

Curriculum Vitae

Michael A. Pitts, Ph.D.

Psychology Department
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EDUCATION & ACADEMIC POSITIONS

Professor (2021-present), **Associate Professor** (2015-2021), **Assistant Professor** (2011-2015)
Psychology Department & Neuroscience Program
Reed College

Postdoctoral Researcher (2007-2011)
Neurosciences Department & Institute for Neural Computation
University of California San Diego

Ph.D., Psychology (2007), **M.S., Psychology** (2004)
Perceptual and Brain Sciences Program
Colorado State University

B.A., Psychology (2001)
Brain and Behavior Program
University of New Hampshire

PUBLICATIONS (Reed students in bold; *co-first author, *co-senior author)

Zhu, Y., **Li, C., Hendry, C., Glass, J.**, Canseco-Gonzalez, E., *Pitts, M., & *Dykstra, A. (2024). Isolating neural signatures of conscious speech perception with a no-report sine-wave speech paradigm. *The Journal of Neuroscience*, 44(8), 1-12.

*Cohen, M., ***Dembski, C., Ortego, K., Steinhilber, C.**, & Pitts, M. (2023). A novel signature of visual awareness independent of post-perceptual processing. *bioRxiv*, <https://doi.org/10.1101/2023.06.09.543951>.

Cogitate Consortium, Ferrante, O., Gorska-Klimowska, U., Henin, S., Hirschhorn, R., Khalaf, A., Lepauvre, A., Liu, L., Richter, D., Vidal, Y., Bonacchi, N., Brown, T., Sripad, P., Armendariz, M., Bendtz, K., Ghafari, T., Hetenyi, D., Jeschke, J., Kozma, C., Mazumder, D., Montenegro, S., Seedat, A., Sharafeldin, A., Yang, S., Baillet, S., Chalmers, D., Cichy, R., Fallon, F., Panagiotaropoulos, F., Blumenfeld, H., de Lange, F., Devore, S., Jensen, O., Kreiman, G., Luo, H., Boly, M., Dehaene, S., Koch, C., Tononi, G., *Pitts, M., *Mudrik, L., *Melloni, L., (2023). An adversarial collaboration to critically evaluate theories of consciousness. *bioRxiv*, <https://doi.org/10.1101/2023.06.23.546249>.

*Melloni, L., *Mudrik, L., *Pitts, M., Bentz, K., Ferrante, O., Gorska, U., Hirschhorn, R., Khalaf, A., Kozma, C., Lepauvre, A., Liu, L., Mazumder, D., Richter, D., Zhou, H., Blumenfeld, H., Boly, M., Chalmers, D., Devore, S., Fallon, F., de Lange, F., Jensen, O., Kreiman, G., Luo, H., Panagiotaropoulos, T., Dehaene, S., Koch, C., Tononi, G. (2023). An adversarial collaboration protocol for testing contrasting predictions of global neuronal workspace and integrated information theory. *PLOS ONE*, 18(2): e0268577.

Hatamimajoumerd, E., Murty, N., Pitts, M., & Cohen, M. (2022). Decoding perceptual awareness across the brain with a no-report fMRI masking paradigm. *Current Biology*, 32, 1-11.

Yaron, I., Melloni, L., Pitts, M., & Mudrik, L. (2022). The ConTraSt database for analysing and comparing empirical studies of consciousness theories. *Nature Human Behavior*, 6, 593-604.

