James F. Cavanagh, PhD

Curriculum Vitae 07/07/2025

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Biographical

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Education & Training

2025 - present	University of New Mexico	Professor
2019 - 2025	University of New Mexico	Associate Professor
2013 - 2019	University of New Mexico	Assistant Professor
2010 - 2013	Brown University	Post-Doc
2010	University of Amsterdam	Visiting Scholar
2005 - 2010	University of Arizona	Ph.D. Psychology
2002 - 2004	San Francisco State University	M.A. Psychology
1996 - 2000	Western Michigan University	B.A. Sociology

Research Interests

Oscillations: The brain processes information with oscillations of neuronal populations. I use EEG to measure these oscillations, particularly when the frontal cortex processes error or conflict information in order to adapt behavior.

Computations: Oscillations gate the timing, location, and intensity of neuronal calculations. I integrate abstract and neural network modeling with EEG to understand the computational functions of fronto-striatal systems during adaptive behavior.

& Implications: These perspectives combine into a powerful approach for understanding brain function, and may reveal the manner of compromised fronto-striatal functioning in neurological and psychiatric disorders.

Under Review

Dalton, S.G., Lavelle, M., **Cavanagh, J.F** & Richardson, J.D. Advancing ERP-Based Tools for Language Monitoring in Aphasia: Psychometric and Clinical Utility of the Word-Level N400

Cavanagh, J.F. & Holroyd, C.B. The Reward Positivity: A goal prediction error.

Topel, S., Kortink, E.D., Liu, H., **Cavanagh, J.F.**, & van der Molen, M.J.W. Frontal-midline theta promotes context-dependent risk aversion in social anxiety

Lavelle, M. & **Cavanagh J.F.** Post-error attention control: Posterior alpha/beta activity is reflexive whereas frontal theta is strategic.

Publications

Cole, R.C., Ging-Jehli, N.R., Vivanco Suarez, J., Greenlee, J.D., Wessel, J.R., Espinoza, A.I., Zhang, J., **Cavanagh, J.F.** & Narayanan, N.S. (2025) Subthalamic nucleus theta frequency stimulation boosts decision threshold. *Brain Stimulation*

Plonsky, O., Apel, R., Ert, E., Tennenholtz, Bourgin, M.D., Peterson, J.C., Reichman, D., Griffiths, T.L., Russell, S.J., Carter, E.C., **Cavanagh, J.F.**, Erev , I. (2025) Predicting human decisions with behavioral theories and machine learning. *Nature Human Behavior*

Ging-Jehli, N.R., **Cavanagh, J.F.**, Ahn, M., Segar, D.J., Asaad, W.F. & Frank, M.J. (2025) Basal ganglia components have distinct computational roles in decision-making under conflict and uncertainty. *PLoS Biology*

Pirrung, C.J.H., Singh, G., Hogeveen, J., Quinn, D. & **Cavanagh, J.F.** (2024) Hypoactivation of ventromedial frontal cortex in major depressive disorder: an MEG study of the Reward Positivity. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*

Fox, N.A., ... **Cavanagh, J.F.** ... and the HBCD EEG Workgroup. (2024) The development and structure of the HEALthy Brain and Child Development (HBCD) Study EEG protocol. *Developmental Cognitive Neuroscience*

Narayanan, N.S., Jourahmad, Z., Cole, R.C. & **Cavanagh, J.F.** (2024) Cortical low frequency failures underlie cognitive dysfunction in Parkinson's disease. *Trends in Cognitive Science*

Hogeveen, J., Campbell, E.M., Mullins, T.S., Quinn, D.K., Mayer, A.R. & **Cavanagh, J.F.** (2024) Neural response to monetary incentives in acquired adolescent depression. *Brain Communications*

Hawkins, G.E., **Cavanagh, J.F.**, Brown, S.D. & Steyvers, M. (2024) Cognitive Models as a Tool to Link Decision Behavior with EEG Signals. In: *An Introduction to Model-Based Cognitive Neuroscience* Second Edition. Springer press. Eds: Foorstmann, B.U. & Turner, B.M.

Nwakamma, M.C., Stillman, A.M., Gabard-Durnam, L.J., **Cavanagh, J.F.**, Hillman, C.H. & Morris, T.P. (2024) Slowing of Parameterized Resting-State Electroencephalography After Mild Traumatic Brain Injury. *Neurotrauma Reports*, 5.1, 448-461.

