`Jeffrey Min-In Yau

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Baylor College of Medicine
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(updated September 2023)

Positions

2021 – present Associate Professor
Department of Neuroscience, Baylor College of Medicine

2014 – 2021 Assistant Professor
Department of Neuroscience, Baylor College of Medicine

Education and Training

2009 – 2014 Johns Hopkins Medical Institutions
Department of Neurology
Postdoctoral Research Fellow
Advisor: John E. Desmond

2004 – 2009 Johns Hopkins University
Ph.D. in Neuroscience
Advisors: Charles E. Connor and Steven S. Hsiao

2000 – 2003 University of North Carolina at Chapel Hill
B.S. in Psychology with Highest Honors

Grants and Awards

Current Research Support

A non-human primate model for bimanual touch
NIH (NINDS) R21NS130164 08/1/22-07/31/24
Role: PI $250,000 total direct costs

Encoding and modulation of vibration representations in human neocortex
NIH (NINDS) R01NS127777 06/15/22-05/31/27
Role: PI $1,634,845 total direct costs

Characterization of neurovascular and neurometabolic coupling of the negative BOLD response in human
NIH (NINDS) R01NS121040 12/01/2021-11/30/2026
Role: Co-I $52,865 (salary support)

Somatosensory feature encoding and attentional modulation in human neocortex
NSF (SBE) 1947663 04/01/2020-03/31/2023 (NCE)
Role: PI $391,660 total direct costs

Visuospatial modulation of bimanual touch perception in real and virtual environments
NSF (SBE) 2019959 — 08/01/2020-07/31/2023 (NCE)
Role: PI — $246,910 total direct costs

Past Research Support / Fellowships

Next-Generation Non-Surgical Neurotechnologies (N3)
DARPA: 175076 — 04/1/22-06/30/23
Role: subaward PI — $133,406 total costs

Supramodal human brain networks for temporal frequency processing
NIH (NINDS) R01NS097462 — 07/15/2016-06/30/2022
Role: PI — $1,093,750 total direct costs

Cortical network reorganization in lower-limb amputees
The Dana Foundation; The David Mahoney Neuroimaging Program — 09/08/2016-09/08/2019
Role: PI — $200,000 total direct costs

Sloan Research Fellow Early Career Award in Neuroscience
Alfred P. Sloan Foundation — 09/15/2015-09/14/2017
Role: PI — $50,000 total direct costs

Magnetic dissection of human perceptual decision making networks
Baylor College of Medicine Junior Faculty Seed Program — 07/01/2014-06/30/2015
Role: PI — $30,000 total direct costs

NIH Kirschstein-National Research Service Award, “Crossmodal recruitment of visual and auditory cortex for tactile perception” (NINDS) F32NS073371, 2011-2014

NIH Kirschstein-National Research Service Award, “Comparison of shape coding in somatosensory and visual cortex” (NINDS) F31NS062511, 2008-2009

Ruben Adler Visual Neuroscience Training Grant (NEI), 2005-2007

Awards and Honors

2022 Rush and Helen Record Outstanding Educator Award
2020 Norton Rose Fulbright Faculty Excellence Award
2015 Sloan Research Fellow Early Career Award in Neuroscience
2009 Summer Institute in Cognitive Neuroscience
2005 The H.A. and Mary K. Chapman Young Investigator Fellowship

Publications

Peer Reviewed Original Research Articles

Macklin, A., Yau, J.M., Fisher-Baum, S., & O’Malley, M.K. (2023) Representational Similarity Analysis for Tracking Neural Correlates of Haptic Learning on a Multimodal Device, *IEEE Transactions in Haptics*, 16(3):424-435. doi: 10.1109/TOH.2023.3303838.

Pezent, E., Macklin, A., Yau, J.M., Colonnese, N., & O'Malley, M.K. (2023) Multisensory pseudo-haptics for rendering manual interactions with virtual objects, *Advanced Intelligent Systems*. Doi: 10.1002/aisy.202200303

Cuppini, C., Magosso, E., Monti, M., Ursino, M. & Yau, J.M. (2022) A neurocomputational analysis of visual bias on bimanual tactile spatial perception during a crossmodal exposure, *Frontiers in Neural Circuits*, 16:933455, doi: 10.3389/fncir.2022.933455

Macklin, A.S., Yau, J.M., & O'Malley, M.K. (2021) Effect of vibrotactile cue duration on localization performance in a wearable tactile array, *IEEE Transactions on Haptics*, 14(2), 328-334, doi: 10.1109/TOH.2021.3079727