- Kronemer, S., Aksen, M., Ding, J., Ryu, J., Xin, Q., Ding, Z., Prince, J., Kwon, H., Khalaf, A., Forman, S., Jin, D., Wang, K., Chen, K., Hu, C., Agarwal, A., Saberski, E., Wafa, S., Morgan, O., Wu, J., Christison-Lagay, K., Hasulak, N., Morrell, M., Urban, A., Constable, R., Pitts, M., Richardson, R., Crowley, M., & Blumenfeld, H. (2022). Human visual consciousness involves large scale cortical and subcortical networks independent of task report and eye movement activity. *Nature Communications*, 13:7342, 1-17.
- Dellert, T., Muller-Bardorff, M., Schlossmacher, I., Pitts, M., Hofmann, D., Bruchmann, M., & Straube, T. (2021). Dissociating the neural correlates of consciousness and task relevance in face perception using simultaneous EEG-fMRI. *The Journal of Neuroscience*, 41(37), 7864-7875.
- Dembski, C.**, Koch, C., & Pitts, M. (2021). Perceptual awareness negativity: A physiological correlate of sensory consciousness. *Trends in Cognitive Sciences*, 25(8), 660-670.
- Melloni, L., Mudrik, L., Pitts, M., & Koch, C. (2021). Making the hard problem of consciousness easier: Championing open science, an adversarial collaboration aims to unravel the footprints of consciousness. *Science*, 372(6545), 911-912.
- Cohen, M., **Ortego, K.**, **Kyroudis, A.**, & Pitts, M. (2020). Distinguishing the neural correlates of perceptual awareness and post-perceptual processing. *The Journal of Neuroscience*, 40(25), 4925-4935.
- Schlossmacher, I., Dellert, T., Pitts, M., Bruchmann, M., & Straube, T. (2020). Differential effects of awareness and task relevance on early and late ERPs in a no-report visual oddball paradigm. *The Journal of Neuroscience*, 40(14), 2906-2913.
- Pitts, M. & **Ortego, K.** (2019). Why "no report" paradigms are an important tool for consciousness research. Commentary on Michel & Morales "Minority reports: Consciousness and the prefrontal cortex." *Mind & Language Symposium*.
- Pitts, M., **Lutsyshyna, A.L.**, & Hillyard, S. (2019). Reply to Montemayor & Haladjian. *Philosophical Transactions of the Royal Society B: Biological Sciences*. 374:20190003.
- Pitts, M., **Lutsyshyna, L.**, & Hillyard, S. (2018). The relationship between attention and consciousness: An expanded taxonomy and implications for "no report" paradigms. *Philosophical Transactions of the Royal Society of London B: Biological Sciences*, 373: 20170348.
- Grauly, C.**, **Papaioannou, O.**, **Bauer, P.**, *Pitts, M., & *Canseco-Gonzalez, E. (2018). Hearing shapes: Event-related potentials reveal the time course of auditory-visual sensory substitution. *Journal of Cognitive Neuroscience*, 30:4, 498-513.
- Baumgartner, H.**, **Grauly, C.**, Hillyard, S., & Pitts, M. (2018). Does spatial attention modulate the earliest component of the visual evoked potential? *Cognitive Neuroscience*, 9:1-2, 4-19.
- Baumgartner, H.**, **Grauly, C.**, Hillyard, S., & Pitts, M. (2018). Does spatial attention modulate the C1 component? The jury continues to deliberate. *Cognitive Neuroscience*, 9:1-2, 34-37.
- Pitts, M. & Hillyard, S. (2018). Still wanted: A reproducible demonstration of a genuine C1 attention effect. *Cognitive Neuroscience*, 9:1-2, 68-70.
- Schelonka, K.**, **Grauly, C.**, Canseco-Gonzalez, E., & Pitts, M. (2017). ERP signatures of conscious and unconscious word and letter perception in an inattentive blindness paradigm. *Consciousness & Cognition*, 54, 56-71.
- Jackson-Nielsen, M.**, *Cohen, M., & *Pitts, M. (2017). Perception of ensemble statistics requires attention. *Consciousness & Cognition*, 48, 149-160.
- Sandberg, K., Frässle, S., & Pitts, M. (2016). Future directions for identifying the neural correlates of consciousness. *Nature Reviews Neuroscience*, 17, 666.