Noback, M., Bhakta, S.G., Talledo, J.A., Kotz, J.E., Benster, L., Roberts, B.Z., Nungaray, J.A., Light, G.A., Swerdlow, N.R., Brigman, J.L., **Cavanagh, J.F.** & Young, J.W. (2024) Amphetamine increases motivation of humans and mice as measured by breakpoint, but does not affect a putative EEG biomarker. *Cognitive, Affective, and Behavioral Neuroscience*, 24(2), 269-278.

Kehrer, P., Brigman, J.L. & **Cavanagh, J.F.** (2024) Depth recordings of the mouse homologue of the Reward Positivity. *Cognitive, Affective, and Behavioral Neuroscience*, 24(2), 292-301.

McKeown, D.J., Schinazi, V.R., Baumann, O., Moustafa, A.A., Finley, A., Kelley, N., **Cavanagh, J.F.**, Keage, H. & Angus, D.J. (2024) Test-retest reliability of spectral parameterization by 1/f characterization using Specparam. *Cerebral Cortex*, 34(1), 1-11.

McKeown, D.J., Jones, M., Pihl, C., Finley, A., Kelley, N., Baumann, O., Schinazi, V.R., Moustafa, A.A., **Cavanagh, J.F.** & Angus, D.J. (2023) Medication-invariant resting aperiodic and periodic neural activity in Parkinson's disease. *Psychophysiology*, 61(4)

Cavanagh, J.F. (2023) Frontal theta helps to explain etiological variability. *Biological Psychiatry*, 94:767-768. [Invited Commentary]

Singh, G., Campbell, E., Hogeveen, J., Witkiewitz, K., Claus, E.D. & **Cavanagh, J.F.** (2023) Affective imagery boosts the reward related delta power in heavy drinkers. *Psychiatry Research: Neuroimaging*, 334, 111685.

Campbell, E.M., Singh, G.S., Claus, E.D., Witkiewitz, K., Costa, V.D., Hogeveen, J. & **Cavanagh, J.F.** (2023) Electrophysiological markers of aberrant cue-specific exploration in heavy drinkers. *Computational Psychiatry,* 7(1).

Olguin, S.L., **Cavanagh, J.F.**, Young, J.W. & Brigman, J.L. (2023) Impaired cognitive control after moderate prenatal alcohol exposure corresponds to increased power in neurophysiological recordings during rodent touchscreen measures. *Neuropharmacology*, 236, 109599.

Singh, A., Cole, R.C., Espinoza, A.I., Wessel, J.R., **Cavanagh, J.F.** & Narayanan, N.S. (2023) Evoked midfrontal activity predicts cognitive deficits in Parkinson's disease. *Journal of Neurology, Neurosurgery, and Psychiatry*, 94: 945-953.

Jackson, T.J. & **Cavanagh, J.F.** (2023) Reduced positive affect alters reward learning via reduced information encoding in the Reward Positivity. *Psychophysiology*, 1-16

Fink, B., Claus, E., **Cavanagh, J.F.**, Hamilton, D.A. & Biesen, J.N. (2023) Heart rate variability may index emotion dysregulation in alcohol-related intimate partner violence. *Frontiers in Psychiatry*, doi.org/10.3389/fpsyt.2023.1017306

Wong, J.K., ... **Cavanagh J.F.**, ... Okun, M.S. (2023) Proceedings of the 10th annual deep brain stimulation think tank. *Frontiers in Human Neuroscience*, 10.3389/fnhum.2022.1084782

Cole, R.C., Espinoza, A.I., Singh, A., Berger, J.I., **Cavanagh, J.F.**, Greenlee, J.D. & Narayanan, N.S. (2023) Novelty-induced frontal-STN networks in Parkinson's disease. *Cerebral Cortex*, 33, 469-485.

Biernacki, K., Myers, C.E., Cole, S., **Cavanagh, J.F.** & Baker, T.E. (2022) Prefrontal transcranial magnetic stimulation boosts response vigour during reinforcement learning in healthy adults. *European Journal of Neuroscience*, 57, 680-691.

Cavanagh, J.F. & Cohen, M. X. (2022) Frontal midline theta as a model specimen of cortical theta. In: *The Handbook of EEG Frequency*. Oxford press, Eds: Gable, P.A., Miller, M. & Bernat, E.B.

Cavanagh, J.F., Olguin, S., Talledo, J.A., Kotz, J.E., Roberts, B.Z., Nungaray, J.A., Sprock, J., Gregg, D., Bhakta, S.G., Light, G.A., Swerdlow, N.R., Young, J.W. & Brigman, J.L. (2022) Amphetamine alters an EEG feature of reward in humans and mice. *Psychopharmacology*, 239: 923-933.

