Grasping beer mugs: On the dynamics of alignment effects induced by handled objects. *J Exp Psychol Hum Percept Perform*. 2010 Apr;36(2):341-58. doi: 10.1037/a0017606.
- Butko, N. & Movellan, J.R. (2009). Optimal scanning for faster object detection. *Computer Vision and Pattern Recognition (CVPR)*.
- Cate, A. & Behrmann, M. (2010). Perceiving shape from 3D concavities: Figural grounds? *Attention, Perception and Performance*, 72, 1, 153-167. (NIHMS141249)
- Cepeda, N., Coburn, N., Rohrer, D., Wixted, J., Mozer, M., & Pashler, H, (2009). Optimizing distributed practice: Theoretical analysis and practical implications. *Experimental Psychology*, 56, 236-246.

Chan, J., Leung, H., & Poizner, H. (2009), Correlation among joint motions allows classification of Parkinsonian versus normal 3D reaching movements, *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, June 2, 2009 [E-pub ahead of print].

Cheung, O. S. & Gauthier, I. (2010). Selective interference on the holistic processing of faces in working memory. *J Exp Psychol Hum Percept Perform*. 2010 Apr;36(2):448-61. doi: 10.1037/a0016471.

Cheung, O.S., Hayward, W.G. & Gauthier, I. (2009). Dissociating the effects of angular disparity and image similarity in mental rotation and object recognition, *Cognition*, 113(1), 128-33.

Chukoskie, L. & Movshon, J.A. (2009). Modulation of visual signals in macaque MT and MST neurons during pursuit eye movement. *J Neurophysiol*. 102(6):3225-33.

Conner, J.M., Franks, K.M., Titterness, A.K., Merrill, D.A., Christie, B.R., Sejnowski, T.J., & Tuszynski, M.H. (2009). NGF is essential for hippocampal plasticity and learning, *J. Neuroscience*, 29: 10833-10899 2009

Cowell, R., Huber, D., & Cottrell, G.W. (2009) Virtual brain reading: A connectionist approach to understanding fMRI. In *Proceedings of the 31st Annual Meeting of the Cognitive Science Society*. Winner of the 2009 Perception/Action Modeling Prize

Curby, K.M. & Gauthier, I. (2010). To the trained eye: Perceptual expertise alters visual processing. *Top Cogn Sci*. 2010 Apr;2(2):189-201. doi: 10.1111/j.1756-8765.2009.01058.x. Epub 2009 Nov 4.

Curby, K.M. & Gauthier, I. (2009). The temporal advantage for encoding objects of expertise, *Journal of Vision*, 9(6):7.1-13.

Curby, K.M., Glazek, K., & Gauthier, I. (2009). A visual short-term memory advantage for objects of expertise. *Journal of Experimental Psychology: Human Perception and Performance*, 35(1): 94-107.

Curran, T., Gibson, L., Horne, J. H., Young, B., & Bozell, A. P. (2009). Expert image analysts show enhanced visual processing in change detection. *Psychonomic Bulletin & Review*, 16, 390-397.

Curto, C., Sakata, S., Marguet, S., Itskov, V., & Harris, K.D. (2009) A simple model of cortical dynamics explains the variability and state-dependence of sensory responses in auditory cortex. *J. Neurosci* 29(34):10600-12.

Dailey, M.N., Joyce, C.A., Lyons, M.J., Kamachi, M., Ishi, H., Gyoba, J., & Cottrell, G.W. (2010). Evidence and a computational explanation of cultural differences in facial expression recognition. *Emotion*

de Barbaro, K., Johnson, C.M., Forster, D., & Deak, G.O. (2010). Temporal dynamics of multimodal multiparty interactions: a microgenesis of early social interaction. In A. Spink, F.

- Drion, G., Bonjean, M., Waroux, O., Scuvée-Moreau, J., Liégeois, J.-F., Sejnowski, T.J., Sepulchre, R., & Seutin, V. (2010). A specific role for M-type channels in slow pacemaker neurons, *European Journal of Neuroscience* 31 (5): 827-835.
- Drion, G., Bonjean, M., Waroux, O., Scuvée-Moreau, J., Liégeois, J.-F.J., Sejnowski, T.J., Sepulchre, R., & Seutin, V. (2010). M-type channels selectively control bursting in rat dopaminergic neurons, *European Journal of Neuroscience* 31, 827-835.
- Eckhardt, M., Fasel, I., & Movellan, J.R. (2009). Towards practical facial feature detection. *International Journal of Pattern Recognition and Artificial Intelligence* 23,3, 379-400, 2009.
- Feldman, D.E. (2009). Synaptic mechanisms for plasticity in neocortex. *Annual Review of Neuroscience*, 32: 33-55.
- Fiset, D., Blais, C., Arguin, M., Tadros, K., Ethier-Majcher, C., Bub, D., & Gosselin, F. (2009). The spatio-temporal dynamics of visual letter recognition, *Cognitive Neuropsychology (Special Issue; Letter recognition: From Perception to Representation)*, 26, 23-35.
- Flax, J.F., Realpe-Bonilla, T., Roesler, C., Choudhury, N., & Benasich, A.A. (2009). Using early standardized language measures to predict later language and early reading outcomes in children at high risk for language-learning impairments. *Journal of Learning Disabilities*, 42, 61-75.
- Gauthier, I., Klaiman, C., & Schultz, R.T. (2009). Face composite effects reveal abnormal face processing in Autism Spectrum Disorders. *Vision Research*, 49(4), 470-8.
- Gauthier, I., Tarr, M., & Bub, D. (2009). "Perceptual Expertise: Bridging Brain and Behavior." Oxford University Press.
- Girardeau, G., Benchenane, K., Wiener, S.I., Buzsaki, G., & Zugaro, M.B. Selective suppression of hippocampal ripples impairs spatial memory. *Nature Neuroscience* 2009, 12:1222-3.
- Goard, M. & Dan, Y. (2009). Basal forebrain activation enhances cortical coding of natural scenes. *Nat. Neurosci.* 12(11), 1444-1449.
- Hsiao, J. & Cottrell, G.W. (2009) Not all expertise is holistic, but it may be leftist: The case of Chinese character recognition. *Psychological Science* 20(4):455-63.
- Hsiao, J. and Cottrell, G.W. (2009) What is the cause of left hemisphere lateralization of English visual word recognition? Pre-existing language lateralization, or task characteristics? In *Proceedings of the 31st Annual Meeting of the Cognitive Science Society*.
- Jadhav, S.P. & Feldman, D.E. (2010). Texture coding in the whisker system (in press). *Current Opinion in Neurobiology*. Volume 20, Issue 3, June 2010, Pages 313-318. <https://doi.org/10.1016/j.conb.2010.02.014>.
- Jadhav, S., Wolfe, J., & Feldman, D.E. (2009). Sparse temporal coding of elementary tactile features during active whisker sensation. *Nature Neuroscience*, 12: 792-800.