- Shafto, J.** & Pitts, M. (2015). Neural signatures of conscious face perception in an inattentional blindness paradigm. *The Journal of Neuroscience*, 35(31), 10940-10948.
- Open Science Collaboration (2015). Estimating the reproducibility of psychological science. *Science*. 349, aac4716 (individual contribution: **Lewis, M.** & Pitts, M. <https://osf.io/hsntd/>)
- Yiu, L.**, Pitts, M. & Canseco-Gonzalez, E. (2015). Electrophysiological assessment of the time course of bilingual visual word recognition: Early access to language membership. *Neuropsychologia*, 75, 349-367.
- Snyder, J., Yerkes, B., & Pitts, M. (2015). Testing domain-general theories of perceptual awareness with auditory brain responses. *Trends in Cognitive Sciences*, 19(6), 295-297.
- Pitts, M., Padwal, J., **Fennelly, D.**, Martinez, A., & Hillyard, S. (2014). Gamma band activity and the P3 reflect post-perceptual processes, not visual awareness. *NeuroImage*, 101, 337-350.
- Davidson, G.** & Pitts, M. (2014). Auditory event-related potentials associated with perceptual reversals of bistable pitch motion. *Frontiers in Human Neuroscience*, 8:572, 1-10.
- Pitts, M., **Metzler, S.**, & Hillyard, S. (2014). Isolating neural correlates of conscious perception from neural correlates of reporting one's perception. *Frontiers in Psychology*, 5:1078, 1-16.
- Pitts, M. & Martinez, A. (2014). Contour integration: Sensory, perceptual, and attention-based ERP Components, Chapter 14. In G.R. Mangun (Eds.), *Cognitive Electrophysiology of Attention: Signals of the Mind* (pp.178-189). Elsevier.
- Open Science Collaboration (2014). The Reproducibility Project: A model of large-scale collaboration for empirical research on reproducibility. In V. Stodden, F. Leisch, & R. Peng (Eds.), *Implementing Reproducible Computational Research* (pp. 299-323). New York, NY: Taylor & Francis.
- Pitts, M., Martinez, A., & Hillyard, S. (2012). Visual processing of contour patterns under conditions of inattentional blindness. *Journal of Cognitive Neuroscience*, 24(2), 287-303.
- Feng, W., Martinez, A., Pitts, M., Luo, Y., & Hillyard, S. (2012). Spatial attention modulates early face processing. *Neuropsychologia*, 50(14), 3461-3468.
- Open Science Collaboration (2012). An open, big science effort to estimate the reproducibility of psychological science. *Perspectives in Psychological Science*, 7, 657-660.
- Pitts, M. & Britz, J. (2011). Insights from intermittent binocular rivalry and EEG. *Frontiers in Human Neuroscience*, 5(107), 1-6.
- Britz, J. & Pitts, M. (2011). Perceptual reversals during binocular rivalry: ERP components and their concomitant source differences. *Psychophysiology*, 48, 1489-1498.
- Pitts, M., Martinez, A., Brewer, J., & Hillyard, S. (2011). Early stages of figure-ground segregation during perception of the face-vase. *Journal of Cognitive Neuroscience*, 23:4, 880-895.
- Britz, J., Pitts, M., & Michel, C. (2011). Right parietal brain activity precedes perceptual alternation during binocular rivalry. *Human Brain Mapping*, 32(9), 1432-1442.
- Pitts, M., Martinez, A., & Hillyard, S. (2010). When and where is binocular rivalry resolved in the visual cortex? *Journal of Vision* 10(14):25, 1-11.
- Pitts, M., Martinez, A., Stalmaster, C., Nerger, J., & Hillyard, S. (2009). Neural generators of ERPs linked with Necker cube reversals. *Psychophysiology*. 46, 694-702.
- Pitts, M., Gavin, W., & Nerger, J. (2008). Early top-down influences on bistable perception revealed by event-related potentials. *Brain and Cognition*, 67(1), 11-24.

- Pitts, M., Nerger, J., & Davis, T. (2007). Electrophysiological correlates of perceptual reversals for three different types of multi-stable images. *Journal of Vision*, 7(1):6, 1-14.
- Pitts, M., Troup, L., Volbrecht, V., & Nerger, J. (2005). Chromatic perceptive field sizes change with retinal illuminance. *Journal of Vision*, 5(5), 435-443.
- Troup, L., Pitts, M., Volbrecht, V., & Nerger, J. (2005). The effect of stimulus intensity on the sizes of chromatic perceptive fields. *Journal of the Optical Society of America A.*, 22(10), 2137-2142.
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CONFERENCE PRESENTATIONS AND INVITED TALKS (Reed students in bold)