Wang, L.Y., Lu, G., Tomson, S.N., & Yau, J.M. (2021) Cortical representations of phantom movements in lower limb amputees, *European Journal of Neuroscience*, 53(9): 3160-3174, doi: 10.111/ejn.15170

Wani, Y.R., Convento, S., & Yau, J.M. (2021) Vision automatically exerts online and offline influences on bimanual tactile spatial perception, *Journal of Mathematical Psychology*, 100: 102480, doi.org/10.1016/j.jmp.2020.102480

Rahman, M.S., Barnes, K.A., Crommett, L.E., Tommerdahl, M., & Yau, J.M. (2020) Auditory and tactile frequency representations are co-embedded in modality-defined cortical sensory systems, *NeuroImage*, Apr 11:116837. doi: 10.1016/j.neuroimage.2020.116837

Halfen, E.J., Magnotti, J.F., Rahman, M.S., & Yau, J.M. (2020) Principles of tactile search over the body, *Journal of Neurophysiology*. Apr 1. doi: 10.1152/jn.00694.2019.

- [designated as an APSselect article for June 2020 by The American Physiological Society]

Oh, H., Kim, J.H., & Yau, J.M. (2019) EPI distortion correction for concurrent human brain stimulation and imaging at 3T. *Journal of Neuroscience Methods*, Nov 1;327:108400. doi: 10.1016/j.jneumeth.2019.108400.

Rahman, M.S. & Yau, J.M. (2019) Somatosensory interactions reveal feature-dependent computations, *Journal of Neurophysiology*, 122(1): 5-21 doi: 10.1152/jn.00168.2019.

Convento, S., Wegner-Clemens, K., & Yau, J.M. (2019) Reciprocal interactions between audition and touch in flutter frequency perception, *Multisensory Research*, 32(1): 67-85. doi: 10.1163/22134808-20181334.

Perez-Bellido, A., Pappal, R.D., & Yau, J.M. (2018) Touch engages visual spatial contextual processing, *Scientific Reports*, 8(1), 16637. Doi: 10.1038.s41598-018-34810-z.

Crommett, L.E., Madala, D., & Yau, J.M. (2018) Multisensory perceptual interactions between higher-order temporal frequency signals, *Journal of Experimental Psychology: General*, 148(7):1124-1137. doi: 10.1037/xge0000513.

Helekar, S.A., Convento, S., Nguyen, L., John, B.S., Patel, A., Yau, J.M., & Voss, H.U. (2018) The strength and spread of the electric field induced by transcranial rotating permanent magnet stimulation in comparison with conventional transcranial magnetic stimulation. *Journal of Neuroscience Methods*, 309: 153-160. Doi: 10.1016/j.jneumeth.2018.09.002.

Convento, S., Rahman, M.S., & Yau, J.M. (2018) Selective attention gates the interactive crossmodal coupling between perceptual systems, *Current Biology*, 28(5), 746-752. Doi: 10.1016/j.cub.2018.01.021.

- [commentary by NP Holmes and L Tamè, "Multisensory perception: Magnetic disruption of attention in human parietal lobe" *Current Biology*, 28(6), R259-261]

Perez-Bellido, A., Crommett, L.E., Barnes, K.A., & Yau, J.M. (2017) Auditory frequency representations in human somatosensory cortex, *Cerebral Cortex*. Doi: 10.1093/cercor/bhx255

- [featured in http://medicalphysicsweb.org/cws/article/research/70385]

Crommett, L.E., Perez-Bellido, A., & Yau, J.M. (2017) Auditory adaptation improves tactile frequency perception, *Journal of Neurophysiology*, 117(3), 1352-1362. Doi: 10.1152/jn.00783.2016

- [designated as an APSselect article for March 2017 by The American Physiological Society]

Yau, J.M., Kim, S.S., Thakur, P.H., & Bensmaia, S.J. (2016) Feeling form: the neural basis of haptic shape perception, *Journal of Neurophysiology*, 115(2), 631-642. Doi: 10.1152/jn.00598.2015

Yau, J.M., DeAngelis, G.C., & Angelaki, D.E. (2015) Dissecting neural circuits for multisensory integration and crossmodal processing, *Proceedings of the Royal Society B*, 370(1677), doi: 10.1098/rstb.2014.0203.

Liao, D.A., Kronemer, S.I., Yau, J.M., Desmond, J.E., Marvel, C.L. (2014) Motor system contributions to verbal and non-verbal working memory, *Frontiers in Human Neuroscience*, doi: 10.3389/fnhum.2014.00753.