- James, K.H. & Gauthier, I. (2009). When writing impairs reading: Letter perceptions' susceptibility to motor interference. *Journal of Experimental Psychology: General*, 138(3):416-31.
- Jessberger, S., Clark, R.E., Broadbent, N.J., Clemenson, G.D. Jr., Consiglio, A., Lie, D.C., Squire, L.R., & Gage, F.H. (2009). Dentate gyrus-specific knockdown of adult neurogenesis impairs spatial and object recognition memory in adult rats. *Learning and Memory*, 16(2):147-54.
- Kanan, C. & Cottrell, G.W. (2010). Robust Classification of Objects, Faces, and Flowers Using Natural Image Statistics. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*.
- Kanan, C., Tong, M. H., Zhang, L. & Cottrell, G. W. (2009). SUN: Top-down saliency using natural statistics. *Visual Cognition*, 17(6), 979-1003.
- Lacroix, A., Guidetti, M., Roge, B., & Reilly, J. (2009). Recognition of emotional and nonemotional facial expressions: A comparison between Williams syndrome and autism. *Research in Developmental Disabilities*, 30(5), 976-85.
- Lai, V.T., Curran, T., & Menn, L. (2009). Comprehending conventional and novel metaphors: An ERP study. *Brain Research*, 1284, 145-155.
- Lebrecht, S., Pierce, L., Tarr, M.J., & Tanaka, J. (2009). Perceptual other-race training reduces implicit racial bias, *PLoS ONE*, 4(1), e4215 doi:10.1371/journal.pone.0004215.
- Lee, H., Mozer, M.C., & Vecera, S. (2009). Mechanisms of priming of pop out: Stored representations or feature gain modulations? *Attention, Perception, & Psychophysics*, 71, 1059-71.
- Li, C.Y., Poo, M.M., Dan, Y. (2009). Burst spiking of a single cortical neuron modifies global brain state. *Science*. 324(5927):643-6.
- Li, F., Cao, B., Deak, G. & Li, H. (2009). The law of large numbers in children's diversity-based reasoning. *Thinking and Reasoning*. Published online: 26 Oct 2009. Download citation <https://doi.org/10.1080/13546780903343227>.
- Luczak, A., Bartho, P., & Harris, K.D. (2009) Spontaneous events outline the realm of possible sensory responses in neocortical populations. *Neuron*, 62(3):423-425.
- Lukos, J.R., Lee, D., Poizner, H., & Santello, M. (2010). Anticipatory modulation of digit placement for grasp control is affected by Parkinson's disease, *PLoS One*, 2010, 5(2): e9184. doi:10.1371/journal.pone.0009184.
- Mack, M.L. & Palmeri, T.J. (2010). Modeling categorization of scenes containing consistent versus inconsistent objects. *Journal of Vision* March 2010, Vol.10, 11. doi:10.1167/10.3.11.

Mack, M. L., & Palmeri, T.J. (2011). Decoupling object detection and categorization. *Journal of Experimental Psychology: Human Perception and Performance*. J Exp Psychol Hum Percept Perform. 2010 Oct;36(5):1067-79. doi: 10.1037/a0020254.

Mack, M.L. & Palmeri, T.J. (2009). Recognizing scenes containing consistent or inconsistent objects. *Proceedings of the Thirty-First Annual Meeting of the Cognitive Science Society*, Amsterdam, The Netherlands.

Mack, M.L., Wong, A.C.-N., Gauthier, I., Tanaka, J.W., & Palmeri, T. (2009). Time-course of visual object categorization: Fastest does not necessarily mean first, *Vision Research*, 49, 1961-8.

Madsen, K. S., W. F. Baare, et al. (2010). "Response inhibition is associated with white matter microstructure in children." *Neuropsychologia* 48(4): 854-862.

Makeig, S., Gramann, K., Jung, T-P., Sejnowski, T.J., & Poizner, H. (2009). Linking brain, mind and behavior, *International Journal of Psychophysiology*, 2009, 73, 95-100.

Marks, T. Hershey, J. Movellan, J. (2010). Tracking motion, deformation and texture using conditionally gaussian processes. *Transactions on Pattern Analysis and Machine Intelligence*. Volume: 32 Issue: 2. DOI: 10.1109/TPAMI.2008.278.

Masson, M. E. J. B., D.N. (2009). "Hand action representations evoked during language comprehension. ." *Experimental Psychology Society (EPS)* July.

McGugin, R.W. & Gauthier, I. (2009). Perceptual expertise with objects predicts another hallmark of face perception. *J Vis.* 2009 Apr 27;10(4):15.1-12. doi: 10.1167/10.4.15.

Meltzoff, A. Kuhl, P. Movellan, J., & Sejnowski, T. (2009). Foundations for a new science of learning, *Science*, 235,5938, 284-288.

Mizuseki, K., Sirota, A., Pastalkova, E., & Buzsaki G. (2009). Theta oscillations provide temporal windows for local circuit computation in the entorhinal-hippocampal loop. *Neuron*, 64:267-80.

Moldakarimov, S.B., Bazhenov, M., & Sejnowski, T.J. (2010). Perceptual priming leads to reduction of gamma frequency oscillations. *Proceedings of the National Academy of Sciences* 107 (12).

Moldakarimov, S.B., Bazhenov, M., & Sejnowski, T.J. (2010). Representation sharpening can explain perceptual priming, *Neural Computation*, 22 (5), 1306-1326.

Montgomery, S.M., Betancur, M., & Buzsaki, G. Behavior-dependent coordination of multiple theta dipoles in the hippocampus. *Journal of Neuroscience* 29:1381-94. 2009.

Morency, L., Whitehill, J., & Movellan, J.R. (2009). Monocular head pose estimation using generalized adaptive view-based appearance model. *Image and Vision Computing*.

- Movellan, J., M. Eckhart, et al. (2009). Sociable robot improves toddler vocabulary skills. *Proceedings of the 2009 International Conference on Human Robot Interaction*.
- Mozer, M. C., Pashler, H., Cepeda, N., Lindsey, R., & Vul, E. (2009). Predicting the optimal spacing of study: A multiscale context model of memory. *Advances in Neural Information Processing Systems 22*. D.S.Y. Bengio, J. Lafferty, C.K.I. Williams, & A. Culotta. La Jolla, CA: 1321-1329.
- Nadkarni, S., Bartol, T., Sejnowski, T.J., & Levine, H. (2009). Spatial and temporal correlates of vesicular release at hippocampal synapses, arXiv, 1004.2009v1, 2010.
- Nelson, J.D., McKenzie, C.R.M., Cottrell, G.W., & Sejnowski, T.J. (2010). Experience-matters: Information acquisition optimizes probability gain, *Psychol Sci*. 2010 Jul; 21(7): 960–969. Published online 2010 Jun 4. doi: 10.1177/0956797610372637.
- Nishimura, M., Doyle, J. & Behrmann, M. (2010). Probing the face-space of individuals with prosopagnosia, *Neuropsychologia*. 2010 May;48(6):1828-41. doi: 10.1016/j.neuropsychologia.2010.03.007. Epub 2010 Mar 19.
- Nishimura, M., Scherf, S. & Behrmann, M. (2009). Development of object recognition in humans. *F1000 Biology Report*, 1. <http://f1000biology.com/reports/10.3410/B1-56/>
- Nyhus, E. & Curran, T. (2010). Functional role of gamma and theta oscillations in episodic memory. *Neurosci Biobehav Rev*. 2010 Jun;34(7):1023-35. doi: 10.1016/j.neubiorev.2009.12.014. Epub 2010 Jan 6.
- Nyhus, E. & Curran, T. (2009). Semantic and perceptual effects on recognition memory: evidence from ERP. *Brain Research*, 1283, 102-114.
- Ortiz-Mantilla, S., Flax, J., Chojnowska, C., Choe, M-S, B., Grant, P.E. & Benasich, A.A. (2009). Associations among morphometric measures, electrophysiological cortical responses, and language abilities in children: Predicting from 6 months to 24 months of age. [Abstract], *Journal of Cognitive Neuroscience [Supplement]* April, San Francisco, CA, 20, B18.
- Ortiz-Mantilla, S., Choe, M-S., Flax, J., Grant, P.E., & Benasich, A.A. (2009). Association between the size of the amygdala in infancy and language abilities during the preschool years in normally developing children. *NeuroImage*, 49, 2791-2799.
- Ozen, S., Sirota, A., Belluscio, M.A., Anastassiou, C.A., Koch, C., & Buzsaki, G. (2010). Transcranial electric stimulation entrains cortical neuronal populations in rats. *J Neurosci*. 2010 Aug 25;30(34):11476-85. doi: 10.1523/JNEUROSCI.5252-09.2010.
- Palmeri, T. J., & Cottrell, G. (2009). Modeling perceptual expertise. *Perceptual Expertise: Bridging Brain and Behavior*. M. T. I. Gauthier, & D. Bub Oxford University Press.
- Parra, L.C., Beck, J., & Bell, A.J. (2009) On the maximization of information flow in spiking neurons, *Neural Comput*. 21, 11, :2991-3009.