- Melloni, L., Mudrik, L., Pitts, M., & Cogitate Consortium (2023) Putting theories to test: an overview of the Cogitate Consortium - an open science adversarial collaboration testing GNWT and IIT. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, June, New York, NY.
- Pitts, M. (2023). Attention, consciousness, and the richness debate. Talk presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, June, New York, NY.
- Dembski, C., Ortego, K., Steinhilber, C.,** Cohen, M., & Pitts, M. (2022). EEG bifurcation dynamics in the absence of report in a visual masking paradigm. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Liu, A. & Pitts, M.** (2022). Spatial attention control mechanism modulated by subliminal stimuli. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Nicolacoudis, A., Allison, L., Montano, I., Rajendran, A., Fenner, M.,** Pitts, M., Sarig, A., Mudrik, L., & Schurger, A. (2022). Triangulating consciousness: A no-report dichoptic color fusion EEG paradigm for isolating NCCs. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Montano, I., Rajendran, A., Allison, L., Nicolacoudis, A.,** Mudrik, L., Sarig, A., Schurger, A., & Pitts, M. (2022). Triangulating neural correlates of consciousness. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Pitts, M. **Dembski, C., Ortego, K., Steinhilber, C.,** & Cohen, M. (2022). Distinct EEG bifurcation dynamics in report and no-report conditions of a visual masking paradigm. Talk presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Amsterdam, Netherlands.
- Fenner, M.,** Pitts, M., **Wen, E., Bennet, M.,** Sarig, A., Mudrik, L., & Schurger, A. (2022). A no-report dichoptic color fusion EEG paradigm for isolating NCCs. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Amsterdam, Netherlands.
- Franklin, A. & Pitts, M.** (2022). "Laurel & Yanny": EEG neural correlates of an auditory bistable language stimulus. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Amsterdam, Netherlands.
- Barone, S. & Pitts, M.** (2022). Investigating the appearance of perceptual richness: A systematic review. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Amsterdam, Netherlands.
- Cohen, M., Murty, N., Pitts, M., & Hatamimajoumerd, E. (2022). Decoding perceptual awareness across the brain with a no-report fMRI masking paradigm. Talk presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Amsterdam, Netherlands.
- Dembski, C., Ortego, K., Steinhilber, C.,** Cohen, M., & Pitts, M. (2022). EEG bifurcation dynamics in a no-report visual awareness paradigm. Poster presented at the Vision Sciences Society (VSS) Annual Meeting, May, St Pete Beach, FL.

- Hatamimajoumerd, E., Murty, N., Pitts, M., & Cohen, M. (2022). What are the neural correlates of perceptual awareness? Evidence from an fMRI no-report masking paradigm. Talk presented at the Vision Sciences Society (VSS) Annual Meeting, May, St Pete Beach, FL.
- Pitts, M. (2021). Distinguishing neural correlates of perceptual awareness from post-perceptual judgments. Invited talk at the Center for Cognitive Neuroscience Berlin (CCNB), June, online.
- Michel, M., Peters, M., Mudrik, L., Pitts, M., Sergent, C., Raccach, O., & Odegaard, B. (2021). Beyond 'front vs. back': making progress on the prefrontal debate. Salon discussion at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, June, online.
- Ortego, K., Pitts, M., & Cohen, M. (2020)** Neural correlates of visual awareness and task-relevance in a no-report masking paradigm. Talk presented at the Vision Sciences Society (VSS) Annual Meeting, June, online.
- Kyroudis, A., Ortego, K., Hillyard, S., Cohen, M., & Pitts, M. (2019)** Neural correlates of visual awareness and task-relevance in a no-report masking paradigm. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, June, London Ontario, CA.
- Ortego, K., Canseco-Gonzalez, E., & Pitts, M. (2019)** EEG signatures of perceptual reversals of bistable visual and linguistic stimuli. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, June, London Ontario, CA.
- Pitts, M. (2019). Neural correlates of consciously perceiving task irrelevant stimuli. Invited talk at the Northern California Consciousness (NCC) meeting, March, Mind and Brain Institute, UC Davis, CA.
- Pitts, M. (2019). Isolating neural correlates of conscious perception. Invited talk at the University of Aarhus, April, Aarhus, Denmark.
- Pitts, M. (2018). Isolating neural correlates of conscious perception. Invited talk at the Max Planck Institute, October, Frankfurt, Germany.
- Pitts, M. (2018). Isolating neural correlates of conscious perception. Invited talk at the University of Nevada Las Vegas, December, Las Vegas, NV.
- Ortego, K., Pitts, M., & Canseco-Gonzalez, E. (2018)**. Neural signatures of perceptual reversals of bistable visual and linguistic stimuli. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Hendry, C., Hough, A., Chesley, O., Graulty, C., Pitts, M., & Canseco-Gonzalez, E. (2018)**. Synesthesia, visual search, and the N2pc. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Kyroudis, A., Cohen, M., & Pitts, M. (2018)**. Neural activity linked with visual awareness and task-relevance in a novel 2x2 design. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Pitts, M., **Hendry, C., Glass, J., Dykstra, A., & Canseco-Gonzalez, E. (2018)**. EEG differences between perceiving speech versus noise in physically identical sine-wave speech stimuli. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Aksen, M., Kronemer, S., Prince, J., Ding, Z., Agarwal, A., Wolf, G., Pearlmutter, B., Coifman, R., Pitts, M., & Blumenfeld, H. (2018). Pupil dynamics as a covert measure of conscious perception in a visual no report paradigm. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.