Yau, J.M., Jalinous, R., Cantarero, G.L., & Desmond, J.E. (2014) Static field influences on transcranial magnetic stimulation: Considerations for concurrent TMS-fMRI, *Brain Stimulation*, 7(3), 388-393. Doi: 10.1016/j.brs.2014.02.007.

Yau, J.M., Celnik, P., Hsiao, S.S., & Desmond, J.E. (2014) Feeling better: Separate pathways for targeted enhancement of spatial and temporal touch, *Psychological Science*, 25(2), 555-565. Doi: 10.1177/0956797613511467.

Yau, J.M., Connor, C.E., & Hsiao, S.S. (2013) Representation of tactile curvature in macaque somatosensory area 2, *Journal of Neurophysiology*, 109(12), 2999-3012. Doi:10.1152/jn.00804.2012.

Yau, J.M., Liao, D.A., Hua, J., & Desmond, J.E. (2013) Efficient and robust identification of cortical targets in concurrent TMS-fMRI experiments, *Neuroimage*, 76, 134-144. Doi:10.1016/j.neuroimage.2013.02.077.

Yau, J.M., Pasupathy, A., Brincat, S.L., & Connor, C.E. (2013) Curvature processing dynamics in macaque area V4, *Cerebral Cortex*, 23(1),198-209. Doi:10.1093/cercor/bhs004.

Yau, J.M., Weber, A.I., & Bensmaia, S.J. (2010) Separate mechanisms for audio-tactile pitch and loudness interactions, *Frontiers in Psychology*, doi: 10.3389/fpsyg.2010.00160.

Godoy, A., Montecinos, V.P., Gray, D.R., Sotomayor, P., Yau, J.M., Vethanayagam, R.R., Singh, S., Mohler, J.L., & Smith, G.J. (2010) Androgen deprivation induces rapid involution and recovery of human prostate vasculature, *American Journal of Physiolology: Endocrinology and Metabolism*, 300(2), E263-75.

Lane, J.W., Fitzgerald, P.J., Yau, J.M., Pembeci, I., & Hsiao, S.S. (2009) A tactile stimulator for studying passive shape perception, *Journal of Neuroscience Methods*, 185(2), 221-229.

Yau, J.M., Pasupathy, A., Fitzgerald, P.J., Hsiao, S.S., & Connor, C.E. (2009) Analogous intermediate shape coding in vision and touch, *Proceedings of the National Academy of Sciences (USA)*, 106(38), 16457-16462.

Yau, J.M., Hollins, M., & Bensmaia, S.J. (2009) Textural timbre: the perception of surface microtexture depends in part on multimodal spectral cues, *Communicative & Integrative Biology*, 2(4), 1-3.

Yau, J.M., Olenczak, J.B, Dammann, J.F., & Bensmaia, S.J. (2009) Temporal frequency channels are linked across audition and touch, *Current Biology*, 19(7), 561-566.

- [commentary by JJ Foxe, "Multisensory integration: frequency tuning of audio-tactile integration." *Current Biology*, 19(9), R373-5]

Berryman, L.J., Yau, J.M., & Hsiao, S.S. (2006) Representation of object size in the somatosensory system, *Journal of Neurophysiology*, 96(1), 27-39.

Bensmaia, S.J., Hollins, M., & Yau, J. (2005) Vibrotactile intensity and frequency information in the Pacinian system: a psychophysical model, *Perception and Psychophysics*, 67(5), 828-841.

Gray, D.R., Huss, W.J., Yau, J.M., Durham, L.E., Werdin, E.S., Funkhouser Jr., W.K., & Smith, G.J. (2004) Short-term human prostate primary xenografts: an *in vivo* model of human prostate cancer vasculature and angiogenesis, *Cancer Research*, 64(5), 1712-21.

Manuscripts under review

Wang, L. & Yau, J.M. (2021) Signatures of vibration frequency tuning in human neocortex. *bioRxiv*

Manuscripts in preparation

Lai, L., Magnotti, J.F., & Yau, J.M. Conditioned inference explains multisensory time distortions

Anand, A., Banda, S., Convento, S., & Yau, J.M. Effects of visuospatial attention on motor cortex excitability.

Perks, K., Wang, L., Rahman, M.S., & Yau, J.M. Cortical signatures of bimanual cue integration in human sensory cortex.

Book Chapters

Yau, J.M. Somatosensory Cortex: Neural Coding of Shape. In Jaeger D. & Jung R. (Ed.), *Encyclopedia of Computational Neuroscience*: SpringerReference (www.springerreference.com). Springer-Verlag Berlin Heidelberg, 2013. DOI:10.1007/SpringerReference_348449 2013-11-26 15:48:24 UTC.