Bhakta, S.G., **Cavanagh, J.F.**, Talledo, J.A., Kotz, J.E., Benster, L., Roberts, B.Z., Nungaray, J.A., Brigman, J.L, Gregg, D., Light, G.A., Swerdlow, N.R., & Young, J.W. (2022) EEG reveals that dextroamphetamine improves cognitive control through multiple processes in healthy participants. *Neuropsychopharmacology*, 47: 1029-1036.

Cavanagh, J.F., Ryman, S. & Pirio Richardson, S. (2022) Cognitive control in Parkinson's disease. *Progress in Brain Research*, 1, 137-152.

Brown, D.R., Jackson, T.J. & **Cavanagh, J.F.** (2022) The Reward Positivity is sensitive to affective liking. *Cognitive, Affective, and Behavioral Neuroscience*, 22, 258:267.

Cavanagh, J.F., Gregg, D., Light, G.A., Olguin, S. Sharp, R.F., Bismark, A.W., Bhakta, S.G., Swerdlow, N.R., Brigman, J.L. & Young, J.W. (2021) Electrophysiological biomarkers of behavioral dimensions from cross-species paradigms. *Translational Psychiatry*, 11, 482

Phillips, J., Pirrung, C.J., Weersinghe, I., Kanishka, G.K., Satharasinghe, Y., Lalitharatne, T., **Cavanagh, J.F.**, Kodituwakku, P. & Wanigasinghe, J. (2021) Portable aquisition of auditory ERPs: a pilot study of premature infants. *Pediatric Neurology*, 122, 84-88.

Hogeveen, J.R. Aragon, D.F., Rogge-Obando, K., Campbell, R.A., Yeo, R.A., Shuttleworth, C.W., Avila-Rieger, R.E., Wilson, J.K., Fratzke, V., Brandt, E., Story-Remer, J., Gill, D., Mayer, A.R., **Cavanagh, J.F.** & Quinn, D. (2021) Ventromedial prefrontal-anterior cingulate hyperconnectivity scales with apathy in Traumatic Brain Injury. *Journal of Neurotrauma*, 38, 2264-2274.

Dalton, S.G.H., **Cavanagh, J.F.** & Richardson, J.D. (2021) Spectral resting-state EEG (rs-EEG) in chronic aphasia is reliable, sensitive, and correlates with functional behavior.

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Singh, A., Cole, R.C., Espinoza, A.I., Evans, A., Cao, S., **Cavanagh, J.F.** & Narayanan, N.S. (2021) Timing variability and midfrontal ~4Hz rhythms correlate with cognitive dysfunction in Parkinson's disease. *NP: Parkinson's Disease*, 7, 14, 1-8.

Gershman, S.J., Guitart-Masip, M. & **Cavanagh, J.F.** (2021) Neural signatures of arbitration between Pavlovian and instrumental action selection. *PLoS Computational Biology*, 1-16.

Anjum, Md Fahim, Dasgupta, S., Mudumbai, R., Singh, A., **Cavanagh, J.F.** & Narayanan, N. (2020) Linear predictive coding distinguishes spectral EEG features of Parkinson's disease. *Parkinsonism & Related Disorders*, 79, 79-85.

Brandt, E., Wilson, K.W., Rieger, R.E., Gill, D., Mayer, A.W. & **Cavanagh, J.F.** (2020) Respiratory sinus arrhythmia correlates with depressive symptoms following mild traumatic brain injury. *Journal of Psychophysiology*, 35(3), 1-13.

Brown, D.R. **& Cavanagh, J.F.** (2020) Novel rewards occlude the reward positivity, and what to do about it. *Biological Psychology*, 151, 107841.

Singh, A. Cole, R.A., Espinoza, A.I., Brown, D.R., **Cavanagh, J.F.** & Narayanan, N. (2020) Frontal theta and beta oscillations during lower-limb movement in Parkinson's Disease. *Clinical Neurophysiology*, 131, 694-702.

Brown, D.R., Pirio Richardson, S. & **Cavanagh, J.F**. (2020) An EEG marker of reward processing is sensitive to Parkinson's disease duration. *Brain Research*, 1727, 146541.

Marquardt, K., **Cavanagh, J.F.** & Brigman, J.L. (2020) Alcohol exposure in utero disrupts cortico-striatal coordination required for behavioral flexibility. *Neuropharmacology*, 162, 107832.

Cavanagh, J.F., Rieger, R.E, Wilson, K.W., Gill, D., Brandt, E. & Mayer, A. (2020) Joint analysis of frontal theta synchrony and white matter following mild traumatic brain injury. *Brain Imaging and Behavior,* 14:2210-2223.