- Pitts, M., **Glass, J.**, Dykstra, A., & Canseco-Gonzalez, E. (2018). Isolating neural signatures of conscious speech perception with a "no-report" sine-wave speech paradigm. Talk at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, June, Krakow, Poland.
- Pitts, M. (2018). Progress in identifying the neural basis of consciousness. Invited public talk at NeuroGeeks monthly meeting, March, Portland, OR.
- Pitts, M. & **Baumgartner, H.** (2016). Does spatial attention modulate afferent activity in primary visual cortex? Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Chesley, O., Grauly, C.**, Canseco-Gonzalez, E., & Pitts, M. (2016). Synesthetic grapheme-color associations are processed early in time and can guide attention during visual search. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Scarpetta, M.**, Pitts, M., & Canseco-Gonzalez, E. (2016). Neural correlates of auditory attention in an exogenous orienting task. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Pitts, M., **Davidson, G., Bauer, P.** (2016). Isolating neural signatures of conscious perception with perceptually bistable stimuli. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Grauly, C., Chesley, O.**, Canseco-Gonzalez, E., & Pitts, M. (2016). The timing of synesthetic color processing and its influence on attention during visual search. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Scarpetta, M.**, Pitts, M., & Canseco-Gonzalez, E. (2016). Neural correlates of auditory attention in an exogenous orienting task. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Pitts, M., Cohen, M., & **Jackson-Nielsen, M.** (2016). Inattention blindness to color ensemble statistics. Poster presented at the Vision Sciences Society (VSS) Annual Meeting, May, St Pete Beach, FL.
- Pitts, M. (2016). Inattention blindness and visual awareness without report. Invited talk at the Northern California Consciousness (NCC) meeting, March, Mind and Brain Institute, UC Davis, CA.
- Pitts, M. (2015) Neural signatures of visual word form perception in an inattention blindness paradigm. Talk at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Paris, FR.
- Jackson-Nielsen, M.** & Pitts, M. (2015) Conscious perception of color and size ensemble statistics requires attention. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Paris, FR.
- Grauly, C.**, Pitts, M., & Canseco-Gonzalez, E. (2015) Color processing in grapheme-color synesthetes: An attentional blink ERP study. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Paris, FR.
- Bauer, P.** & Pitts, M. (2015) Electrophysiological correlates of individual percepts arising from the bistable face-vase figure. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, Paris, FR.
- Grauly, C., Papaioannou, O., Bauer, P., Stephens, M., Sheiman, J., Pitts, M., & Canseco-Gonzalez, E.** (2015) Hearing shapes: ERPs reveal changes in perceptual processing as a result of sensory substitution training. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Macrae, F.** & Pitts, M. (2015) Does inducing belief in free will alter brain correlates of preconscious motor preparation?: A replication study. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.