Bensmaia, S.J. & Yau, J.M. The organization and function of somatosensory cortex. In Hertenstein & Weiss (Eds.), *Handbook of Touch*. New York, NY: Springer Publishing Company, 2011, 161-187.

Hsiao, S.S. & Yau, J.M. Neural basis of haptic perception. In M. Grunwald (Ed.), *Human Haptic Perception: Basics and Applications*. Basel, Switzerland: Birkhäuser Verlag, 2008, 103-112.

Invited Presentations

2023 Simian Collective (Chicago)
2023 Center for Magnetic Resonance Research, University of Minnesota, Minneapolis, MN
2022 Association for Research in Otolaryngology (ARO): Peripheral-Central Interactions in the Auditory and Vestibular System (Houston)
2022 Rice Neuroengineering Conference (Houston)
2022 World Wide Neuro: Multisensory perception
2021 UK/Ireland Multisensory Group
2021 Institute of Neuroscience, University of Guadalajara, Mexico
2021 Department of Neurobiology and Anatomy, McGovern Medical School, University of Texas-Houston, Houston, TX
2021 fMRI Symposium, University of Michigan, Ann Arbor, MI
2021 Department of Neuroscience, Baylor College of Medicine, Houston TX
2020 Grand Rounds, Department of Neurology, Baylor College of Medicine, Houston, TX
2020 Bodian Seminar, Johns Hopkins University, Baltimore, MD
2020 Grand Rounds, Department of Physical Medicine and Rehabilitation, Johns Hopkins Medical Institutions, Baltimore, MD
2019 Peking University, Beijing, China
2019 National State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Normal University, Beijing, China
2018 Center for Vital Longevity, University of Texas at Dallas, Dallas, TX.
2018 Interdisciplinary Program in Neuroscience, Georgetown University, Washington DC.
2018 Child Neurology Grand Rounds, Texas Children's Hospital, Houston, TX.
2017 CIBR Center Seminar, Baylor College of Medicine, Houston, TX.
2016 Department of Neuroscience, University of Wisconsin-Madison, Madison, WI.
2016 National Taiwan University, Taipei, Taiwan, ROC.
2016 Motor rehabilitation group, University of Houston, Houston, TX.
2015 Networks Seminar, University of Houston, Houston, TX.
2015 Janelia Research Conference, Janelia Research Campus, Ashburn, VA.
2015 IEEE World Haptics Conference, Evanston, IL.
2015 Neuroengineering Seminar, Rice University, Houston, TX.
2014 Cognitive Tea, Rice University, Houston, TX.
2014 The Steven S. Hsiao Memorial Symposium, Johns Hopkins University, Baltimore, MD.
2014 Multisensory Research Group, Universitat Pompeu Fabra, Barcelona, Spain.
2014 Bodian Seminar, Johns Hopkins University, Baltimore, MD.
2013 Human Cortical Physiology and Stroke Neurorehabilitation Section, National Institute of Neurological Disorders and Stroke, Bethesda, MD.
2013 Department of Neurology, Johns Hopkins Medical Institutions, Baltimore, MD.
2013 Department of Neuroscience, Baylor College of Medicine, Houston, TX.
2012 Maryland Neuroimaging Retreat, Baltimore, MD.
2012 Institute of Movement Neuroscience, University College London, London, UK.
2012 Institute of Movement Neuroscience, University College London, London, UK.
2012 Laboratory of Brain and Cognition, National Institute of Mental Health, Bethesda, MD.
2011 161st Meeting of the Acoustical Society of America, Seattle, WA.
2008 Howard Hughes Medical Institute – Janelia Farm Research Campus, Ashburn, VA.

Conference organization

- Organizing Committee, Scientific Committee. International Multisensory Research Forum (2018; Toronto, Canada)
- Chair, Minisymposium. “Good Vibrations: Genetic, Neural and Behavioral Links Between Auditory and Tactile Perception”. Society for Neuroscience (2017; Washington DC).
- Chair, Symposium. “Adaptation in Space and Time”. International Multisensory Research Forum (2016; Suzhou, China).

Conference Presentations

Context matters: Caveats and opportunities in sensory restoration. Rice NeuroConn (2022), Houston, Texas, USA

Bimanual touch and cortical encoding models of sensory cue integration. Keystone Symposia Conference (2020), Keystone, Colorado, USA

Distributed and interactive cortical systems for audition and touch. New Ideas Workshop on Crossmodal Processing (2018), Paris, France

Normalization models of cue combination in touch. Hand, Brain, and Technology: The Somatosensory System (2018), Ascona, Switzerland

Canonical computations mediate cue combination in touch. International Multisensory Research Forum (2018), Toronto, Canada

The neural basis of spatial and temporal touch. Interdisciplinary Research Perspectives on Braille Reading and Writing (2018), Houston, TX.

