

## Curriculum Vitae – Edward M. Bernat

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### PERSONAL INFORMATION

Bernat, Edward, M.

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### Current Appointment

2019-present Associate Professor, Department of Psychology, University of Maryland, College Park, Maryland (Clinical area and Cognitive and Neural Systems area in Psychology, and Neuroscience and Cognitive Science (NACS) program).

### Other Employment

2013-2019 Assistant Professor, Department of Psychology, University of Maryland, College Park, Maryland (Clinical area and Cognitive and Neural Systems area in Psychology, and Neuroscience and Cognitive Science (NACS) program).

2009-2013 Associate Professor (tenure-track, untenured), Clinical Area, Department of Psychology, Florida State University, Tallahassee, Florida.

2002-2009 Research Associate, Clinical Area, Department of Psychology, University of Minnesota, Minneapolis, Minnesota.

### Educational Background

2000-2002 Visiting Scholar, Biomedical Engineering, Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, Michigan.

2000-2002 Postdoctoral Fellow, Clinical Area, Department of Psychology, University of Minnesota, Minneapolis, Minnesota.

1999-2000 Postdoctoral Fellow, Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, Michigan. Mentor: William J. Williams, Ph.D.

1997-1999 Postdoctoral Fellowship, Psychiatry University of Michigan, Ann Arbor, MI. APA-Accredited (2000+ clinical hours, license eligible)

1997 Doctor of Philosophy, Clinical Psychology, University of Michigan, Ann Arbor, MI  
APA-Accredited Internship: University of Michigan Psychological Clinic

1993 Master of Arts, Clinical Psychology  
University of Michigan, Ann Arbor, MI

1989 Bachelor of Arts, *Cum Laude*  
University of Arizona, Tucson, AZ  
Major: Psychology, Minor: English

## **Professional Certifications, Licenses, and Memberships**

Society for Neuroscience (SFN)  
Society for Psychophysiological Research (SPR)  
International Organization of Psychophysiology (IOP)  
American Psychological Association (APA)  
Association for Psychological Science (APS)  
Cognitive Neuroscience Society (CNS)

## **RESEARCH, SCHOLARLY AND CREATIVE ACTIVITIES**

*Notes: First author = +mentored student, \*co-mentored student.*

### **Books Edited**

1. Gable, P., Miller, M., **Bernat, E.M.** (under contract, expected publication 2021). Oxford Handbook of EEG Frequency Analyses. Oxford University Press.

### **Book Chapters**

1. Patrick, C. J., and **Bernat, E. M.** (2010). Neuroscientific foundations of psychopathology. In: T. Millon, R. F. Krueger, and E. Simonsen (Eds.), Contemporary directions in psychopathology: Toward the DSM-V (pp. 419-452). New York: Guilford Press.
2. Patrick, C. J., and **Bernat, E. M.** (2009). Neurobiology of psychopathy: A two-process theory. In: G. G. Berntson and J. T. Cacioppo (Eds.), Handbook of neuroscience for the behavioral sciences (pp. 1110-1131). New York: John Wiley & Sons.
3. Patrick, C. J., and **Bernat, E. M.** (2009). From markers to mechanisms: Using psychophysiological measures to elucidate basic processes underlying aggressive externalizing behavior. In: S. Hodgins, E. Viding, and A. Plodowski (Eds.), Persistent violent offenders: Neuroscience and rehabilitation (pp. 223-250). London: Oxford University Press.
4. Patrick, C.J. and **Bernat, E.** (2006). The construct of emotion as a bridge between personality and psychopathology. In R.F. Krueger and J.Tackett (Eds.), Personality and psychopathology: Building bridges. New York: Guilford Press.
5. Beutler, E., Engle, D., Shoham-Salomon, V., David, C., Dean, J., and **Bernat, E.** (1991). Searching for differential treatments. In Beutler, Larry E. (Ed). Psychotherapy research: An international review of programmatic studies. Washington, DC, USA: American Psychological Association; 1991 (xiii, 334), 90-97.

### **Refereed Journal Articles**

1. **Bernat, E. M.**, Ellis, J. S., Bachman, M. D., & Hicks, B. M. (2020). P3 amplitude reductions are associated with shared variance between internalizing and externalizing psychopathology. *Psychophysiology*, e13618.
2. Bauer, B. W., Albanese, B. J., Macatee, R. J., Tucker, R. P., **Bernat, E.**, Schmidt, N. B., & Capron, D. W. (2020). Fearlessness About Death is Related to Diminished Late Positive Potential Responses When Viewing Threatening and Mutilation Images in Suicidal Ideators. *Cognitive Therapy and Research*, 1-15.