- Pitts, M., **Metzler, S.**, & Hillyard, S. (2015) Isolating neural correlates of conscious perception from neural correlates of reporting one's perception: A 2x2 manipulation of visual awareness and task-relevance. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Schelonka, K.**, Canseco-Gonzalez, E., & Pitts, M. (2015) Preconscious, conscious, and post-perceptual processing of visual word forms in an inattentional blindness paradigm. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Pitts, M., **Shafiq, J.**, & **Schelonka, K.** (2014). Inattentional blindness for shapes, faces, and words: ERP correlates of attention & awareness. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Canseco-Gonzalez, E., **Grauly, C.**, **Papaioannou, O.**, **Bauer, P.**, & Pitts, M. (2014). Studying the time course of sensory substitution mechanisms. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Grauly, C.**, **Papaioannou, O.**, **Bauer, P.**, Pitts, M., & Canseco-Gonzalez, E. (2014). Electrophysiological dynamics of auditory-visual sensory substitution. Poster presented at the Vision Sciences Society (VSS) Annual Meeting, May, St Pete Beach, FL. Published in: Journal of Vision, vol. 14, no. 10, article 438.
- Pitts, M., Martinez, A., & Hillyard, S. (2014). Contour integration and its independence from attention, awareness, and task-relevance. Poster presented at the Vision Sciences Society (VSS) Annual Meeting, May, St Pete Beach, FL. Published in: Journal of Vision, vol. 14, no. 10, article 65.
- Shafiq, J.** & Pitts, M. (2013). Visual processing of faces during inattentional blindness. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Lewis, M.** & Pitts, M. (2013). On the practice of replicating an electrophysiological study with the Center for Open Science. Poster presented at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Pitts, M. (2013). Isolating NCCs that are necessary and sufficient for visual awareness. Invited symposium talk with Melloni, L., Dehaene, S., & Block, N., at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, San Diego, CA.
- Shafiq, J.** & Pitts, M. (2013). Neural signatures of conscious face perception: The N170 is absent during inattentional blindness. Talk at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, San Diego, CA.
- Davidson, G.** & Pitts, M. (2013). Neural signatures of perceptual transitions for a novel bistable auditory stimulus. Poster presented at the Association for the Scientific Study of Consciousness (ASSC) Annual Meeting, July, San Diego, CA.
- Padwal, J., Pitts, M., **Fennelly, D.**, Martinez, A., & Hillyard, S. (2013). Contour integration: Stimulus and task-based modulations of ERPs and gamma oscillations. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Schelonka, K.**, **Grauly, C.**, Canseco-Gonzalez, E., & Pitts, M. (2013). Event-related potentials elicited by sine-wave speech stimuli before and after speech recognition training. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Yiu, L.**, **Krisnabai-Gitanjali, K.**, Pitts, M., & Canseco-Gonzalez, E. (2013). An electrophysiological study on the time course of bilingual word recognition. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Lewis, M.** & Pitts, M. (2013). An open science electrophysiology study of anxiety and error monitoring. Talk at the Oregon Academy of Sciences (OAS) Annual Meeting, March, Salem, OR.

- Yiu, L., Krisnabai-Gitanjali, K., Pitts, M., & Canseco-Gonzalez, E. (2013).** An electrophysiological study on the time course of bilingual word recognition. Talk at the Oregon Academy of Sciences (OAS) Annual Meeting, March, Salem, OR.
- Pitts, M., Martinez, A., Hillyard, S. (2012). ERPs and gamma oscillations modulated by visual awareness and task-relevance. Talk at the Cognitive Science Association for Interdisciplinary Learning (CSAIL) Annual Meeting, July, Hood River, OR.
- Pitts, M., Martinez, A., Hillyard, S. (2011). Neural correlates of conscious and non-conscious visual processing. Poster presented at the Psychonomics Society (PS) Annual Meeting, November, Seattle, WA.
- Pitts, M., Martinez, A., Hillyard, S. (2011). Neural correlates of visual awareness assessed via EEG in an inattention paradigm. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Pitts, M., Martinez, A., Hillyard, S. (2010). Visual processing of seen and unseen patterns during inattention blindness. Talk at the Society for Neuroscience (SfN) Annual Meeting, Nov, San Diego, CA.
- Pitts, M., Martinez, A., Brewer, J., Hillyard, S. (2009). Early stages of figure-ground segregation: ERP components associated with face-vase perception. Poster presented at the Vision Science Society (VSS) Annual Meeting, May, Naples, FL.
- Pitts, M., Martinez, A., Hillyard, S. (2008). Bistable perceptual reversals: ERP components and their neural generators. Poster presented at the Cognitive Neurosciences Society (CNS) Annual Meeting, April, San Francisco, CA.
- Pitts, M., Nerger, J., Stalmaster, C. (2007). The role of spatial selective attention in the perception of bistable images. Poster presented at the Vision Sciences Society (VSS) Annual Meeting, May, Sarasota, FL.
- Pitts, M., Gavin, W., Davalos, D., Nerger, J. (2006). Top-down influences on bistable perceptions revealed by ERPs. Poster presented at the Society for Psychophysiological Research (SPR) Annual Meeting, October, Vancouver, BC