Distributed representations of auditory and tactile frequency in the human brain. Society for Neuroscience (2017), Washington DC.

Common circuits support frequency perception by audition and touch. International Society for Behavioural Neuroscience (2017), Las Vegas, NV.

Adaptation reveals supramodal temporal frequency circuits. International Multisensory Research Forum (2016), Suzhou, China

Do neural codes shape crossmodal correspondences? International Multisensory Research Forum (2014), Amsterdam, Netherlands.

Dissociating pitch and loudness interactions between audition and touch. International Multisensory Research Forum (2013), Jerusalem, Israel.

Dissociable crossmodal recruitment of visual and auditory cortex for tactile perception. International Multisensory Research Forum (2012), Oxford, UK.

Perceptual interactions between audition and touch. Tactile Research Group Meeting (2010), St Louis, MO.

Curvature synthesis in area V4. Annual Meeting of the Vision Sciences Society (2010), Naples, FL.

Abstracts

Macklin, A., Perks, K., Wang, L.Y., O'Malley, M.K., & Yau, J.M. *Population-level coding of multisensory frequency signals in human neocortex.* (2023) Society for Neuroscience.

Fifer, M., Osborn, L., Christie, B., McMullen, D., Pawar, A., Nickl, R., Yau, J., Wester, B., Bensmaia, S., Celnik, P., & Tenore, F. (2022) *Interaction between intracortical microstimulation of human somatosensory cortex and residual somatosensation in an individual affected by incomplete tetraplegia*. Society for Neuroscience

Vergara, J., Bartoli, E., Nickl, R.W., Cantarero, G.L., Fifer, M.S., Tenore, F., Celnik, P.A., & Yau, J.M. (2022) *Characterization of single unit and local field potential responses during bimanual touch in human somatosensory cortex.* Human Single Neuron Meeting 2022

Vergara, J., Nickl, R.W., Cantarero, G.L., Fifer, M.S., Tenore, F., Celnik, P.A., & Yau, J.M. (2021) *Single unit and population coding of bimanual interactions in human sensory cortex*. Society for Neuroscience

Ung, K., Nordmark, P.F., & Yau, J.M. (2021) *Compensatory changes following somatosensory feedback loss in a dexterous manual task*. Society for Neuroscience

Yau, J.M. & Rahman, M.S. (2020) *Bimanual touch and cortical encoding models of sensory cue integration*. Keystone Symposium Conference

Rahman, M.S. & Yau, J.M. (2019) *Encoding and decoding bimanual vibration frequency information in human sensorimotor cortex*. Society for Neuroscience

Banda, S., Anand, A., Convento, S., & Yau, J.M. (2019) *Visuospatial attention modulates motor cortex excitability*. Society for Neuroscience

Wani, Y., Convento, S., & Yau, J.M. (2019) *Vision automatically exerts online and offline influences on tactile spatial perception*. Society for Neuroscience

Halfen, E.J., Magnotti, J.F., & Yau, J.M. (2019) *Principles of tactile search over the body*. Society for Neuroscience

Helekar, S.A., Convento, S., Joseph, E., John, B.S., Shannon, C.R., Mathew, J.A., & Yau, J.M. (2019) *Modulation of cortical excitability and function by rapid rotation of strong permanent magnets in a wearable brain stimulator*. International Neuromodulation Society

Sen, S., Rahman, M., & Yau, J.M. (2019) *Bimanual perceptual interactions in the frequency domain differ for flutter and vibration cues*. Cognitive Neuroscience Society

Davids, A.G. & Yau, J.M. (2019) *A novel method to quantify the haptic perception of slope*. American Academy of Orthotists and Prosthetists

Tomson, S.N., Wang, L.Y., & Yau, J.M. (2017) *Cortical reorganization following lower limb amputation*. Society for Neuroscience

Helekar, S.A., Patel, A., Convento, S., John, B., Nguyen, L., Yau, J.M. (2017) *Comparison of the amplitude and spatial distribution of voltages induced by a new method of magnetic stimulation with conventional transcranial magnetic stimulation*. Society for Neuroscience

Lai, L., Magnotti, J.F., & Yau, J.M. (2017) *Multisensory context warps time perception.* Cognitive Computational Neuroscience

Rahman, M., Patel, A.M., & Yau, J.M. (2017) *Probabilistic inference in multi-finger touch*. Cognitive Computational Neuroscience

Convento, S., Rahman, M., & Yau, J.M. (2017) *State-dependent influences of somatosensory cortex on audition*. International Multisensory Research Forum.