3. Albanese, B.J., Macatee, R.J., Stanley, I.H., Bauer, B.W., Capron, D.W., **Bernat, E.**, Joiner, T.E. and Schmidt, N.B. (2019). Differentiating suicide attempts and suicidal ideation using neural markers of emotion regulation. *Journal of affective disorders*, 257, 536-550.
4. Buzzell, G.A., Barker, T.V., Troller-Renfree, S.V., **Bernat, E.M.**, Bowers, M.E., Morales, S., Bowman, L.C., Henderson, H.A., Pine, D.S. and Fox, N.A. (2019). Adolescent cognitive control, theta oscillations, and social observation. *NeuroImage*, 198, 13-30. DOI information: 10.1016/j.neuroimage.2019.04.077
5. Chen-Sankey, J. C., Unger, J. B., Bansal-Travers, M., Niederdeppe, J., **Bernat, E.**, & Choi, K. (2019). E-cigarette Marketing Exposure and Subsequent *Experimentation Among Youth and Young Adults*. *Pediatrics*, 144(5).
6. Yoon, J. S., Harper, J., Boot, W. R., Gong, Y., & **Bernat, E. M.** (2019). Neural Evidence of Superior Memory: How to Capture Brain Activities of Encoding Processes Underlying Superior Memory. *Frontiers in human neuroscience*, 13, 310.
7. Lindgren, K. P., Hendershot, C. S., Ramirez, J. J., **Bernat, E.**, Rangel-Gomez, M., Peterson, K. P., & Murphy, J. G. (2019). A dual process perspective on advances in cognitive science and alcohol use disorder. *Clinical psychology review*, 69, 83-96.
8. Allan, N.P., Judah, M.R., Albanese, B.J., Macatee, R.J., Sutton, C.A., Bachman, M.D., **Bernat, E.M.** and Schmidt, N.B., (2019). Gender differences in the relation between the late positive potential in response to anxiety sensitivity images and self-reported anxiety sensitivity. *Emotion*, 19(1), 70.
9. Bowers, M. E., Buzzell, G. A., **Bernat, E. M.**, Fox, N. A., & Barker, T. V. (2018). Time-frequency approaches to investigating changes in feedback processing during childhood and adolescence. *Psychophysiology*, 55(10), e13208.
10. +Ellis, J. S., Watts, A. T., Schmidt, N., & **Bernat, E. M.** (2018). Anxiety and feedback processing in a gambling task: Contributions of time-frequency theta and delta. *Biological psychology*, 136, 1-12.
11. +Watts, A. T., Tootell, A. V., Fix, S. T., Aviyente, S., & **Bernat, E. M.** (2018). Utilizing time-frequency amplitude and phase synchrony measure to assess feedback processing in a gambling task. *International Journal of Psychophysiology*, 132, 203-212..
12. +Watts, A. T., & **Bernat, E. M.** (2018). Effects of reward context on feedback processing as indexed by time-frequency analysis. *Psychophysiology*, 55(9), e13195.
13. +Bachman, M. D., & **Bernat, E. M.** (2018). Independent contributions of theta and delta time-frequency activity to the visual oddball P3b. *International Journal of Psychophysiology*, 128, 70-80..
14. +Watts, A. T., Bachman, M. D., & **Bernat, E. M.** (2017). Expectancy effects in feedback processing are explained primarily by time-frequency delta not theta. *Biological psychology*, 129, 242-252.
15. Macatee, R. J., Albanese, B. J., Clancy, K., Allan, N. P., **Bernat, E. M.**, Cogle, J. R., & Schmidt, N. B. (2018). Distress intolerance modulation of neurophysiological markers of cognitive control during a complex go/no-go task. *Journal of Abnormal Psychology*, 127(1), 12-29.
16. Kang, S.S., MacDonald, A.W., Chafee, M.V., Im, C.H., **Bernat, E.M.**, Davenport, N.D., & Sponheim, S.R. (2018). Abnormal cortical neural synchrony during working memory in schizophrenia. *Clin. Neurophys*, 129(1), 210 - 221
17. Ozdemir, A., **Bernat, E. M.**, & Aviyente, S. (2017). Recursive Tensor Subspace Tracking for Dynamic Brain Network Analysis. *IEEE Transactions on Signal and Information Processing over Networks*, 3(4), 669 – 682.