GRANTS & FELLOWSHIPS (Reed students in bold)

Templeton World Charity Foundation (2022-2024), \$229,031

Bifurcation dynamics in a no-report paradigm

Role: PI (Co-PI: Michael Cohen; Post-bac researcher: **Cole Dembski**)

Templeton World Charity Foundation (2022-2024), \$229,960

Triangulating neural correlates of consciousness

Role: PI (Co-PIs: Aaron Schurger, Liad Mudrik)

Templeton World Charity Foundation (2020-2024), \$4,889,456 total, \$344,738 to Reed

Accelerating research on Consciousness: An adversarial collaboration to test contradictory predictions of Global Neuronal Workspace and Integrated Information Theory

Role: Center PI (Co-center-PIs: Lucia Melloni, Liad Mudrik)

NSF – Cognitive Neuroscience (2018-2022), \$535,094 total, \$235,318 to Reed

Collaborative Research: RUI: Isolating neural mechanisms of perceptual awareness from post-perceptual processes (Award ID: BCS-1829458)

Role: PI (Co-PI: Michael Cohen; Post-bac researcher: **Kevin Ortego**; Post-doc researcher: Elaheh Hatamimajoumerd)

NSF – Research Experience for Undergraduates (REU) (2020-2022), \$51,000

Bifurcation dynamics around the threshold of conscious vision

Role: PI (REU students: **Clay Steinhilber, Maxwell Bennett, Angelica Nicolacoudis, Lucy Allison, Isabella Montano**)

Templeton World Charity Foundation (2019), \$375,740 total, \$49,130 to Reed

Pilot study for a novel paradigm to study consciousness

Role: collaborator (PI: Liad Mudrik)

Templeton World Charity Foundation (2018-2019), \$40,000

Game development and pilot study for an experiment on consciousness

Role: PI (Co-PIs: Lucia Melloni, Liad Mudrik; Post-bac researchers: **Kevin Ortego, Andrew Kyroudis**)

Reed College Science Research Fellowships (2012-present), \$7,900 each

Linking neural signals to perception via bifurcation patterns around contrast detection thresholds (2024)

Role: Faculty Supervisor (PI: **Leore Capurso**)

Identifying neural correlates of consciousness by triangulating across three manipulations (2023)

Role: Faculty Supervisor (PI: **Jules Camden**)

Triangulating neural correlates of consciousness (2022)

Role: Faculty Supervisor (PI: **Avanthika Rajendran**)

Locating the neural correlates of consciousness via dichoptic color fusion and EEG (2021)

Role: Faculty Supervisor (PI: **Elle Wen**)

Searching for the neural correlates of consciousness using a novel video game task (2021)

Role: Faculty Supervisor (PI: **Sophronia Barone**)

Isolating the neural correlates of conscious vision via pattern masking and EEG (2018)

Role: Faculty Supervisor (PI: **Andrew Kyroudis**)

Distinguishing perceptual experience from its report: A brain recording experiment (2018)

Role: Faculty Supervisor (PI: **Anton Lutsyshyna**)

Effect of spatial attention on early visual processing in the primary visual cortex (2015)

Role: Faculty Supervisor (PI: **Hannah Baumgartner**)

The role of abstract beliefs and neural oscillations in motor preparation and inhibition. (2014)

Role: Faculty Supervisor (PI: **Fenner Macrae**)

Electrophysiological signatures of speech recognition. (2012)

Role: Faculty Supervisor (PI: **Kathryn Schelonka**)

Neuroscience Research Fellowships (2019-present), \$7,900 each

Triangulating consciousness (2023)

Role: Faculty Supervisor (PI: **Angelica Nicolacoudis**)

EEG decoding analysis of relevant and irrelevant stimuli in a visual masking paradigm (2019)

Role: Faculty Supervisor (PI: **Zehui Zhao**)

Esther Hyatt Wender Fund for Collaborative Research in Psychology (2015-present), \$4,800 each

Linking neural signals to perception via bifurcation patterns around contrast detection thresholds (2024)

Role: Faculty Supervisor (PI: **Abigail Hartman**)

Identifying neural correlates of consciousness by triangulating across three manipulations (2024)