Paul, P. P., H. Leung, et al. (2010a). Detecting neural decision patterns using SVM-based EEG classification. International Conference on Bioinformatics and Biomedical Engineering (iCBBE 2010), Chengdu, China.

Paul, P. P., H. Leung, et al. (2010b). Combining temporal and frequency based prediction for EEG signals. International Conference on Bio-inspired Systems and Signal Processing (BIOSIGNALS2010) Valencia, Spain.

Peterson, D.A., Elliott, C., Song, D.D., Makeig, S., Sejnowski, T.J., & Poizner, H. (2009). Probabilistic reversal learning is impaired in Parkinson's disease, *Neuroscience*.163, 1092-1101.

Peterson, D., Sejnowski, T.J., & Poizner, H. (2010). Convergent evidence for abnormal striatal synaptic plasticity in dystonia, *Neurobiology of Disease*. 37, 558-573.

Purcell, B.A., Schall, J.D., & Palmeri, T.J. (2009). Discrete versus continuous flow of information: Relating neural activity and the drift diffusion model. Proceedings of the Thirty-First Annual Meeting of the Cognitive Science Society, Amsterdam, The Netherlands.

Purcell, B. A., Heitz, R.P., Cohen, J.Y., Schall, J.D., Logan, G.D., & Palmeri, T.J. (2010). Neurally-constrained modeling of perceptual decision making. *Psychol Rev*. 2010 Oct;117(4):1113-43. doi: 10.1037/a0020311.

Quinn, L.K., Nitz, D.A., & Chiba, A. A. (2010). Learning-dependent dynamics of beta-frequency oscillations in the basal forebrain of rats performing an associative learning task. *Eur J Neurosci*. 2010 Nov;32(9):1507-15. doi: 10.1111/j.1460-9568.2010.07422.x. Epub 2010 Oct 12.

Reilly, J. S. (2009). Language and the many faces of emotion. *Advances in Language Acquisition*. S. Foster-Cohen, Palgrave: 143-168.

Renart, A., de la Rocha, J., Bartho, P., Hollender, L., Parga, N., Reyes, A., & Harris, K.D. (2010). The asynchronous state in cortical circuits. *Science*, 327(5965):587-90.

Richler, J.J., Bukach, C.M., & Gauthier, I. (2009). Context influences holistic processing of nonface objects in the composite task. *Perception & Psychophysics*, 71(3): 530-40.

Richler, J.J., Cheung, O.S., Wong, A. C.-N., & Gauthier, I. (2009). Does response interference contribute to face composite effects? *Psychonomic Bulletin and Review*, 16(2), 258-63.

Richler, J.J., Mack, M.L., Gauthier, I., & Palmeri, T.J. (2009). Holistic processing of faces at a glance. *Vision Research*; 49: 2856-2861.

Robbe, D. & Buzsaki, G. (2009). Alteration of theta timescale dynamics of hippocampal place cells by a cannabinoid is associated with memory impairment. *Journal of Neuroscience* 29:12597-605.

Rohrer, D., Pashler, H. (2010). Recent Research on Human Learning Challenges Conventional Instructional Strategies. *Educational Researcher*, Vol 39, Issue 5, 2010.
<https://doi.org/10.3102/0013189X10374770>.

- Rossion, B. & Curran, T. (2010). Visual expertise with pictures of cars correlates with RT magnitude of the car inversion effect, *Perception*. 2010;39(2):173-83.
- Royer, S., Sirota, A., Patel, J., & Buzsaki, G. (2010). Distinct representations and theta dynamics in Dorsaland ventral hippocampus. *J Neurosci*. 2010 Feb 3;30(5):1777-87. doi: 10.1523/JNEUROSCI.4681-09.2010.
- Sakata, S. & Harris, K.D. (2009). Laminar structure of spontaneous and sensory-evoked population activity in auditory cortex. *Neuron*, 64(3): 404-418.
- Scherf, K.S., Behrmann, M., Kimchi, R. & Luna, B. (2009). Emergence of global shape processing continues through adolescence, *Child Development*, 80, 1, 162-177.
- Scherf, S., Luna, B., Minshew, N., & Behrmann, M. (2010). Atypical Development of Face-Related Activation in Autism. *Frontiers in Neuroscience*.
- Schettino, L., Van Erp, E., Hening, W., Lessig, S., Song, D., Barba, D., & Poizner, H. (2009). Deep brain stimulation of the subthalamic nucleus facilitates coordination of hand pre-shaping in Parkinson's Disease, *International Journal of Neuroscience*, 2009, 119, 1905-1924.
- Schmidt, R., Diba, K., Leibold, C., Schmitz, D., Buzsaki, G., & Kempter, R. (2009). Single-trial phase precession in the hippocampus. *Journal of Neuroscience*, 29:13232-41.
- Schwartz, O., Sejnowski, T.J., & Dayan, P. (2009). Perceptual organization in the tilt illusion, *Journal of Vision*, 9(4):19, 1-20.
- Shelly, M., Lim, B.K., Cancedda, L., Heilshorn, S.C., Gao, H., & Poo M.M. (2009). Local and long-range reciprocal regulation of cAMP and cGMP in axon/dendrite formation. *Science*. 327(5965):547-52.
- Simmering, V., Spencer, J., Deak, G., & Triesch, J. (2010). To model or not to model? A dialogue on the role of computational modeling in developmental science. *Child Dev Perspect*. 2010 Aug;4(2):152-158.
- Simpkins, A. & Todorov, E. (2009). Position estimation and control of compact BLDC motors based on analog linear Hall effect sensors. To appear in American Control Conference.
- Singer, J. M., Sheinberg, D.L. (2010). Temporal cortex neurons encode articulated actions as slow sequences of integrated poses. *J Neurosci*. 30(8): 3133-3145.
- Smith, C. N. & Squire, L.R. (2009). Medial temporal lobe activity during retrieval of semantic memory is related to the age of the memory. *J Neurosci* 29(4): 930-938.
- Stiefel, K.M., Fellous, J-M., Thomas, P.J., & Sejnowski, T.J. (2010). Intrinsic sub-threshold oscillations extend the influence of inhibitory synaptic inputs on cortical pyramidal neurons, *European J. Neuroscience*, 31 (6).

- Stiefel, K.M., Gutkin, B.S., & Sejnowski, T. J. (2009). The effects of cholinergic neuromodulation on neuronal phase-response curves of modeled cortical neurons, *Journal of Computational Neuroscience*, 26, 289-301.
- Tanaka, J., Bartlett, M., Movellan, J., Littlewort, G., and Lee-Cultura, S. (2010). Face-Face-Revolution: A game in real-time facial expression recognition. Demo, Vision Sciences Society Conference, Naples, FL, May 2010. Demo, Vision Sciences Society Conference, Naples, FL.
- Tanaka, H., Sejnowski, T.J., & Krakauer, J.W. (2009). Adaptation to visuomotor rotation through interaction between posterior parietal and motor cortical areas, *Journal of Neurophysiology*.
- Tanaka, J. W., Wolf, J. M., Klaiman, C., Koenig, K., Cockburn, J., Herlihy, L., Brown, C., Stahl, S., Kaiser, M.D., & Schultz, R.T. (2010). Using computerized games to teach face recognition skills to children with autism spectrum disorder: The Let's Face It! program. *J Child Psychol Psychiatry*. 2010 Aug;51(8):944-52. doi: 10.1111/j.1469-7610.2010.02258.x.
- Tanaka, J., W.P., L.J. (2009). The neural plasticity of other-race face recognition. *Cognitive, Affective, & Behavioral Neuroscience*, March 2009, Volume 9, Issue 1, pp 122–131.
- Theodorou, E., Tassa, Y. & Todorov, E. (2009). Stochastic differential dynamic programming. To appear in American Control Conference.
- Tiesinga, P. & Sejnowski, T.J. (2009). Cortical enlightenment: Are gamma oscillations driven by ING or PING? *Neuron*, 63: 727-732.
- Todorov, E. (2009). Compositionality of optimal control laws. *Advances in Neural Information Processing Systems* 22, pp 1856-1864.
- Todorov, E. (2009). Efficient computation of optimal actions. *Proceedings of the National Academy of Sciences*, 106(28): 11478-11483.
- Todorov, E. (2009). Implicit nonlinear complementarity: A new approach to contact dynamics. To appear in International Conference on Robotics and Automation.
- Volman, V., Levine, H., Ben-Jacob, E., & Sejnowski, T.J. (2009). Locally balanced dendritic integration by short-term synaptic plasticity and active dendritic conductance, *Journal of Neurophysiology*, 102, 3234-3250.
- Vul, E., Harris C., Winkielman, P., & Pashler, H. (2009). Puzzlingly high correlations in fMRI studies of emotion, personality, and social cognition. *Perspectives on Psychological Science*, 4, 274-290.
- Vul, E., Harris C., Winkielman, P., & Pashler, H. (2009). Reply to comments on Puzzlingly high correlations in fMRI studies of emotion, personality, and social cognition. *Perspectives on Psychological Science*, 4, 274-290.