18. Clancy, K., Ding, M., **Bernat, E.**, Schmidt, N.B., & Li, W. (2017). Restless 'rest': intrinsic sensory hyperactivity and disinhibition in post-traumatic stress disorder, *Brain*, Vol. 140, 7(1), 2041–2050
19. Mahyari, A. G., Zoltowski, D. M., **Bernat, E. M.**, & Aviyente, S. (2017). A Tensor Decomposition-Based Approach for Detecting Dynamic Network States From EEG. *IEEE Transactions on Biomedical Engineering*, 64(1), 225-237.
20. Aviyente, S., Tootell, A., & **Bernat, E. M.** (2017). Time-frequency phase-synchrony approaches with ERPs. *International Journal of Psychophysiology*, 111, 88-97.
21. \*Steele, V. R., Anderson, N.E., Claus, E.D., **Bernat, E. M.**, Rao, V., Assaf, M., Pearlson, G.D., Calhoun, V. D., Kiehl, K. A. (2016). Neuroimaging measures of error-processing: Extracting reliable signals from event-related potentials and functional magnetic resonance imaging. *NeuroImage*, 132, 247-260.
22. +Harper, J., Malone, S. M., Bachman, M. D., and **Bernat, E. M.** (2016). Stimulus sequence context differentially modulates inhibition-related theta and delta band activity in a go/no-go task. *Psychophysiology* 53(5):712-22. doi: 10.1111/psyp.12604.
23. \*Steele, V. R., Maurer, J. M., **Bernat, E. M.**, Calhoun, V. D., & Kiehl, K. A. (2016). Error-related processing in adult males with elevated psychopathic traits. *Personality Disorders: Theory, Research, and Treatment*, 7(1), 80.
24. Anderson, N. E., Steele, V. R., Maurer, J. M., **Bernat, E. M.**, & Kiehl, K. A. (2015). Psychopathy, attention, and oddball target detection: New insights from PCL-R facet scores. *Psychophysiology*, 52(9), 1194-1204.
25. Ozdemir, A., Bolanos, M., **Bernat, E.**, Aviyente, S. (2015). Hierarchical Spectral Consensus Clustering for Group Analysis of Functional Brain Networks. *IEEE Transactions on Biomedical Engineering*, (62)9, 2158-2169.
26. Maurer, J. M., Steele, V. R., Edwards, B. G., **Bernat, E. M.**, Calhoun, V. D., & Kiehl, K. A. (2015). Dysfunctional error-related processing in female psychopathy. *Social cognitive and affective neuroscience*, nsv070.
27. Moran, T. P., **Bernat, E. M.**, Aviyente, S., Schroder, H. S., & Moser, J. S. (2015). Sending mixed signals: Worry is associated with enhanced initial error processing but reduced call for subsequent cognitive control. *Social Cognitive and Affective Neuroscience*, nsv046.
28. **Bernat, E. M.**, Nelson, L. D., & Baskin-Sommers, A. R. (2015). Time-frequency theta and delta measures index separable components of feedback processing in a gambling task. *Psychophysiology*, 52(5), 626-637.
29. Barry, R. J., De Blasio, F. M., **Bernat, E. M.**, & Steiner, G. Z. (2015). Event-related EEG time-frequency PCA and the orienting reflex to auditory stimuli. *Psychophysiology*, 52(4), 555-561.
30. Foti, D., Weinberg, A., **Bernat, E. M.**, & Proudfit, G. H. (2015). Anterior cingulate activity to monetary loss and basal ganglia activity to monetary gain uniquely contribute to the feedback negativity. *Clin. Neurophys.*, 126(7), 1338-1347.
31. Burwell, S. J., Malone, S. M., **Bernat, E. M.**, & Iacono, W. G. (2014). Does electroencephalogram phase variability account for reduced P3 brain potential in externalizing disorders. *Clin. Neurophys.*, 125(10), 2007-2015.
32. Liu, Y., Nelson, L., **Bernat, E.**, and Gehring, W.J. (2014). Perceptual Properties of Feedback Stimuli Influence the Feedback-Related Negativity in the Flanker Gambling Task, *Psychophysiology*, 51(8), 782-788.