Role: Faculty Supervisor (PI: **Jules Camden**)

ERP correlates of perceptual reversal during binocular rivalry: A no-report paradigm (2023)

Role: Faculty Supervisor (PI: **Jeff Nestor**)

A no-report dichoptic color fusion EEG paradigm for isolating NCCs (2022)

Role: Faculty Supervisor (PI: **Madeleine Fenner**)

Spatial attention control mechanism modulated by subliminal stimuli: An EEG study (2022)

Role: Faculty Supervisor (PI: **Abigail Liu**)

Isolating neural signatures of conscious perception: A no-report, threshold-detection paradigm (2020)

Role: Faculty Supervisor (PI: **Abigail Liu**)

Isolating the neural correlates of conscious vision via pattern masking and EEG (2019)

Role: Faculty Supervisor (PI: **Andrew Kyroudis**)

Grapheme-color synesthesia in visual search tasks (2017)

Role: Faculty Supervisor (PI: **Aoife Hough**)

Auditory awareness of sine-wave speech (2017)

Role: Faculty Co-supervisor (PI: **James Glass**)

Can the P300 reveal someone's iPhone passcode? (2015)

Role: Faculty Co-supervisor (PI: **Phoebe Bauer**)

Reed College Sabbatical Research Fellowship (2018-2019), \$10,570

Isolating neural mechanisms of conscious perception via no-report paradigms
Role: PI (Collaborator: Steven Hillyard)

Kavli Institute for Brain and Mind - Innovative Research Grant (2010-2011), \$30,000

Spatio-temporal neuroimaging of conscious and non-conscious visual processing
Role: PI (Collaborators: Steven Hillyard & Eric Halgren)

Postdoctoral Fellowship (2007-2009)

Training program in cognitive neuroscience (Grant # 5 T32 MH20002)
Institute for Neural Computation, University of California San Diego
Role: postdoctoral trainee (Sponsor: Steven Hillyard; Co-sponsor: James Brewer)

TEACHING

Courses Taught at Reed (2011-present)

- Sensation & Perception (Psy 381)
- Neuroscience of Consciousness (Psy 217)
- Attention & Consciousness Research (Psy 417)
- Psych Science Lab: Cognitive Neuroscience (Psy 202)
- Foundations in Psychological Science (Psy 101)
- Introduction to Psychology (Psy 121)
- Cognitive Neuroscience (Psy 334)
- Senior Thesis (Psy 470)

Teaching Experience Prior to Reed:

- Physiological Psychology Laboratory (2005-2007)
 - Sensation and Perception Laboratory (2003-2005)
 - Sensation and Perception Guest Lecturer (2006)
 - Introductory Psychology Guest Lecturer (2003)
 - History and Systems of Psychology GTA (2002)
 - Introduction to Psychology GTA (2002)
 - Visual Perception UTA (2000)
 - Logic UTA (1999)
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RESEARCH TRAINING

Electroencephalography (EEG) & Event-related potentials (ERPs)

- EEG Decoding Workshop, hosted by Steve Luck, UC Davis (2019)
- ERP Boot Camp, hosted by Steve Luck at Reed College (2016)
- Post-doctoral research in Steve Hillyard's ERP Lab, UCSD (2007-2011)
- Graduate training, Perceptual & Brain Sciences Program, Colorado State University (2005-2007)
- ERP Boot Camp, hosted by Steve Luck at the SPR Annual Meeting (2006)

Functional Magnetic Resonance Imaging (fMRI) & Magnetoencephalography (MEG)

- Cogitate consortium: Hal Blumenfeld's fMRI Lab, Yale; Floris de Lange's fMRI Lab, Donders; Ole Jensen's MEG Lab, Birmingham; Huan Luo's MEG Lab, Peking (2020-2024)
- Post-doctoral research in Eric Halgren's Multimodal Imaging Lab, UCSD (2010-2011)
- Post-doctoral training in Jim Brewer's fMRI Lab, UCSD (2007-2009)
- fMRI methods training with Frank Haist, David Dubowitz, & Richard Buxton, UCSD (2007)

Behavioral Psychophysics

- Graduate training in Jan Nerger's Lab, Colorado State University (2002-2005)
- Undergraduate training in Ken Fuld's Lab, University of New Hampshire (2000-2001)