- Vural, E., Bartlett, M.S., Littlewort, G., Cetin, M. Ercil, E., & Movellan, J. (2010). Discrimination of moderate and acute drowsiness based on spontaneous facial expressions. Proc. IEEE International Conference on Pattern Recognition.
- Wang, H.P., Spencer, D., Fellous, J.M., & Sejnowski, T.J. (2010). Synchrony of thalamocortical inputs maximizes cortical reliability, *Science*, 328: 106-109.
- Whitehill, J., Bartlett, M., Littlewort, G., Fasel, I. and J.R. Movellan (2009). Towards practical smile detection. *Pattern Analysis and Machine Intelligence*, 99(2): 2106-2111
- Whitehill, J., Littlewort, G., Fasel, I., Bartlett, M., & Movellan, J. (2009). Towards practical smile detection, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 99(2),
- Whitehill, J., Ruvolo, P. Wu, T., Bergsma, J. & Movellan, J. (2009). Whose vote should count more: Optimal integration of labels from labelers of unknown expertise. *Advances in Neural Information Processing Systems*.
- Williams, N.R., Willenbockel, V. & Gauthier, I. (2009). Sensitivity to spatial frequency and orientation content is not specific to face perception, *Vision Research*, 39, 2353-62.
- Wisniewski, M., Church, B.A., & Mercado, E. (2009). Learning-related shifts in generalization gradients for complex sounds. *Learning and Behavior*, 37, 325-335.
- Wong, Y.K. & Gauthier, I. (2010). A multimodal neural network recruited by expertise with musical notation. *J Cogn Neurosci*. 2010 Apr;22(4):695-713. doi: 10.1162/jocn.2009.21229.
- Wong, A.C.-N., Palmeri, T.J., & Gauthier, I. (2009). Conditions for face-like expertise with objects: Becoming a Ziggerin expert -- but which type? *Psychological Science*. 20(9), 1108-17.
- Wong, A.C.-N., Jobard, G., James, K.H., James, T.W., & Gauthier, I. (2009). Expertise with characters in alphabetic and non-alphabetic writing systems engage overlapping occipito-temporal areas. *Cognitive Neuropsychology*, 26(1): 111:127.
- Wong, A.C.-N., Palmeri, T.J., Rogers, B.P., Gore, J.C., & Gauthier, I. (2009). Beyond shape: Experience can determine patterns of category selectivity in the visual system. *PLoS One*, 4(12), e8405.
- Wu, T., Butko, N., Ruvolo, P., Bartlett, M.S., & Movellan, J.R. (2009). Learning to make facial expressions, *Proceedings of the 8th International Conference on Development and Learning*. Shanghai, China.
- Wu, T., Bartlett, M.S., & Movellan, J. (2010). Facial expression recognition using Gabor motion energy filters. *Proc. IEEE CVPR workshop on Computer Vision and Pattern Recognition for Human Communicative Behavior Analysis*.
- Yen, N.-S., Chen, K.H., & Liu, E.H. (2010). Emotional modulation of the late positive potential (LPP) generalizes to Chinese individuals. *International Journal of Psychophysiology*, 75, 319-325.

Zhang, L., Tong, M., & Cottrell, G.W. (2009) SUNDAY: Saliency Using Natural Statistics for Dynamic Analysis of Scenes. In Proceedings of the 31st Annual Meeting of the Cognitive Science Society.

Zhang, T., Zheng, X., Zhang, L., Shu, W., Deak, G., & Li, H. (2010). Children's misunderstanding of uncertain belief after passing the false belief task. *Cognitive Development*, v25 n2 p158-165 Apr-Jun 2010.

2009-2010 Books-Chapters

Bartlett, M., Littlewort, G., Whitehill, J., Vural, E., Wu, T., Lee, K., Ercil, A., Cetin, M., & Movellan, J. (2010). Insights on spontaneous facial expressions from automatic expression measurement. In Giese, M. Curio, C., Bulthoff, H. (Eds.) *Dynamic Faces: Insights from Experiments and Computation*. MIT Press. Invited chapter, peer reviewed.

Behrmann, M., Avidan, G., Thomas, C., & Humphreys, K. (2010). Congenital and Acquired Prosopagnosia: Flip sides of the same coin?. In D. Bub, I. Gauthier & M. Tarr (Eds.). *Perceptual Expertise: Bridging Brain and Behavior*. Oxford University Press, p167-196.

Behrmann, M., Avidan, G., & Nishimura, M. (2010). Impairments in face perception. In A. Calder, J. V. Haxby, G. Rhodes & M. Johnson (Eds.) *Handbook of Face Perception*. Oxford University Press.

Bub, D. (2009). Lessons from Neuropsychology. In Gauthier, I.G., Bub, D.N. & Tarr, M.J. (eds.) *Perceptual Expertise: Bridging Brain and Behavior*, a New Volume in *Advances in Visual Cognition Series*, Oxford University Press.

Buzsaki G. (2009). *Hippocampus: Network physiology*. Gordon Shepherd (eds.) *Neural Microcircuits*, MIT Press.

Chiba, A.A. & Quinn, L.K. (2009), Basal forebrain and memory; *Learning and Memory: A Comprehensive Reference*, edited by John H Byrne et al. pp. 281-301.

Choudhury, N. & Benasich, A.A. (2009). Infant information processing and family history of specific language impairment: Converging evidence for early auditory perceptual deficits. In H. Eswaran & N. Chatterje Singh (Eds.) *Advances in developmental neuroscience and imaging*, pp. 9-23. New Delhi, India: Anamaya Publishers.

Diba, K. & Buzsaki, G. (2009). Oscillation-supported information processing and transfer in the hippocampus-entorhinal-neocortical interface. W Singer (ed) *Coding in networks*. Springer.

Dickinson, S. J., Leonardis, A., Schiele, B., & Tarr, M. J. (2009). *Object categorization: Computer and human vision perspectives*. New York, NY: Cambridge University Press.

Gauthier, I., Tarr, M. J., & Bub, D. (2009). *Perceptual expertise: Bridging brain and behavior*. New York, NY: Oxford University Press.