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Broadway, J.M., Rieger, R.E., Wilson, K.W., Gill, D., Quinn, D., Mayer, A.W. & **Cavanagh, J.F.** (2019) Executive function predictors of delayed memory deficits after mild traumatic brain injury. *Cortex*, 120, 240-248.

Cavanagh, J.F., Wilson, K., Reiger, R., Gill, D., Broadway, J.M., Story Remer, J.H., Fratzke, V., Mayer, A.R. & Quinn, D.K. (2019) ERPs predict symptomatic distress and recovery in sub-acute mild traumatic brain injury. *Neuropsychologia,* 132, 107125.

Kane, J., **Cavanagh, J.F.** & Dillon, D.G. (2019) Reduced theta power during memory

retrieval in depressed adults. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 4(7), 636-643.

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Janowich, J.R. & **Cavanagh, J.F.** (2019) Immediate vs. delayed control demands elicit distinct mechanisms for instantiating proactive control. *Cognitive, Affective, and Behavioral Neuroscience,* 19(4), 910-926.

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Albrecht, M.A., Waltz, J., **Cavanagh, J.F**., Frank, M.J. & Gold, J.M. (2019) Increased conflict-induced slowing, but no differences in conflict-induced positive or negative prediction error learning in patients with schizophrenia. *Neuropsychologia*, 123, 131-140.

Cavanagh, J.F., Bismark, A.W., Frank, M.J. & Allen, J.J.B. (2019) Multiple dissociations between co-morbid depression and anxiety on reward and punishment processing: Evidence from computationally-informed EEG. *Computational Psychiatry*, https://doi.org/10.1162/cpsy_a_00024

Janowich, J.R. & **Cavanagh, J.F.** (2018) Delay Knowledge and Trial Set Count Modulate Use of Proactive vs. Reactive Control: A Meta-Analytic Review, *Psychonomic Bulletin and Review*, 25(4), 1249-1268.

Singh, A. Pirio Richardson, S. Narayanan, N, **Cavanagh, J.F.** (2018) Frontal midline theta is diminished during cognitive control in Parkinson's disease. *Neuropsychologia*, 117, 113-122.

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behavioral adjustment, but at different times. *NeuroImage*, 110, 205-216.

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Cavanagh, J.F., Wiecki, T.V., Kochar, A., & Frank, M.J. (2014) Eye tracking and pupillometry reflect dissociable indices of latent cognitive processes. *Journal of Experimental Psychology: General*, 143(4), 1476-1488.

Collins, A.G.E., **Cavanagh, J.F.**, & Frank, M.J. (2014) Human EEG uncovers latent, generalizable rule structure during learning. *Journal of Neuroscience*, 34(13), 4677-4685.

Narayanan, N.S.*, **Cavanagh, J.F.***, Frank, M.J. & Laubach, M. (2013) A common low frequency oscillatory mechanism for adaptive control in rats and humans. *Nature Neuroscience*, 16(12), 1888-1895.

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Cavanagh, J.F., Eisenberg, I., Guitart-Masip, M., Huys, Q. & Frank, M.J. (2013) Frontal theta overrides Pavlovian learning biases. *Journal of Neuroscience,* 33(19), 8541-8548.

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Cavanagh, J., Geisler, M. (2006). Mood effects on the ERP processing of emotional intensity in faces: A P3 investigation with depressed students. *International Journal of Psychophysiology*, 60, 27-33

Current Funding

NINDS 2R01NS100849-06A1 Dates: 03/01/2025 – 02/28/2030
Narayanan/Cavanagh (MPIs)
"*Frontal midline delta/theta rhythms and cognitive control in PD*"
Total Costs: $3,405,414
Role: MPI 25%

NIDA U01DA055359 Dates: 09/30/2021 – 06/30/2026
Bakhireva/Leeman (MPIs)
"*18/24 The Healthy Brain and Child Development National Consortium*"
Total Costs: $5,476,047
Role: Co- Investigator 10%

NIDCD RO1DC019292-01 Dates: 05/01/2021 – 04/30/2026
PI: Jessica Richardson
"*Optimizing targeted interventions for aphasia*"
Direct Costs: $1,900,000
Role: Co- Investigator 5%

Completed Funding

NIMH RO1MH119382-01 Dates: 04/01/2019 – 01/31/2024
PI: James F. Cavanagh
"A Novel Bench-to-Bedside Translational Model of Anhedonia"
Direct Costs: $1,262,551
Role: PI 50%

NIGMS P30GM122734 Dates: 05/01/2022 – 06/31/2023
PI: James F. Cavanagh
"*Causal Dissociation of Value Contributions to the Reward Positivity*"
Direct Costs: $24,860
Role: Pilot project PI