Crommett, L.E., Madala, D, & Yau, J.M. (2017) *Multisensory interactions in frequency sweep perception*. International Multisensory Research Forum

Yau, J.M., Rahman, M., & Patel, A.M. (2017) *Spatial proximity determines the strength of multi-finger interactions*. Neural Control of Movement

Convento, S., Rahman, M., & Yau, J.M. (2016) *Neuromodulation of primary somatosensory cortex alters auditory perception*. Society for Neuroscience

Rahman, M., & Yau, J.M. (2016) *Multi-finger cue combination depends on hand proprioception*. Society for Neuroscience

Lai, L., & Yau, J.M. (2016) *Attractive and repulsive multisensory interactions in time perception*. Society for Neuroscience

Crommett, L.E., Madala, D, & Yau, J.M. (2016) *Multisensory interactions in frequency sweep perception*. Society for Neuroscience

Perez-Bellido, A., Barnes, K.A., & Yau, J.M. (2016) *Auditory and tactile frequency representations overlap in parietal operculum*. European Conference on Visual Perception

Barnes, K.A., Tommerdahl, M., & Yau, J.M. (2015) *fMRI adaptation reveals population tuning for tactile and auditory stimulus frequency in human cortex*. Society for Neuroscience

Perez-Bellido, A., Barnes, K.A., Tommerdahl, M., & Yau, J.M. (2015) *Decoding modality-specific and modality-invariant temporal frequency representations in the human brain*. Society for Neuroscience

Crommett, L., Perez-Bellido, A., & Yau, J.M. (2015) *Crossmodal perceptual adaptation implies neuronal convergence of auditory and tactile frequency signals*. Society for Neuroscience

Hua, J., Pekar, J.J., van Zijl, P.C.M., Qin, Q., Jones, C.K., & Yau, J.M. (2014) *Boosting BOLD sensitivity in frontal and temporal regions using T2-prepared BOLD fMRI at 7T*. Organization for Human Brain Mapping

Yau, J.M., Nebel, M.B., Hua, J., & Desmond, J.E. (2013) *Direct comparison of network connectivity revealed by resting-state fMRI and concurrent TMS-fMRI*. Society for Neuroscience

Desmond, J.E., Hua, J., Liao, D.A., & Yau, J.M. (2012) *Robust and rapid identification of TMS targets in concurrent TMS-fMRI experiments*. Society for Neuroscience

Yau, J.M., Celnik, P., Hsiao, S.S., & Desmond, J.E. (2012) *Direct current stimulation reveals separate crossmodal mechanisms for tactile orientation and frequency perception*. Society for Neuroscience

Liao, D.A., Yau, J.M., Desmond, J.E., & Marvel, C.L. (2012) *Contributions of the motor system to verbal and non-verbal working memory: A TMS study*. Society for Neuroscience

Liao, D.A., Yau, J.M., Echavarria, D.M., Faulkner, M.L., Desmond, J.E., & Marvel, C.L. (2012) *Using fMRI and TMS to study interactions of the motor system and working memory*. Organization for Human Brain Mapping

Yau, J.M., Celnik, P., & Desmond, J.E. (2011) *Direct current stimulation of visual cortex improves tactile spatial acuity*. Society for Neuroscience

Yau, J.M., Kim, D.J., Jo, M., & Bensmaia, S.J. (2009) *Cross-modal interactions in pitch and loudness*. Society for Neuroscience

Yau, J.M., Hsiao, S.S., & Connor, C.E. (2008) *Common neural mechanisms of intermediate shape processing in vision and touch*. Computational and Systems Neuroscience

Yau, J.M., Fitzgerald, P.J., Connor, C.E., & Hsiao, S.S. (2007) *Early and intermediate representation of edge shape in the somatosensory system*. Society for Neuroscience

Berryman, L.J., Yau, J.M., Fitzgerald, P.J., & Hsiao, S.S. (2006) *Representation of object size, compliance and curvature in the second somatosensory cortex*. Society for Neuroscience

Yau, J.M., Berryman, L.J, Fitzgerald, P.J., Connor, C.E., & Hsiao, S.S. (2006) *2D shape representation in macaque second somatosensory cortex characterized with a genetic algorithm*. Society for Neuroscience

Kim, S.S., Fitzgerald, P., Thakur, P., Berryman, L., Yau, J.M., & Hsaio, S.S. (2005) *Integration of spatial form across fingers in the second somatosensory cortex (SII) of the awake monkey*. Society for Neuroscience