33. +Harper, J., Malone, S. M., **Bernat, E.M.** (2014). Theta and delta band activity explain N2 and P3 ERP component activity in a go/no-go task. *Clin. Neurophys.*, 125(1), 124-132.
34. Eisenbarth, H., Angrilli, A., Calogero, A., Harper, J., Olson, L. A., **Bernat, E. M.** (2013). Reduced negative affect response in female psychopaths. *Biological Psychology*, 94(2), 310-318.
35. \*Steele, V.R., **Bernat, E.M.**, van den Broek, P., Collins, P.F., Patrick, C.J., Marsolek, C.J. (2013). Separable Processes Before, During, and After the N400 Elicited by Previously Inferred and New Information: Evidence from Time-Frequency Decompositions. *Brain Research*, 1492, 92-107.
36. Bolanos, M., **Bernat, E.M.**, He, B., Aviyente, S. (2013). "A Weighted Small World Network Measure for Assessing Functional Connectivity". *Journal of Neuroscience Methods*, 212(1), 133-142.
37. Yoon, H. H., Malone, S. M., Burwell, S. J., **Bernat, E. M.**, & Iacono, W. G. (2013). Association between P3 event-related potential amplitude and externalizing disorders: A time-domain and time-frequency investigation of 29-year-old adults. *Psychophysiology*, 50(7), 595-609.
38. Mutlu, A. Y., **Bernat, E. M.**, Aviyente, S. (2012). A Signal Processing Based Approach to Time-Varying Graph Analysis for Dynamic Brain Network Identification. *Computational and Mathematical Methods in Medicine*, 2012.
39. **Bernat, E. M.**, Cadwallader, M., Seo, D., Vizueta, N., & Patrick, C. J. (2011). Effects of instructed emotion regulation on valence, arousal, and attentional indices of affective processing. *Devel. Neuropsychol.*, 36(4), 493-518.
40. \*Nelson, L. D., Patrick, C. J., Collins, P., Lang, A. R., & **Bernat, E. M.** (2011). Alcohol impairs brain reactivity to explicit loss feedback in a gambling task. *Psychopharmacology*, 218(2), 419-28.
41. Sponheim, S.R., McGuire, K., Kang, S.S., Davenport, N., Aviyente, S., **Bernat, E.**, Lim, K. (2011). Evidence of Disrupted Functional Connectivity in the Brain After Combat-Related Blast Injury. *Neuroimage*, 54(Suppl 1), S21-9.
42. \*Venables, N.C., Patrick, C.J., Hall, J.R., **Bernat, E.M.** (2011). Clarifying Relations Between Dispositional Aggression and Brain Potential Response: Overlapping and Distinct Contributions of Impulsivity and Stress Reactivity. *Biological Psychology*, 58(3), 279-88.
43. Aviyente, S., **Bernat, E.M.**, Evans, W.S., Sponheim, S.R. (2011). A phase synchrony measure for quantifying dynamic functional integration in the brain. *Human Brain Mapping*, 32(1), 80-93.
44. **Bernat, E. M.**, Nelson, L. D., Steele, V., Gehring, W.J., and Patrick, C. J. (2011). Externalizing Psychopathology and Gain/Loss Feedback in a Simulated Gambling Task: Dissociable Components of Brain Response Revealed by Time-Frequency Analysis. *Journal of Abnormal Psychology*, 120(2), 352-364.
45. \*Shannon, R. W., Patrick, C. J., Jiang, Y., **Bernat, E.**, & He, S. (2011). Genes contribute to the switching dynamics of bistable perception. *Journal of Vision*, 11(3):8, 1-7.
46. \*Vaidyanathan, U., **Bernat, E.M.**, Hall, J.R., Patrick, C.J. (2011). Clarifying the Role of Fear Deficits in Psychopathy and Antisocial Personality Using Startle Reflex Methodology. *Journal of Abnormal Psychology*, 120(1), 253-258.
47. \*Nelson, L. D., Patrick, C. J., and **Bernat, E. M.** (2011). Operationalizing proneness to externalizing psychopathology as a multivariate psychophysiological phenotype. *Psychophysiology*, 48(1), 64-72.