NINDS P20NS123151-01 Dates: 07/01/2021 – 06/30/2023
PI: Nandakumar S. Narayanan
"*Prefrontal Cortex, Cognition, and Speech Symptoms in PD (PRECIS-PD)*"
Direct Costs: $926,740
Role: Co- Investigator 10%

NIMH UH3MH109168-01 Dates: 09/04/2018 – 12/31/2020
PI: Jared Young
"Neurophysiological biomarkers of behavioral dimensions from cross-species paradigms"
Direct Costs: $1,307,090
Role: Co-Investigator 12%

UNM Grand Challenge Dates: 09/01/2019 – 08/31/2020
PI: James F. Cavanagh
"Biomarkers of Aberrant Control and Reward Processing in Individuals with an Alcohol Use Disorder"
Direct Costs: $10,000
Role: PI

UNM Grice Award Dates: 03/01/2019 – 08/31/2020
PI: James F. Cavanagh
"Role of the Infralimbic Cortex in Reinforcement Learning"
Direct Costs: $3,000
Role: PI

NIGMS P20GM109089-01A1 Dates: 09/15/2015 – 12/31/2018
PI: Bill Shuttleworth
UNM Center for Brain Recovery and Repair
Direct costs: $11,357,000
Subcomponent direct costs: $885,499
Role: Project PI 50%

NIMH UH2MH109168-01 Dates: 04/01/2016 – 03/31/2018
PI: Jared Young
"Neurophysiological biomarkers of behavioral dimensions from cross-species paradigms"
Direct Costs: $1,566,674
Role: Co-Investigator 5%

UNM Office of the Vice President of Research Dates: 06/01/2016 – 05/30/2017
PI: James Cavanagh
"*PRED+CT: A Patient Repository of EEG Data and Computational Tools*"

Direct Costs: $19,444
Role: PI

NIAAA R21AA0023947-01A1 Dates: 10/01/2015 – 09/31/2017
PI: Brandi Fink
Over-Arousal as a Mechanism between Alcohol and Intimate Partner Violence
Direct Costs: $214,178
Role: Co-Investigator 10%

University of Iowa Medical School Dates: 04/01/2013 – 04/01/2014
PI: Nandakumar S. Narayanan
"*Parkinson's Disease, Cognitive Symptoms, and Medial Prefrontal Processing*"
Direct costs: $20,000
Role: Co-Investigator

NSF 1125788 Dates: 09/01/2011 – 08/31/2015
PI: Michael J. Frank (*co-written by James F. Cavanagh)
"*Electrophysiological and Computational Studies of Action Monitoring*"
Direct costs: $757,012
Role: Co-Investigator

NIH NRSA T32MH019118-21 Dates: 07/01/2011 – 06/30/2012
PI: James F. Cavanagh
Direct costs: $40,556
Role: Fellowship

NIH NRSA F31MH082560-01A2 Dates: 09/15/2008 – 08/17/2010
PI: James F. Cavanagh
"*How stress alters neural systems of reinforcement: A model of depressive etiology*"
Direct costs: $61,326
Role: Fellowship

Professional Memberships and Service Activities

- 2024-2027 Consulting Editor: *Psychophysiology*
- 2016-2026 Consulting Editor: *Cognitive, Affective, and Behavioral Neurosciences*
- 2016-2024 Consulting Editor: *Brain Research*
- 2018 Program Chair: *New Mexico EEG and Behavior Conference*, Albuquerque
- 2009 Co-Organizer: *Opinions and Discussions on Cognitive Neuro.*, Amsterdam
- Society for Psychophysiological Research:
    - Poster Judge (2015, 2016, 2017, 2022)
    - Early Careers Panelist (2015)
    - Program Committee (2017, 2019-2023)
    - Public Relations Committee (2021-2023)
    - Chair: Member Awards and Recognition Committee (2023)
    - Board of Directors (2023-2026)
    - Early Career Award Committee (2026-2029)
- 2025 Ad Hoc Member: NIH *Neural Basis Psychopathol., Add. & Sleep* Study Section
- 2025 Ad Hoc Member: NIH *Adult Lifespan Psychopathology* Study Section