Berryman, L.J., Yau, J.M., Byrne, A.J., & Hsiao, S.S. (2004) *The effect of contact force and surface curvature on tactile size discrimination*. Society for Neuroscience

Gray, D.R., Huss, W.J., Yau, J.M., Werdin, E.S., & Smith, G.J. (2004) *Human Prostate Vascular Dynamics following castration: a study of primary human prostate xenografts*. American Association for Cancer Research Conference

Bensmaia, S.J., Hollins, M., & Yau, J.M. (2003) *The Pacinian system and the discrimination of high-frequency complex tactile waveforms: A neural model*. North Carolina Cognitive Group

Gray, D.R., Werdin, E.S., Durham, L.E., Yau, J.M., Huss, W.J., Funkhouser, Jr., W.K., Mohler, J.L., & Smith, G.J. (2002) *Angiogenesis in CaP: Primary Human Prostate Xenografts: A Novel Model*. Society for Basic Urologic Research

Teaching Experience

Classroom Instruction – Baylor College of Medicine

2018-present Director
'Neural Systems I' (Baylor College of Medicine, Graduate Level)
* Awarded Best Neuroscience course (2020)

2015-present Lecturer
'Nervous System' (Baylor College of Medicine, Medical students, Nursing students)

2018-present Lecturer
'Fundamentals of Human Neuroimaging' (Baylor College of Medicine, Graduate Level)

2016-present Lecturer
'Neurolabs' (Baylor College of Medicine, Graduate Level)

2015-2017 Lecturer
'Neural Systems' (Baylor College of Medicine, Graduate Level)

2015 Lecturer
'Cognitive Neuroscience' (Rice University, Undergraduate Level)

2014-2015 Lecturer
'Neural Systems' (Rice University, Undergraduate Level)

Classroom Instruction – Johns Hopkins University

2013 Lecturer
'Higher Brain Function' (Undergraduate Level)

2011 Instructor
'Sensorimotor Processing' (Undergraduate Level)

2008 Lecturer
'Primate Brain Function' (Undergraduate Level)

2006 Graduate TA
'Neuroscience and Cognition II' (Graduate Level)

Professional Societies

Society for Neuroscience
Society for the Neural Control of Movement
International Society for Behavioral Neuroscience
Vision Sciences Society

Reviewing

Editorial board

Associate Editor, Multisensory Research (2018-)
Associate Editor, Frontiers in Human Neuroscience: Sensory Neuroscience (2019-)
Associate Editor, Haptics Symposium (2022)
Associate Editor, Brain Topography (2022-)

Journals
Acta Psychologica, American Journal of Physical Medicine & Rehabilitation, Attention, Perception & Psychophysics, BMC Neuroscience, Brain Topography, Cerebral Cortex, Cortex, Cognition, Cognitive Neuroscience, Current Biology, eNeuro, European Journal of Neuroscience, Experimental Brain Research, IEEE Transactions on Haptics, i-Perception, iScience, Journal of the Acoustical Society of America, Journal of Cognitive Neuroscience, Journal of Experimental Psychology: General, Journal of Musculoskeletal and Neuronal Interactions, Journal of Neurophysiology, Journal of Neuropsychiatry and Clinical Neurosciences, Journal of Neuroscience, Multisensory Research, Neurobiology of Aging, NeuroImage, Neuromorphic Computing and Engineering, Neuropsychologia, Neuroscience, Perception, Philosophical Transactions B, Physiology & Behavior, PLoS Biology, PLoS Computational Biology, PLoS ONE, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society B, Psychological Science, Psychophysiology, Scientific Reports, Somatosensory and Motor Research, Temperature

Grants
National Institutes of Health
- Cognition and Perception (ad hoc reviewer; 6/2017, 2/2018)
- Mechanisms of Sensory, Perceptual, and Cognitive Processes (ad hoc reviewer; 6/2018)
- ZRG1 F02B-R (ad hoc reviewer; 6/2022)
- Human Complex Mental Funtion (ad hoc reviewer; 6/2023)

National Science Foundation (Perception, Action, & Cognition: outside reviewer; 2016, 2020, 2023)
Natural Sciences and Engineering Research Council of Canada (outside reviewer)
New Zealand Ministry of Business, Innovation and Employment (outside reviewer)

Mentoring

Current Students / Trainees
Elise Denghausen (2022-present): PhD student in Neuroscience
Juan Carlos Ramirez (2022-present): MD/PhD student in Quantitative Computational Bioscience
Jose Vergara de la Fuente (2019-present): postdoctoral researcher
Kevin Ung (2021-present): postdoctoral researcher