48. Marsolek, C. J., Deason, R. G., Ketz, N. A., Ramanathan, P., **Bernat, E. M.**, Steele, V. R., Patrick, C. J., Verfaellie, M., & Schnyer, D. M. (2010). Identifying objects impairs knowledge of other objects: A relearning explanation for the neural repetition effect. *NeuroImage*, *49*(2), 1919-1932. NeuroImage Editors' Choice Award Winner, 2010.
49. Gilmore, C S., Malone, S. M., **Bernat, E. M.**, and Iacono, W. G. (2010). Relationship between the P3 Event-Related Potential, Its Associated Time-Frequency Components, and Externalizing Psychopathology. *Psychophysiology*, *47*(1), 123–132.
50. Aviyente, S., **Bernat, E.M.**, Malone, S.M., Iacono, W.G. (2010). Time-Frequency Data Reduction for Event Related Potentials: Combining Principal Component Analysis and Matching Pursuit. *EURASIP Journal on Advances in Signal Processing*, Article ID 289571, 13 pages, DOI:10.1155/2010/289571.
51. \*Vaidyanathan, U., Patrick, C. J., and **Bernat, E. M.** (2009). Startle reflex potentiation during aversive picture viewing as an index of trait fear. *Psychophysiology*, *46*, 75-85.
52. Jiang, Y., Shannon, R. W., Vizueta, N., **Bernat, E. M.**, Patrick, C. J., and He, S. (2009). Dynamics of processing invisible faces in the brain: Automatic neural encoding of facial expression information. *Neuroimage*, *44*, 1171-1177.
53. \*Venables, N.C., **Bernat, E.M.**, and Sponheim, S.R. (2008). Genetic and Disorder-Specific Aspects of Resting State EEG Abnormalities in Schizophrenia. *Schizophrenia Bulletin*, *35*(4), 826-839, DOI: 10.1093/schbul/sbn021
54. Yoon, H.H., Iacono, W.G., Malone, S.M., **Bernat, E.M.**, and McGue, M. (2008). The effects of childhood disruptive disorder comorbidity on P3 event-related brain potentials in preadolescents with ADHD. *Biological Psychology*, *79*, 329-336.
55. Rakauskas, M.E., Ward, N.J., Boer, E., **Bernat, E.**, Cadwallader, M., Patrick, C. (2008). Car following performance during conventional distractions and alcohol intoxication. *Accident Analysis and Prevention*, *40*, 1742-49. DOI:10.1016/j.aap.2008.06.009
56. **Bernat, E.**, Hall, J., Steffen, B., and Patrick, C.J. (2007). Violent offending predicts P300 amplitude. *International Journal of Psychophysiology*, *66*, 161-167.
57. **Bernat, E.M.**, Malone, S.M., Williams, W.J., Patrick, C.J., and Iacono, W.G. (2007). Decomposing delta, theta, and alpha time-frequency ERP activity from a visual oddball task using PCA. *International Journal of Psychophysiology*, *64*(1), 62-74.
58. \*Hall, R.J., **Bernat, E.M.**, and Patrick, C.J. (2007). Externalizing psychopathology and the error-related negativity. *Psychological Science*, *18*(4), 326-33
59. \*Hicks, B.M., **Bernat, E.M.**, Malone, S.M., Iacono, W.G., Patrick, C.J., Krueger R.F., and McGue M. (2007). Genes mediate the association between P300 amplitude and externalizing disorders. *Psychophysiology*, *44*, 98-105.
60. Patrick, C.J., **Bernat E.**, Malone S.M., Iacono W.G., Krueger, R.F., and McGue, M. (2006). P300 amplitude as a marker of externalizing in adolescent males. *Psychophysiology*, *43*(1), 84-92.
61. **Bernat, E.**, Patrick, C.J., and Benning, S., and Tellegen, A. (2006). Thematic content and affective intensity: Modulation of startle reflex, electromyogram, heart rate, and skin conductance. *Psychophysiology*, *43*(1), 93-103.
62. **Bernat, E.**, Williams, W.J., and Gehring, W. (2005). Decomposing ERP time-frequency energy using PCA. *Clin. Neurophys.*, *116*, 1314-1334.
63. Snodgrass, J.M., **Bernat, E.**, and Shevrin, H. (2004). Unconscious perception at the objective detection threshold exists. *Perception and Psychophysics*, *66*(5), 888-895.