- Lai, P. (2009). Music and Emotion in Williams Syndrome. (Master's Thesis) San Diego State University: Department of Psychology. San Diego, California.
- Mack, M.L., Richler, J.J., Palmeri, T.J., & Gauthier, I. (2009). Categorization. To appear in G.G. Berntson & J.T. Cacioppo (Eds.), *Handbook of Neuroscience for the Behavioral Sciences*, Hoboken, NJ: John Wiley & Sons.
- Mozer, M.C. & Wilder, M. H. (2009). A unified theory of exogenous and endogenous attentional control. In D. Heinke & E. Mavritsaki (Eds.), *Computational modeling in behavioral neuroscience: Closing the gap between neurophysiology and behavior* (pp. 245-265). London: Psychology Press.
- Mozer, M.C., Pashler, H., Cepeda, N., Lindsey, R., & Vul, E. (2010). Predicting the optimal spacing of study: A multiscale context model of memory. In Y. Bengio, D. Schuurmans, J. Lafferty, C.K.I. Williams, & A. Culotta (Eds.), *Advances in Neural Information Processing Systems 22* (pp. 1321-1329). La Jolla, CA: NIPS Foundation.
- Palmeri, T.J. & Cottrell, G. (2009). Modeling perceptual expertise. In I. Gauthier, M. Tarr, & D. Bub (Eds.), *Perceptual Expertise: Bridging Brain and Behavior*. Oxford University Press.
- Reilly, J.S. (2009). Language and the many faces of emotion. In Foster-Cohen, S (Ed). *Advances in Language Acquisition*. Palgrave.
- Reilly, J.S. (2009). Language and emotion. In Scherer, K. & Sander, D. (Eds). *Oxford Companion to the Affective Sciences*, Oxford University Press.
- Reilly, J, Lai, P, Bernicot, J, & Bellugi, U. (2010). Williams syndrome. In R. Nass (Ed.) & F. Yitzchak (Ed.), *Cognitive and Behavioral Abnormalities of Pediatric Diseases*. New York: Oxford University Press (pp 267-284).
- Sheinberg, D. & Tarr, M.J. (2009). Objects of expertise. In I. Gauthier, M.J. Tarr, & D. Bub (Eds.), *Perceptual expertise: Bridging brain and behavior*. New York, NY: Oxford University Press.
- Wilder, M., Jones, M., & Mozer, M.C. (2010). Sequential effects reflect parallel learning of multiple environmental regularities. In Y. Bengio, D. Schuurmans, J. Lafferty, C.K.I. Williams, & A. Culotta (Eds.), *Advances in Neural Information Processing Systems 22* (pp. 2053-2061). La Jolla, CA: NIPS Foundation.
- Zitzer-Comfort, C., Reilly, J.S. Korenberg, J.R., Bellugi, U. (2010). We are social -- therefore we are: The interplay of mind, culture and genetics in Williams syndrome. In CM Worthman, P Plotsky, D Schechter, & C Cummings (Eds.) *Formative experiences: The interaction of caregiving, culture, and developmental psychobiology*. Cambridge University Press.

2009 - 2010 Conference Presentations

Alvarez, B.S., Ortiz-Mantilla, S.C., Choudhury, N., Diclemente, F. & Benasich, A.A. (2009). Differences in the MMN-P3a-LDN cortical responses using auditory discrimination to non-speech signals in early and late Spanish-English bilingual adults. 39th Annual Meeting, Society for Neuroscience Abstracts, Chicago, IL, Vol. 33, Program No. 779.24.

Amarasingham, A. & Buzsaki, G. (2009). Model-free analysis of functional connectivity in a multinneuronal population, 57th Annual Session of the International Statistical Institute, Durban, South Africa, August.

Avidan, G., Thomas, C., & Behrmann, M. (2009). An integrative approach towards understanding of the neural basis of congenital prosopagnosia. Society for Neurosciences, Washington, October.

Bartlett, M.S. (2009). Information maximization in face processing. Invited talk. Society for Autonomous Neurodynamics, La Jolla, CA, July 27-29.

Behrmann, M. (2009). Invited Keynote Address, OPAM (Object recognition, perception and memory) conference. Boston, October.

Behrmann, M. (2009). National Chung Cheng University. 14th Workshop on Attention and Perception, Chiayi, Taiwan. Keynote speaker.

Behrmann, M. (2009). Lets face it. Society for Experimental Psychologists, Boulder, Colorado.

Buzsaki, G. (2009). INMED Passation de Direction (Y. Ben-Ari to A. Represa), INMED-Inserm 901, Marseille, France. September 14, 2009. Keynote Speaker.

Buzsaki, G. (2009). 6th Joint ECNS-ISNIP Conference, Atlanta, GA. September 9-12, 2009. Plenary Speaker.

Buzsaki, G. (2009). International Society for Neurofeedback and Research, Indianapolis, IN. September 5, 2009. Plenary Speaker.

Buzsaki, G., (2009). Dynamic Coordination in the Brain: From Neurons to Mind. Frankfurt am Main, Germany. August 16–21, 2009. Speaker

Buzsaki, G. (2009). Origins and functions of the local field potential. The Swartz Initiative in Theoretical Neuroscience, Yale University, September 21, 2009. Speaker.

Buzsaki, G. (2009). 28th International Epilepsy Congress Budapest, Hungary. June 28-July 4, 2009. Invited symposium speaker.

Buzsaki, G. (2009). 9th World Congress of Biological Psychiatry. Paris, France. June 28-July 2, 2009. Invited symposium speaker.

Buzsaki, G. (2009). Cortical interneurons in health and disease – EMBO Workshop. Costa d'en Blanes, Mallorca, Spain. June 21 - 25 June, 2009. Invited Speaker

Buzsaki, G., Dendrites: Molecules, Structure & Function. (2009). Gordon Research Conferences. Lucca (Barga), Italy (Greg J. Stuart & Anirvan Ghosh, org). May 18-21. Invited Speaker.

Busaki, G., (2009). Research Frontiers in Neuroscience: Brainstorming Tinnitus. Cernobbio, Italy, May 11-13. Invited Speaker.

Cheung, O., Richler, J.J., Phillips, S., & Gauthier, I. (2009). Does temporal integration of face parts reflect holistic processing? Annual Meeting of the Vision Sciences Society, Naples, FL, May.

Curran, T, (2009). Human learning and memory: Perspectives from event-related brain potentials (ERPs). Invited presentation to the First Sino-German Fall School of the International Research Training Group (IRTG) Adaptive Minds: Neural and Environmental Constraints on Learning and Memory, Beijing, China.

Curran, T, (2009). The ERP Correlates of Perceptual Expertise. Invited presentation to the Temporal Dynamics of Learning Center Boot Camp, San Diego, CA.

Deak, G. (2009). Understanding the emergence of typical attention-sharing behaviors in infancy. Invited talk, Children's Hospital Grand Rounds, San Diego, CA, November..

Deak, G.O. (2009). Learning social cues that support social learning. Invited talk, DELTA Center Pre-conference, Cognitive Development Society Biennial Meeting, San Antonio, TX, October.

Deak, G.O. (2009). Emergence of joint attention: A theory is close at hand. Invited talk, University of Texas at Austin, Psychology Department, October.

Deak, G.O. (2009). Are children fast word-learners? Invited talk, University of Texas at Austin, Psychology Department, October.

Diba, K., Mizuseki, K., Sullivan, D., Royer, S., & Buzsaki, G. (2009). Interneurons bind to and segregate cell assemblies in hippocampal networks of behaving rats. Soc. Neurosci. Abs. 192.14.

Dipietro, L., Poizner, H., van Erp, E., & Poizner, H. (2009). EEG correlates of submovements in human wrist movements. Program Number 663.6. Abstract Viewer/Itinerary Planner. Washington, D.C: Society for Neuroscience.

Folstein, J.R., Gauthier, I., Green, J.L., & Palmeri, T.J. (2009). An effect of mere exposure on visual category learning. Paper presented at the 9th Annual meeting of the Vision Science Society, Naples, FL.

Fujisawa, S. & Buzsaki, G. (2009). A novel (4 Hz) oscillation of prefrontal and hippocampal neurons in the waking rat. #192.12 Neuroscience Meeting. Chicago, IL: Society for Neuroscience.

Geisler, C. (2009). Co-organizer and Speaker, Workshop on Cortical Oscillations at the CNS Conference in Berlin, July 22.-23.