Former Students / Trainees
Alexis Perez Bellido, PhD (2014-2016): postdoctoral researcher
Silvia Convento, PhD (2015-2018): postdoctoral researcher
Hyuntaek Oh, PhD (2017-2018): postdoctoral researcher
Lexi Crommett (2014-2018): PhD student in Neuroscience
MD Shoaibur Rahman (2015-2019): PhD student in Neuroscience
Elizabeth Halfen (2017-2020): PhD student in Neuroscience
Lingyan Wang (2017-2022): PhD student in Neuroscience
Dakarai McCoy (2016-2017): post-baccalaureate researcher
Katherine Perks (2020-2021): post-baccalaureate researcher
Katharine Pyron (2016-2017): Masters student in Orthotics and Prosthetics
Patrick Hing (2015-2016): Masters student in Orthotics and Prosthetics
Austin Grant Davids (2017-2018): Masters student in Orthotics and Prosthetics

Undergraduate researchers
Radha Malhotra (2020-present), Audrey Kim (2022), Claire Cho (2020-2021), Yash Wani (2017-2020), Grace Wu (2018-2020), Zhuoyang Li (2019-2020), Sriparna Sen (2017-2019), Sophia Chang (2018-2019), Snigdha Banda (2018-2019), Franklin Zhang (2018), Lucy Lai (2015-2018), Akshat Patel (2016-2017), Adrish Anand (2016-2018), Jennifer Mathews (2016-2018), Chandler Shannon (2016-2017), Ryan Pappal (2015-2017), Kira Wegner-Clemens (2015-2017), Ethan Lau (2016), Grace Flink (2016), Deeksha Madala (2015-2016), Allen Lin (2014-2015), Richard Massey Branscomb (2014-2015), Stephanie Yijing Chen (2014), Helen Hoover (2014),

Research assistants / Lab managers
Dain Rust (2023-), Katie Steck (2023-), Jesse Williford (2022-2023), Aiswaryia Mantagani (2018-2019), Swati Pandita (2017), Allen Lin (2014-2015)

Advisor of 23 PhD or MD/PhD students during research rotations (LH, UG, RB, LA, JM, LC, SR, JS, SS, LW, JZ, YL, MC, TW, XC, JR, NQ, ID, ED, AC, KK, WZ, CT)

Dissertation/Qualifying Committees (BCM)
Member of 14 thesis committees (excluding mentored students): Savannah Gosnell, Lin Zhou, Steven Lien, Jaclyn Patterson, Ye Li, Lyndsey Aponik, Joy Zhou, Courtney Garcia, Elise Mangin, Madaline Mocchi (reporting member), Luis Salazar (reporting member), Melissa Ryan, Erik Anderson, Maxwell Gagnon (reporting member)

Dissertation/Qualifying Committees (External)
Alexandra Buckner (UTHealth; 2022-)

Qualifying Exam Committee (BCM)
Member of 8 1st year Neuroscience qualifying exams; Member of 5 QCB qualifying exams (LW, CL, RP, VJ, EA, DB, CW)

Qualifying Exam Committee Chair (BCM)
Chairing member of 4 Quantitative Computational Bioscience exams: Linhua Wang, Chaozhong Liu, Robert Petrovic, Venkata Jonnakuti, David Bellini, Catherine Wang

Thesis Exam Committee (External)
Lux Li – McMaster University, Department of Psychology, Neuroscience & Behavior (9/2017)
Justin Brantley – University of Houston, Electrical & Computer Engineering (12/2019)
Kevin Ng – University of New South Wales (5/2021)
Irena Arslanova – University College London (6/2021)
Spencer Arbuckle – University of Western Ontario (8/2021)

Co-sponsor of NIH training awards (F30/F31) (External)
Molly Hermiller – Northwestern University (2019)
Patrick Malone – Georgetown University (2018)

BCM Service

Neuroscience Graduate Program: Associate Director (2022-present)

Neuroscience Department:

Admissions Committee (2016-present)
    Initial screening Subcommittee (2021-present)
Curriculum Committee (2016-present); Chair (2022-present)
Diversity, Equity, and Inclusion Committee (2021-present)

College:
Faculty senate (2022-present)
Faculty Mentor Training (CIMER) Facilitator (2022-present)
Seven Year-Plus Time to Degree Workgroup (2016)
GSBS Strategic Planning: Subcommittee on Thesis Advisory Committees (2017)
BCM PREP Steering Committee (2018-present)
Core for Advanced MRI (CAMRI) Advisory Committee (2018-present)
BCM IACUC
    Working group on conditioning (2021)
    Large Animal Users Subcommittee (2022)
Curriculum Committee (2022-present)