64. Snodgrass, J.M., **Bernat, E.**, and Shevrin, H. (2004). Unconscious perception: A model-based approach to method and evidence. *Perception and Psychophysics*, 66(5), 846-867.
65. Wong, P.S., **Bernat, E.M.**, Snodgrass, J.M., and Shevrin, H. (2004). Event-related brain correlates of associative learning without awareness. *International Journal of Psychophysiology*, 53(3), 217-231
66. **Bernat, E.**, Bunce, S.C., and Shevrin, H. (2001). Event-related brain potentials differentiate positive and negative mood adjectives during both supraliminal and subliminal visual processing. *International Journal of Psychophysiology*, 42, 11-34.
67. **Bernat, E.**, Shevrin, H., and Snodgrass, J.M. (2001). Subliminal visual oddball stimuli evoke a P300 component. *Clin. Neurophys.*, 112(1), 159-171.
68. Bunce, S.C., **Bernat, E.**, Wong, P.S., and Shevrin, H. (1999). Further evidence for unconscious learning: Preliminary support for the conditioning of facial EMG to subliminal stimuli. *Journal of Psychiatric Research*, 33, 341-347.
69. Wong, P.S., **Bernat, E.**, Bunce, S.C., and Shevrin, H. (1997). Brain indices of nonconscious associative learning. *Consciousness and Cognition*, 6, 519-544.

## Conferences, Workshops, and Talks

### *Refereed Conference Proceedings*

1. Ozdemir, A., Mahyari, A. G., **Bernat, E. M.**, & Aviyente, S. (2014, August). Multiple subject analysis of functional brain network communities through co-regularized spectral clustering *Proc. Engineering in Medicine and Biology (EMBC)*, 36th Annual International Conference of the IEEE (pp. 5992-5995).
2. Bolanos, M., **Bernat, E.**, Aviyente, S. (2011). Identifying Community Structure Among Multiple Subjects from EEG Recordings. *Proc. Engineering in Medicine and Biology (EMBC)*.
3. Zoltowski, D. M., **Bernat, E. M.**, & Aviyente, S. (2014, August). A graph theoretic approach to dynamic functional connectivity tracking and network state identification. *Proc. Engineering in Medicine and Biology (EMBC)*, 36th Annual International Conference of the IEEE (pp. 6004-6007).
4. Bolanos, M., Aviyente, S., **Bernat, E.**, (2010). Identifying functional clusters in the brain using phase synchrony. *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) 2010*, 5446-5449.
5. Bolanos, M., Aviyente, S., **Bernat, E.** (2010). Graph Analysis of Neuronal Interactions for the Error-Related Negativity. *Proc. Engineering in Medicine and Biology (EMBC)*.
6. Bolanos, M.E., **Bernat, E.M.**, Aviyente, S. (2009). Identification of small world topologies in neural functional connections quantified by phase synchrony measures. *Conf Proc IEEE Eng Med Biol Soc.*, 2009. 1:5308-11.
7. **Bernat, E.M.**, Nelson, L.D., Holroyd, C.B., Gehring, W.J., and Patrick, C.J. (2008). Separating cognitive processes with principal components analysis of EEG time-frequency distributions. *Proc. SPIE Vol. 7074*, 70740S.
8. Aviyente, S., Evans, W., **Bernat, E.** and Sponheim, S. (2007). A time-varying phase coherence measure for quantifying functional integration in the brain, Acoustics, Speech and Signal Processing, 2007. *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 4, 1169-1172.
9. Aviyente, S., **Bernat, E.M.**, Malone, S.M., and Iacono, W.G. (2006). Analysis of event related potentials using PCA and matching pursuit on the time-frequency plane, *Engineering in Medicine and Biology Society, 2006. EMBS '06. 28th Annual International Conference of the IEEE*, 2454-2457.

### *Invited Talks*

1. **Bernat, E.** (2018). A Neuroscience Informed Cue-Focused Meditation Intervention. Plenary Speaker, UMD Mind Body Research and Applications Conference, University of Maryland, April, 2018.
2. **Bernat, E.** (2009). P300 and Impulse Dysregulation: Biomarkers and Processes. Autumnschool: Research in Forensic Populations, Kloster Seeon, Germany, September, 2009.
3. **Bernat, E.** (2006). Evaluating Structural and Neural Properties of Time-Frequency Activity Extracted Using Principal Components Analysis. MEDYFINOL'06: XV Conference on Nonequilibrium Statistical Mechanics and Nonlinear Physics. Mar del Plata, Argentina, December, 2006.
4. **Bernat, E.** (2006). Brain Response Correlates of Externalizing. Carmel Conference: hosted by Emanuel Donchin, Tampa Bay, FL, January, 2006.
5. **Bernat, E.** (2005). Decomposing ERP Time-Frequency Energy Using PCA. Brain and Cognition Conference, Izmir, Turkey, May, 2005.