- 2024 Ad Hoc Member: NIH *Biobeh. Mech. Of Emo., Stress & Health* Study Section
- 2023 Ad Hoc Member: NIMH *Conte Center* Study Section
- 2023 Ad Hoc Member: NIH *Human Complex Mental Functions* Study Section
- 2022 Ad Hoc Member: NIH *BRAIN F32* Study Section
- 2022 Panel Member: NSF *Science & Technology Centers* Program P221783
- 2022 Ad Hoc Member: NIH *TBI, Hemorrhage & Fluid Dyn.* SEP (*chaired 2 proposal*)
- 2022 Ad Hoc Member: NIH *Human Complex Mental Functions* Study Section
- 2021 Ad Hoc Member: NIMH *Conte Center* Study Section
- 2021 Ad Hoc Member: NIH *Member Conflict: Human Complex Mental Functions*
- 2021 Ad Hoc Member: NIMH *Computational Psychiatry* Study Section
- 2021 Ad Hoc Member: NIH *Human Complex Mental Functions* Study Section
- 2020 Ad Hoc Member: NIMH *Computational Psychiatry* Study Section
- 2020 Ad Hoc Member: NIMH *Conte Center* Study Section
- 2019 Ad Hoc Member: NIH *Cognition and Perception* Study Section

Awards & Recognitions

2025	Research & Creative Works Leadership Award	UNM Office of Academic Affairs
2021	First Place	Openneuro.org Hall of Fame contributions
2018	Early Career Award	Society for Psychophysiological Research
2013	Travel Award	COSYNE conference, Salt Lake City UT
2011	Travel Award	DEFD conference, Boulder CO
2010	Scholarship Award	UA Grad Council for College of Science
2010	Scholarship Award	UA Psychology Dept
2009	Tursky (Top Student Poster) Award	Society for Psychophysiological Research
2008	Travel Award	UA Graduate Student Council
2006	Travel Award	UA Graduate Student Council
2005	Pre-Doctoral Research Grant	UA Social & Behavioral Research Institute
2000	Graduated Cum Laude	Western Michigan University

DEI Training, Outreach, and Service

2023-2024	2X Chair, 1X Panel: NIH FIRST DEI-focused faculty search committee
2023	National Research Mentoring Network workshops: unconscious bias

Invited Colloquia Presentations

2025	University of Florida, Dept of Psychology
2024	University of Maryland, Child Development Lab
2023	University of South Dakota, Department of Neuroscience
2022	University of Iowa, Department of Psychology
2022	Cambridge University, Department of Psychiatry
2022	McLean Hospital, P50 Speaker Series
2019	Rutgers, Center for Molecular and Behavioral Neuroscience
2017	University of Maryland, Department of Psychology

2015 Columbia University, Department of Neurosurgery
2014 Yale University, J.B. Pearce Labs
2014 University of Iowa, Department of Neurology Grand Rounds

Conference Talks

Cavanagh, J.F. (2024) Hedonic and motivational influences on the Reward Positivity: From Circuits to Behavior. *Presented at the Society for Psychophysiological Research, 10/24.*

Pirrung, C.J.H., Singh, G., Hogeveen, J., Quinn, D. & **Cavanagh, J.F.** (2023) MEG source estimation of the Reward Positivity. *Presented at the Society for Psychophysiological Research, 09/23.*

Cavanagh, J.F. (2023) Event-related EEG reflects prediction errors across the cortical hierarchy. *Presented at Breaking Expectations, Marburg Germany, 07/23*.

Cavanagh, J.F. (2022) The Reward Positivity is a nexus of multidimensional value. *Presented at the Society for Psychophysiological Research, 09/22.*

Singh, G., Campbell, E., Hogeveen, J., Witkiewitz, K., Claus, E. & **Cavanagh, J.F.** (2022) Alcohol imagery evokes a larger Reward Positivity in heavy drinkers. *Presented at the Society for Psychophysiological Research, 09/22.*

Cavanagh, J.F. (2022) A novel, fast, inexpensive biomarker of the ventral reward system. *Presented at the 10th conference of the Deep Brain Stimulation society, 08/22*.

Cavanagh, J.F. (2021) Using reinforcement prediction errors as a filter for information content in EEG recordings. *Presented at the Society for Psychophysiological Research, Virtual Conference, 10/21.*

Cavanagh, J.F. (2021) Best experiment ever! Puppies, milkshakes, and the neurobiology of anhedonia. *Presented at the Society for Affective Science, Virtual Conference, 04/21.*

Cavanagh, J.F., Coffman, B. & Dillon, D.E. (2019) Memento malum: Mistakes boost memory via fronto-hippocampal theta synchrony. *Presented at the Society for Psychophysiological Research, Washington, DC, 09/19.*

Cavanagh, J.F. (2019) Frontal theta as a mechanism for cognitive control: Application to psychiatric and neurological populations. *Presented at the Iowa Neuroscience Institute Workshop, Iowa City, IA, 09/19*

Cavanagh, J.F. (2018) Early Career Award: Electrophysiology as a theoretical and methodological hub in the neural sciences. *Presented at the Society for Psychophysiological Research, Quebec City, CA, 10/18*