Geisler, C. (2009). Poster. Delayed coupling of oscillating hippocampal place cell assemblies generates slower oscillating population activity at theta frequency, *Frontiers in Applied and Computational Mathematics*, June 1-2. NJIT, Newark, NJ.

Geisler, C. & Buzsaki, G. (2009). Poster. Delayed coupling of oscillating hippocampal place cell assemblies generates slower oscillating population activity at theta frequency. *Society for Neuroscience Meeting*, Chicago, IL (192.7).

Geisler, C.M., Mizuseki, K., Pastalkova, E., Diba, K., Royer, S. & Buzsaki, G. (2009). Delayed coupling of oscillating hippocampal place cell assemblies generates slower oscillating population activity at theta frequency. *Soc. Neurosci. Abs.* 192.7.

Gramann, K., Bigdely-Shamlo, N., Vankov, A., & Makeig, S. (2009). Mobile brain/body imaging (MoBI) of active cognition. *Fifth Bernstein Conference on Computational Neuroscience*, Frankfurt, Germany.

Gramann, K., Gwin, J.T., Ferris, D.P., & Makeig, S. (2010). Cognition on the Run. *The 3rd International Congress on Gait & Mental Function*, Washington D.C.

Gwin, J.T., Gramann, K., Ferris, D.P., & Makeig, S. (2010). Electro cortical brain activity is coupled to gait cycle phase during treadmill walking. *The 3rd International Congress on Gait & Mental Function*, Washington D.C.

Hayward, W., Zhao, M., Cheung, O., Rhodes, G., & Gauthier, I. (2009). Dissociating contributions of configural and component information to the own-race advantage in face recognition. *Annual Meeting of the Vision Sciences Society*, Naples, FL, May.

Jones, M., Curran, T., Mozer, M., & Wilder, M.H. (2009). Sequential effects reflect learning of temporal structure. Paper presented at the 50th Annual Meeting of the Psychonomic Society (Boston, MA).

Kharitonova, M., Curran, T., Munakata, Y., Kitajo, K., & Yamaguchi, Y. (2009). Theta oscillations reflect individual differences in working memory capacity. Poster presented at the *Society for Neuroscience meeting*, Chicago, IL.

Kinka, D., Bukach, C., & Gauthier, I. (2009). Are label associations necessary for the acquisition of expertise? *Annual Meeting of the Vision Sciences Society*, Naples, FL, May.

Lai, V.T & Curran, T. (2009). Comparison Processes and Conceptual Mappings in Metaphor Comprehension: Evidence from ERPs. Poster presented at the 15th Annual Conference on Architectures and Mechanisms for Language Processing, Barcelona, Spain.

Lai, V.T. & Curran, T. (2009). Conceptual mappings as comparison in metaphor comprehension. Poster presented at the *Neurobiology of Language Conference*. Chicago, IL.

Lai, P., Lazo, D., & Reilly, J. (2010). Expressivity through Musical Expression in Individuals with Williams Syndrome. San Diego State University: Student Research Symposium, March 5.

Lee, D., Henriques, D.Y.P., Li, X., Helms-Tillery, S., Song, D.D., & Poizner, H. (2009). Reaching to kinesthetically defined targets in Parkinson's disease: Effects of deep brain stimulation therapy. Washington, D.C: Society for Neuroscience.

Lee, D. Henriques, D., Corcos, D.M., & Poizner, H. (2009). Patterns of eye-hand coupling in reaching to remembered 3D targets. Neural Control of Movement Annual Meeting, Kona, Hawaii, April.

Liu, E. H., Church, B. A., Orduna, I., & Mercado, E. (2010). Behavioral and electrophysiological effects of progressive training on auditory discrimination. Paper presented at the Temporal Dynamics of Learning Center All Hands Meeting, January.

Liu, E. H., Church, B. A., Orduna, I., & Mercado, E., III (January, 2010). Behavioral and electrophysiological effects of progressive training on auditory discrimination. Poster presented at the TDLC All-Hands Meeting, San Diego, CA.

Liu, E. H., Church, B. A., Orduna, I., & Mercado, E. (2009). Generalization of auditory discrimination following limited training: Is progressivity important? Paper presented at the 50th Annual Meeting of the Psychonomics Society, Boston, Massachusetts, November.

Liu, E. H., Church, B. A., Orduna, I., & Mercado, E., III (November, 2009). Generalization of Auditory Discrimination Following Limited Training: Is Progressivity Important? Poster presented at the 50th Annual Meeting of the Psychonomics Society, Boston, MA.

Lucos, J.R., Lee, D., Poizner, H., & Santello, M. (2009). Patients with Parkinson's disease fail to appropriately use sensorimotor memories during multi-digit grasping. Neural Control of Movement Annual Meeting, Kona, Hawaii, April.

Mack, M.L. & Palmeri, T.J. (2009). Are detection and categorization tightly coupled? Paper presented at the 50th annual meeting of the Psychonomic Society, Boston, MA.

Meza, R. L. Phan, L. Felizardo, J., Littlewort, Bartlett, M, Movellan, J., & J. Reilly. (2009). The Paradox of Facial Expression in Children. Poster presented at the Annual Biomedical Research Conference for Minority Students, Phoenix, AZ. November, 2009.

Meza, R. L. Phan, L. Felizardo, J., Littlewort, Bartlett, M, Movellan, J., & J. Reilly. (2010). Why so many faces? Children's Spontaneous and Voluntary Facial Expressions. Poster presented at the San Diego State University Student Research Symposium, San Diego, CA. March, 2010. Awarded the Provost's Prize.

Mizuseki, K., Sirota, A., Pastalkova, E. & Buzsaki, G. (2009). Theta oscillations provide temporal windows for local circuit computation in the entorhinal-hippocampal loop. Soc. Neurosci. Abs. 192.16.

Mizuseki, K. (2009). The 32nd Annual Meeting of the Japan Neuroscience Society. September 16-18, 2009, Nagoya, Japan. Oral presentation: Theta oscillations provide temporal windows for local circuit computation in the entorhinal-hippocampal loop.

Movellan, J.R. Eckhardt, M. Virnes, M., Rodriguez, A. (2009) Sociable Robot Improves Toddler Vocabulary Skills. Proceedings of the International Conference on Human Robot Interaction,

Nishimura, M., Doyle, J. & Behrmann, M. (2009). Probing the face-space of individuals with prosopagnosia. Vision Sciences meeting, Naples, FL, May.

Nyhus, E., Curran, T. (2009). Recollection revealed by its absence: Midazolam-induced amnesia reduces memory for details and the ERP correlate of recollection. Paper presented at the annual meeting of the Cognitive Neuroscience Society, San Francisco.

Ozen, S., Sirota, A.M., Anastassiou, C., Belluscio, M., Koch, C. & Buzsaki, G. (2009). Entrainment of cortical activity by applied electrical fields. NSF Science of Learning Centers Annual Meeting.

Ozen, S., Sirota, A.M., Anastassiou, C., Belluscio, M., Koch, C. & Buzsaki, G. (2009). Entrainment of cortical activity by applied electrical fields. Society for Neuroscience Meeting, Chicago, IL (192.8).

Palmeri, T.J. (2009). Neurally-constrained model of perceptual decision making. Paper presented at the Copenhagen Colloquium, Center for Visual Cognition, University of Copenhagen.

Palmeri, T.J., Purcell, B.A., Schall, J.D., Logan, G.D., Heitz, R.P., & Cohen, J.Y. (2009). Neural basis of stochastic accumulator models of perceptual decision making. Paper presented at the 2009 Annual Interdisciplinary Conference, Jackson Hole, WY.

Pastalkova, E. (2009). HHMI Janelia Farm Research Center. Invited Seminar. Neuronal mechanisms of the hippocampus-dependent memory.

Pastalkova, E. (2009). Department of Mechanical Engineering and Applied Mechanics, University of Pennsylvania. Invited seminar. Hippocampus-dependent memories.