**Refereed Presentations**

1. **Bernat, E.**, Tootell, A., Massey, A., Fix, S., Ellis, J., Aviyente, S. (2018). Theta and Delta Dynamics Underlying ERPs in Performance and Feedback Tasks. Symposium talk at the annual meetings of the Society for Psychophysiological Research, Oct, 2018.
2. Buzzell, G.A., Barker, T.V., Troller-Renfree, S.V., Bowman, L.C., Beatty, P.J., Roberts, D.M., McDonald, C.G., **Bernat, E.M.**, Henderson, H.A., Pine, D.S., Fox, N.A.(2018). Complex relations between performance monitoring and subsequent control in kids and adults: Effects of confidence, social factors, and temperament. Symposium talk at the annual meetings of the Society for Psychophysiological Research, Oct, 2018.
3. **Bernat, E.M.** (2017). Emerging EEG/ERP methods: new potential for tobacco science. Symposium talk presented at the meetings of the Society for Research on Nicotine and Tobacco (SRNT), Florence, Italy.
4. +Seitz-Brown, C. J., Magidson, J. F., Hoffman, E. M., DeGeorge, D. P., **Bernat, E. M.**, Daughters, S. B., & Lejuez, C. W. (2016). Psychiatric Concerns Among Individuals Living With HIV/AIDS Entering Residential Substance Use Treatment. Paper presented at the 22nd Annual South African Psychology Congress, Johannesburg, South Africa.
5. **Bernat, E.M.** (2016). Smokeless Tobacco Products: Assessing Effects of Flavor and Nicotine. Presentation given at the UMD-Battelle Tobacco Center for Regulatory Science (TCORS) retreat. University of Maryland, College Park, Maryland.
6. \*Steele, V. R., **Bernat, E. M.**, van den Broek, P., Collins, P. F., Patrick, C. J., Marsolek, C. J. (2015). Reading what has been inferred: Electrophysiological evidence for dissociable processes. Symposium presentation at the Society for Text and Discourse Annual Meeting, Minneapolis, MN.
7. \*Steele, V.R., **Bernat, E.M.**, Calhoun, V.D., Kiehl, K.A. (2015). Neuroimaging Measures of Cognitive Control: Extracting Reliable Signals. Mini-symposium . *Journal of Cognitive Neuroscience*, 27(Suppl. 1), 27.
8. **Bernat, E.M.**, Aviyente, S. A., Moser, J., and Schmidt, N. B. (2015). Indexing Dynamic Functional Integration Using Bivariate Time-Frequency Phase-Synchrony with Even-Related Potential Data. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), 27
9. Aviyente, S., Zoltowski, D., Mahyaril, A., **Bernat, E.M.** (2015). A Tensor-Based Approach to Tracking Dynamics of Functional Connectivity in the Brain. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), 28.
10. **Bernat, E.** (2007). Slow-Wave Affective Responses to IAPS Pictures. Talk presented at the meetings of the NIMH, Center for the Study of Emotion and Attention (CSEA), April, Gainesville, FL.
11. **Bernat, E.** (2007). A Dissociation Between Tasks Generating The Error-Related Negativity (ERN) Suggests That Prefrontal Cortex Is Critical To Observed ACC Deficits In Impulse Control Problems. Talk presented at the 3<sup>rd</sup> meeting for the Society for the Scientific Study of Psychopathy (SSSP), April, St. Petersburg Beach, FL.
12. **Bernat, E.**, Patrick, C.J., Hall, J., Venables, N. (2005). Brain response correlates of externalizing: implications for Psychopathy. Symposia presentation, Society for the Scientific Study of Psychopathy (SSSP), Vancouver, B.C., July, 2005.
13. **Bernat, E.**, Bunce, S.C., Shevrin, H., Snodgrass, M., and Hibbard, S. (1997). Subliminal and supraliminal ERPs as markers of connotative meaning. Paper presentation in Symposium #7,

ERPs to subliminal stimuli: markers for unconscious processes. *Psychophysiology*, 34(Suppl. 1), S11.

14. Bunce, S.C., **Bernat, E.**, Shevrin, H., and Hibbard, S. (1997). P300 to subliminal stimuli: looks like a duck, acts like a duck. *Psychophysiology*, 34(Suppl. 1), S11.
15. **Bernat, E.** (1996). Time-frequency feature analysis and unconscious learning. Symposium talk presented at the 104th annual meeting of the American Psychological Association.