Cavanagh, J.F. (2017) Open tools for EEG-based pattern classification of psychiatric and neurological disease. *Presented at the Society for Psychophysiological Research, Vienna, Austria, 10/17*

Cavanagh, J.F., Meyer, A. & Hajcak, G. (2017) Error-specific cognitive control alterations in General Anxiety Disorder. *Presented at the Society for Psychophysiological Research, Vienna, Austria, 10/17.*

Smith, E.E., **Cavanagh, J.F.** & Allen, J.J.B. (2017) Intracranial source activity related to scalp-level asymmetry scores and depression status. *Presented at the Society for Psychophysiological Research, Vienna, Austria, 10/17.*

Cavanagh, J.F., Coffman, B. & Dillon, D.E. (2017) Memento malum: Mistakes boost memory via fronto-hippocampal theta synchrony. *Presented at the Organization for Human Brain Mapping, Vancouver, Canada, 06/17.*

Cavanagh, J.F. (2016). Dissociated Circuit Motifs: Multiple Mechanisms for Control. *Presentation at the Computational and Systems Neuroscience Society (Workshop: "Computations of the Dorsomedial Prefrontal Cortex"), Salt Lake City, UT, 03/16*.

Cavanagh, J.F. (2015). E-Phys is the Basis: A Translational Model of Adaptive Control. *Presentation at Society for Psychophysiological Research, Seattle, WA, 09/15*.

Cavanagh, J.F. (2015). Is There a General Theory for PFC/ACC Function? *Presentation at the 4th Workshop on Computational Properties of Prefrontal Cortex, Washington, DC, 05/15*.

Cavanagh, J.F. (2015). Dynamic Thresholds in Decision Making. *Presentation at the Computational and Systems Neuroscience Society (Workshop: "Random Walk Models Across Decision-Making Domains"), Salt Lake City, UT, 03/15*.

Cavanagh, J.F. (2014). Frontal Theta as a Mechanism for Cognitive Control. *Presentation at the 3rd Workshop on Computational Properties of Prefrontal Cortex, Whistler, BC, Canada, 10/14*.

Cavanagh, J.F. (2014). Frontal Theta as a Mechanism for Affective and Effective Control. *Presentation at the Society for Psychophysiological Research, Atlanta, GA, 09/14*.

Cavanagh, J.F. (2014). Synchrony in the Subthalamic Nucleus: Adaptive and Maladaptive Patterns in Health and Disease. *Presentation at the Computational and Systems Neuroscience Society (Workshop: "Rogue States: Altered Dynamics of Neural Circuit Activity in Brain Disorders"), Salt Lake City, UT, 03/14*.

Cavanagh, J.F. (2013). Theta as a Common Language for Mediofrontal Cortical Operations. *Presentation at Neural Circuits for Adaptive Control of Behavior, Paris, France, 9/13*.

Cavanagh, J.F. (2009). Allostatic Load and the Brain. *Presentation at the Opinions and Discussions on Cognitive Neuroscience: Amsterdam workshop, Amsterdam, Netherlands, 10/09.*

Cavanagh, J.F., Gründler, T.O.J., Frank, M.J. & Allen, J.J.B. (2009). Damned if you do, Damned if you don't: Dissociating Error Monitoring Systems in OCD. *Presentation at the Society for Psychophysiological Research, Berlin, Germany, 10/09.*

Cavanagh, J.F., Frank, M.J. & Allen, J.J.B. (2008). Social Stress Alters Cognitive Control in Vulnerable Individuals: Implications for Reinforcement Learning. *Presentation at the Action Monitoring and Behavioral Adjustment workshop, Aachen, Germany, 03/08*

Kemeny, M.E., **Cavanagh, J.F.,** & Foltz, C.A. (2008). Cognitive Response Determines Autonomic and Endocrine Response to Social Threat. *Presentation at the Society for Personality and Social Psychology, Albuquerque, NM, 01/08*

Ad-Hoc Reviewer - Grants

1. Army Research Laboratory (ARL – USA)
2. Austrian Science Fund (FWF – Austria)
3. Binational Science Foundation (BSF – US / Israel)
4. Deutsche Forschungsgemeinschaft (Germany)
5. European Research Council (ERC – Europe)
6. Health Research Council of New Zealand (HRC – NZ)
7. Medical Research Council (MRC – UK)
8. National Institute of Health (NIH - USA)
9. National Research Agency (ANR - France)
10. National Science Center (NCN – Poland)
11. National Science Foundation (NSF – USA)
12. National Sciences and Engineering Res. Council (NSERC - Canada)
13. Netherlands Org. for Health Research and Devel. (ZonMw - Netherlands)
14. Netherlands Organization for Sci. Research (NWO – Netherlands)
15. Research Foundation – Flanders (FWO - Belgium)
16. Swiss National Science Foundation (FNSNF - Switzerland)
17. UK Research and Innovation (UKRI – United Kingdom)
18. Welcome Trust (United Kingdom)