Pastalkova, E. (2009). Minisymposium (Oscillations and Brain Function: Setting the Neuronal Tempo in Health and Disease). Symposium Speaker. Neuronal mechanisms of the hippocampus-dependent memory. Society for Neuroscience Annual Meeting, Chicago, IL

Patel, J., Royer, S. & Buzsaki, G. (2009) 3-D topography of oscillatory patterns in the hippocampus of the behaving rat. Soc. for Neurosci. Abs. 192.18.

Peterson, D.A., Lotz, D., Ahn, A., Halgren, E., Makeig, S., Sejnowski, T., & Poizner, H. (2009). Fronto-central EEG dissociates learning and decision making-based expected value: EEG correlates of submovements in human wrist movements. Program Number 675.2. Abstract Viewer/Itinerary Planner. Washington, D.C: Society for Neuroscience.

- Peterson, D.A., Sejnowski, T.J., & Poizner, H. (2009). Can reinforcement learning provide a unifying framework for the etiology of dystonia: Multidisciplinary Symposium on Reinforcement Learning, Montreal, Canada, June.
- Phan, L., Felizardo, J., Bartlett, M., Littlewort-Ford, G., Meza, R. & J. Reilly. (2009). Behavioral Indices of cognitive processing. Paper presented at MutiModality 2009. Toulouse, France, July.
- Phan, L. Patel, S., Meza, R., Littlewort, G., Bartlett, M., Movellan, J. & Reilly, S. (March, 2010). Behavioral indices of cognitive grappling in problem solving. Poster presented at the 3rd Annual San Diego State University Student Research Symposium. San Diego, California.
- Purcell, B.A., Heitz, R.P., Cohen, J.Y., Schall, J.D., Logan, G.D., & Palmeri, T.J. (2009). Using neurophysiology to explore discrete versus continuous flow models of perceptual decision making. Paper presented at the 2009 meeting of the Society for Mathematical Psychology, Amsterdam.
- Purcell, B.A., Cohen, J.Y., Heitz, R.P., Schall, J.D., Logan, G.D., & Palmeri, T.J. (2009). Developing a neuromimetic accumulator model of perceptual decisions. Paper presented at the 9th Annual meeting of the Vision Science Society, Naples, FL.
- Reilly, J. (2009). Language and the many faces of emotion. Invited Plenary Talk. MultiModality Toulouse, France, 2009.
- Richler, J.J., Mack, M.L., Gauthier, I., & Palmeri, T.J. (2009). What makes face recognition holistic: Insights (or not) from models and MSDA. Paper presented at the 2009 meeting of the Society for Mathematical Psychology, Amsterdam.
- Richler, J.J., Mack, M.L., Gauthier, I., & Palmeri, T.J. (2009). What makes face recognition holistic: Insights from models. Paper presented at the Thirty-First Annual Meeting of the Cognitive Science Society, Amsterdam, The Netherlands.
- Royer, S., Zemelman, B., Losonczy, A., Magee, J. & Buzsaki, G. (2010) Perturbation of hippocampal place cell dynamics by halorhodopsin-assisted silencing of PV interneurons. Cosyne Meeting. (Poster).
- Sirota, A. (2009). Invited talk at SIAM Conference on Applications of Dynamical systems, May.
- Sirota, A. (2009). Invited talk at Janelia Workshop, Technical Challenges in Extracellular Electrophysiology, June.
- Sirota, A. (2009). Invited talk at Lorentz Center, Leiden University Workshop on Brain Waves, June.
- Sirota, A. (2009). Invited talk at Cognitive Neuroscience Society, Berlin Cortical Oscillations Workshop, July.

- Sirota, A., Montgomery, S., Mizuseki, K. & Buzsaki, G. (2009). Diversity and theta phase coordination of gamma oscillators in entorhino-hippocampal system during exploration and REM sleep. Society for Neuroscience Meeting, Chicago, IL (192.5).
- Sirota, A., Montgomery, S., Mizuseki, K. & Buzsaki, G. (2009). Diversity and theta phase coordination of gamma oscillators in entorhinal-hippocampal system during exploration and REM sleep in rats. Soc. Neurosci. Absr. 192.6.
- Snyder, H., Hutchison, N., Nyhus, E., Curran, T., & Munakata, Y. (2009). So many options: The roles of neural inhibition and abstract representations in selection. Poster presented at the annual meeting of the Cognitive Science Society, Amsterdam, Netherlands.
- Tanaka, J., Bartlett, M., Movellan, j., Littlewort, G., & Lee-Cultura, S. (accepted). Face-Face-Revolution: A game in real-time facial expression recognition. Demo, Vision Sciences Society Conference, Naples, FL, May 2010.
- Toellner, T., Mueller, H.J., Poizner, H., & Gramann, K. (2009). Electroencephalographic measurement of manual pointing in visually guided compound search. Annual Meeting of the Society for Psychophysiological Research, Berlin, Germany. Psychophysiology, 46, S118-S119.
- Torres, E., Heilman, K.M., & Poizner, H. (2009). Complementary roles of the left posterior parietal lobe and basal ganglia in reference frame usage. Computational and Systems Neuroscience 2009 (COSYNE09), Snowbird, Utah, March.
- Velu P., Hammon, P., Mullen, T., & de Sa, V. (2009). Dissociating visual response and motor preparation in reach prediction from EEG. Program No. 360.8. 2009 Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience. Online.
- Vettel, J.M., Nestor, A., Bird, C.W., Heller, L.M., Curran T., & Tarr, M. J. (2009). Investigating the Interplay of Time & Semantics during Multimodal Integration. Poster presented at the 10th International Multimodal Research Forum, New York, NY.
- Wang, Y., Toellner, T., Gramann, K., & Makeig, S. (2009). Theta oscillations in the medial frontal cortex during response preparation. Society for Neuroscience Annual Meeting, Chicago, USA.
- Williams, N.R. & Gauthier, I. (2009). Expertise CAN explain why face perception is sensitive to spatial frequency content! Annual Meeting of the Vision Sciences Society, Naples, FL, May.
- Wisniewski, M., Gramann, K., Mercado, E., & Makeig, S. (2010). Changes in EEG dynamics during perceptual learning. Paper presented at the Temporal Dynamics of Learning Center All Hands Meeting, January.
- Wisniewski, M., Church, B. A., & Mercado, E. (2009). Auditory peak shift: The impact of experience. Paper presented at the 50th Annual Meeting of the Psychonomics Society, Boston, MA, November.

Wong, A.C.-N., Palmeri, T.J., Rogers, B.P., Gore, J.C., & Gauthier, I. (2009). Experience can determine category selectivity in the visual system. Paper presented at the 9th Annual meeting of the Vision Sciences Society, Naples, FL, May.

Wong, Y.K., Folstein, J.R., & Gauthier, I. (2009). Comparing perceptual learning and perceptual expertise with matched stimuli. Annual Meeting of the Vision Sciences Society, Naples, FL, May.

Before 2009 Publications

Aimone, J. B., J. Wiles, et al. (2006). Potential role for adult neurogenesis in the encoding of time in new memories. *Nat Neurosci* 9(6): 723-727.

Barrington, L., Marks, T. K., Hui-wen Hsiao, J., & Cottrell, G. W. (2008). "NIMBLE: A kernel density model of saccade-based visual memory." *Journal of Vision* 8(14): 1-14.

Benasich, A. A., Z. Gou, et al. (2008). "Early cognitive and language skills are linked to resting frontal gamma power across the first 3 years." *Behav Brain Res* 195(2): 215-222.

Benasich, A. A., Gou, Z., Choudhury, N., Harris, K.D. (2008). Early cognitive and language skills are linked to resting frontal gamma power across the first 3 years. *Behav Brain Res*. 195(2): 215-222.

Butko, N., & Movellan, J. (2008). I-POMDP: An infomax model of eye movement. 2008 IEEE International Conference on Development and Learning (ICDL).