Ad-Hoc Reviewer - Journals

1 Advances in Medical Sciences
2 Acta Psychologica
3 American Journal of Psychiatry
4 Behavioural Brain Research
5 Behavioral Neuroscience
6 Biological Psychology
7 Biological Psychiatry
8 Biological Psychiatry: CNNI
9 Biomedical Signal Processing & Control
10 BMC Biology
11 Brain
12 Brain and Cognition
13 Brain Communications
14 Brain Imaging and Behavior
15 Brain Research
16 Brain Stimulation
17 Brain Structure & Function
18 Cell
19 Cell Reports
20 Cerebral Cortex
21 Clinical Neurophysiology
22 Cog., Aff. & Beh. Neuroscience
23 Cognition
24 Cognition and Emotion
25 Cognitive Neurodynamics
26 Communications Biology
27 Communications Psychology
28 Comp. Methods and Prog. in Biomed.
29 Computational Psychiatry
30 Cortex
31 Current Biology
32 Current Opinion in Behavioral Sciences
33 Drug & Alcohol Dependence
34 European Journal of Neuroscience
35 European Neuropsychopharmacology
36 eLife
37 Emotion
38 eNeuro
39 Frontiers in Cognition
40 Frontiers in Decision Neuroscience
41 Frontiers in Human Neuroscience
42 Frontiers in Neuroscience
43 Human Brain Mapping
44 iScience
45 Imaging Neuroscience
46 International J. of Psychophysiology
47 Journal of Cognitive Neuroscience
48 Journal of Child Psychiatry and Psychol.
49 Journal of Economics in Psych. and
50 Neuro.
51 JEP: General
52 JEP: Learning, Memory & Cognition
53 JEP: Human Perception & Performance
54 Journal of the Int'l Neuropsych. Society
55 Journal of Mathematical Psychology
56 Journal of Neural Engineering
57 Journal of Neuropharmacology
58 Journal of Neurophysiology
59 Journal of Neuroscience
60 Journal of Neurotrauma
61 Journal of Neurosci., Psychol. &
62 Economics
63 Journal of Personality
64 Journal of Psychopathol. and Clin.
65 Science
66 Journal of Psychophysiology
67 Journal of Physiology (Paris)
68 Learning and Memory
69 Movement Disorders
70 npj Parkinson's Disease
71 Nature Communications
72 Nature Human Behavior
73 Nature Neuroscience
74 Neuron
75 Neuroscience
76 NeuroImage
77 NeuroImage: Clinical
78 Neuropharmacology
79 Neuropsychopharmacology
80 Neuropsychologia
81 Neuroscience & Biobehavioral Reviews
82 Peer Community in Registered Reports
83 PNAS
84 PLoS Computational Biology
85 PLoS One
86 Prog NeuroPsychPharm & Bio Psychi
87 Psychiatry Research: Neuroimaging
88 Psychological Medicine
89 Psychological Review
90 Psychological Science
91 Psychology and Aging
92 Psychoneuroendocrinology
93 Psychopharmacology
94 Psychophysiology
95 Scientific Reports
96 Schizophrenia Bulletin
97 Social, Cognitive & Affective Neurosci.
98 Social Neuroscience
99 Translational Psychiatry
100 Trends in Cognitive Science

Teaching Experience

Instructor:	Psy 641: Cognition, Brain & Behavior Seminar, *UNM* Psy 650: Human Decision Making, *UNM* Psy 450: Principles of Psychophysiology, *UNM* Psy 650: Functions of Prefrontal Cortex, *UNM* Psy 644: Advanced EEG Analysis in Matlab, *UNM* Psy 240: Brain and Behavior, *UNM* Psy 443: Psychobiology of Emotion, *UNM* LAEL-LE94: Psychobiology of Emotion, *RI School of Design* Psy 200: Intro to Psychology, *SFSU* Psy 371: Intro to Statistics, *SFSU* Psy 400: Research Methods, *SFSU*
Lab Instructor:	Psy 501b: Psychophysiology Lab, *University of Arizona* Psy 297a: Research Methods, *University of Arizona* Psy 571: Psychophysiology Lab, *SFSU* Psy 400: Research Methods, *SFSU* Psy 371: Intro to Statistics, *SFSU*