Carpenter, S. K., Pashler, H., Cepeda, N. J., & Alvarez, D. (2007). Applying the principles of testing and spacing to classroom learning. 29th Annual Cognitive Science Society, Nashville, TN.

Cepeda, N. J., Pashler, H., Vul, E., Wixted, J. T., & Rohrer, D. (2006). Distributed practice in verbal recall tasks: A review and quantitative synthesis. *Psychological Bulletin* 132: 354-380.

Chukoskie, L., Schwartz, O., Albright, T.D., Sejnowski, T.J., (2007). Spatial patterns of fixation: bottom-up effects. *Society for Neuroscience Abstracts*.

Cockburn, J., Bartlett, M., Tanaka, J., Movellan, J., Pierce, M., and Schultz, R. (2008). SmileMaze: A Tutoring System in Real-Time Facial Expression Perception and Production for Children with Autism Spectrum Disorder. *Proc. Intl Conf. on Automatic Face and Gesture Recognition, Workshop on Facial and Bodily Expressions for Control and Adaptation of Games*.

D'Lauro, C., Tanaka, J. W., & Curran, T. (2008). The preferred level of face categorization depends on discriminability. *Psychonomic Bulletin & Review* 15: 623-629.

D'Lauro, C., Scott, L.S., Sheinberg, D, Tanaka, J.W., & Curran, T. (2008). Spaced learning promotes robust perceptual expertise. Poster presented at Society for Neuroscience Conference, Washington, DC.

Drew, P. J. F., D.E. (2007). Representation of Moving Wavefronts of Whisker Deflection in Rat Somatosensory Cortex. *J Neurophysiol* 98: 1566-1580.

Hammond, P. S., Makeig, S., Poizner, H., Todorov, E., de Sa, V. (2008). Extracting trajectories and target endpoints from human EEG during a reaching task. *IEEE Signal Processing* 25: 69-77.

- Han, F., N. Caporale, et al. (2008). Reverberation of recent visual experience in spontaneous cortical waves. *Neuron* 60(2): 321-327.
- Jacob, V., Brasier, D.J., Erchova, I., Feldman, D., Shulz, D.E. (2007). Spike timing-dependent synaptic depression in the in vivo barrel cortex of the rat. *J Neurosci.* 27(6): 1271-1284.
- McCleery, J. P., Zhang, L., Ge, L., Wang, Z., Christiansen, E.M., Lee, K. and Cottrell, G.W. (2008). The roles of visual expertise and visual input in the face inversion effect: Behavioral and neurocomputational evidence. *Vision Research* 48: 703-715.
- Mincses, V. H., Datlow, M., Alfonso, S., Chiba, A.A. (2008). Sensory Learning and the cholinergic input to the sensory cortices. Twelfth International Conference on Cognitive and Neural Systems (ICCN), Boston, MA.
- Movellan, J. R. (2010) "Warning: The author of this document may have no mental states. Read at your own risk." *Interaction Studies*.
- Movellan, J. R., F. T. F, et al. (2007). The RUBI Project: A Progress Report. Proceedings of the 2nd ACM/IEEE international conference on human-robot interaction.
- Palmeri, T. J., & Tarr, M. (2008). Visual object perception and long-term memory. *Visual Memory*. S. L. A. Hollingworth, Oxford University Press.: 163-207.
- Pashler, H., Rohrer, D., Cepeda, N., & Carpenter, S. (2007). "Enhancing learning and retarding forgetting: Choices and consequences." *Psychonomic Bulletin & Review* 14: 187-193.
- Pastalkova, E., V. Itskov, et al. (2008). Internally generated cell assembly sequences in the rat hippocampus. *Science* 321(5894): 1322-1327.
- Pastalkova, E., Itskov, V., Amarasingham, A. and Buzsaki, G. (2008). Internally generated cell assembly sequences in the rat hippocampus. *Science* 321(5894): 1322-1327.
- Paz, R., E. P. Bauer, et al. (2008). Theta synchronizes the activity of medial prefrontal neurons during learning. *Learn Mem* 15(7): 524-531.
- Robinson, A. E., & de Sa, V.R. (2008). Brief presentations reveal the temporal dynamics of brightness induction and Whites illusion. *Vision Research* 48(22): 2370-2381.
- Ruvolo, P. and J. R. M. and (2008). "Automatic Cry Detection in Early Childhood Education Settings." Proceedings of the International Conference on Development and Learning.
- Ruvolo, P. and I. a. M. J. R. Fasel (2008). Auditory Mood Detection for Social and Educational Robots. IEEE International Conference on Robotics and Automation.
- Ruvolo, P., J. Whitehill, M. Virnes, and J. R. Movellan. (2008). Building a more effective teaching robot using apprenticeship learning. International Conference on Development and Learning.
- Ruvolo, P., J. Whitehill, et al. (2008). Building a More Effective Teaching Robot Using Apprenticeship Learning. International Conference on Development and Learning.
- Ruvolo, P. Fasel, I.R., & Movellan, J.R. (2008). Optimization on a budget: A reinforcement learning approach. *Advances in Neural Information Processing Systems*.
- Scherf, K. S., Behrmann, M., Humphreys, K & Luna, B. (2007). Visual Category-selectivity for faces, places and objects emerges along different developmental trajectories. *Dev. Sci.* 10(4): 15-30.

Scott, L. S., Tanaka, J. W., Sheinberg, D. L., & Curran, T. (2008). "The role of category learning in the acquisition and retention of perceptual expertise: A behavioral and neurophysiological study." *Brain Research* 1210: 204-215.

Shan, H., Zhang, Lingyun and Garrison W. Cottrell (2007). Recursive ICA." In *Advances in Neural Information Processing Systems* 20.

Shrager, Y., C. B. Kirwan, et al. (2008). Neural basis of the cognitive map: path integration does not require hippocampus or entorhinal cortex. *Proc Natl Acad Sci U S A* 105(33): 12034-12038.

Simpkins, A., and Todorov, E. (2008). Optimal trade-off between exploration and exploitation^[L]_[SEP]. American Control Conference.

Tallal, P. and N. Gaab (2006). "Dynamic auditory processing, musical experience and language development." *Trends Neurosci* 29(7): 382-390.

Tanaka, F., A. Cicourel, et al. (2007). Socialization between toddlers and robots at an early childhood education center. *Proceedings of the National Academy of Sciences*: -17958.

Tanaka, F., J. R. Movellan, et al. (2006). Daily HRI Evaluation at a Classroom Environment: Reports from Dance Interaction Experiments. *Proceedings of the 2006 Conference on Human-Robot Interaction (HRI 06)*.

Tong, M. H., Joyce, C.A., and Cottrell, G.W. (2008). Why is the fusiform face area recruited for novel categories of expertise? A neurocomputational investigation. *Brain Research* 1202: 14-24.

Trottier, L. G. d. S., V.R. (2007). A multimodal paradigm for investigating the perisaccadic temporal inversion effect in vision. 29th Annual Meeting of the Cognitive Science Society.

Whitehill, J., M. S. Bartlett, and J. R. Movellan. (2008). Automatic facial expression recognition for intelligent tutoring systems. . *Computer Vision and Pattern Recognition (CVPR) Workshop on CVPR for Human Communicative Behavior Analysis*.

Whitehill, J. and J. Movellan (2008). A Discriminative Approach to Frame-by-Frame Head Pose Tracking. *Proceedings of the International Conference on Face and Gesture Recognition*.

Wu, T., Bartlett, M.S., and Movellan, J. (2010). Facial expression recognition using gabor motion energy filters. *IEEE CVPR workshop on Computer Vision and Pattern Recognition for Human Communicative Behavior Analysis*. DOI: 10.1109/CVPRW.2010.5543267

Zhang, L., Tong, Matthew H., Marks, Tim K., Shan, Honghao, and Cottrell, Garrison W. (2008). SUN: A Bayesian Framework for Saliency Using Natural Statistics. *Journal of Vision*, 8(7): 32, 31-20.