### *Colloquia*

1. **Bernat, E.** (2018). Time-frequency approaches to indexing separable brain activity and functional connectivity. National Institute on Drug Abuse (NIDA), Neuroimaging Research Branch, May, 2018.
2. **Bernat, E.** (2017). Emerging EEG/ERP Methods: Application to Substance Use. Colloquium, Center for Addiction, Personality, and Addiction Research. Department of Psychology, University of Maryland, March, 2017.
3. **Bernat, E.** (2016). Time-frequency approaches to indexing separable brain activity and functional connectivity. Colloquium, Department of Human Development, University of Maryland, December, 2016.
4. **Bernat, E.** (2016). Reward and Loss Processing: Relevance to Salience and Control Brain Systems. Colloquium, Motivated Cognition Laboratory, Department of Psychology, University of Maryland, March, 2016.
5. **Bernat, E.** (2016). Indexing Brain Activity and Functional Integration using Time-Frequency Approaches and Event-Related Potential Data. Colloquium, Department of Psychology, George Mason University, January, 2016.
6. **Bernat, E.** (2015). Salience and Control Brain Systems: Applications with clinical problems and cognitive-affective processing. Colloquium, Department of Human Development, University of Maryland, March, 2015.
7. **Bernat, E.** (2014). Assessing Salience and Control Brain Systems. Colloquium, Summer Diversity Conference, University of Maryland, August, 2014.
8. **Bernat, E.** (2012). Indexing Separable Brain Processes using Time-Frequency: Developmental, Cognitive, and Psychopathology Applications. Colloquium, Mind Research Center, University of New Mexico, August, 2012.
9. **Bernat, E.** (2011). Time-frequency Energy and Phase-Synchrony Approaches: Application to Event-Related Potentials. Colloquium, Department of Engineering, University of Minnesota, August, 2011.
10. **Bernat, E.** (2011). Using Time-frequency Energy and Phase-Synchrony Analysis to Index Separable Brain Processes. Colloquium, Electrical Geodesics Inc., April, 2011.
11. **Bernat, E.** (2010). Time-frequency approaches to disentangling brain processes associated with cognition, emotion, and impulse dysregulation psychopathology. Colloquium, Department of Biomath, Florida State University, Dec, 2010.
12. **Bernat, E.** (2008). Impulse Control Problems: EEG/ERP Approaches to Investigating Processes and Neural Sources. Colloquium, Department of Psychology, University of Arizona, November, 2008.
13. **Bernat, E.** (2004). Time-Frequency Energy Approaches: Comparing the RID and Wavelets. Colloquium, Brain Sciences Center, Minneapolis VA, December, 2004.

14. **Bernat, E.** (2002). *Fast Emotional Processing: Assessing the Role of Awareness*. Brown Bag, Department of Psychology, University of Minnesota, March, 2002.

### *Refereed Posters*

1. +Arenson, M., Risco, C., Lejuez, C., **Bernat, E.** (August, 2020). Patterns of Substance Dependence: An Examination of Use Within a Residential Treatment Facility. American Psychological Association Annual Convention, Washington, D.C.
2. +Weiner, S., Tefsa, N., Reyda, L., Arenson, M., **Bernat, E.** (May, 2020) PTSD and Substance Use Patterns: A Latent Class Analysis. Association for Psychological Science Annual Convention, Chicago, IL. Conference Cancelled.
3. +Sathe, K., Theunissen, S., Weiner, S., Adetayo, T., Schmidt, B., Arenson, M. **Bernat, E.** (May, 2020). Anxiety Sensitivity and Substance Use Patterns: A SCID-IV Latent Class Analysis. Association for Psychological Science Annual Convention, Chicago, IL. Conference Cancelled.
4. Risco, C., Butler, D., Fix, S., Reece, T., Pease, M., Birgin, A., Quiroga, K., Reardon, N., Leininger, A., Davis, K., & **Bernat, E.** (May, 2020). Development and validation of a novel cue-based paradigm for examining cognitive-affective reactivity to racial stigma. Association for Psychological Science Annual Convention, Chicago, IL. Conference Cancelled.
5. +Hacker, K. J., Fix, S.T., **Bernat, E. M.**, Garland, E., (2020). Development and validation of an eyes open one-session cue-focused meditation intervention task. Association for Psychological Science Annual Convention, Chicago, IL. Conference Cancelled.
6. Goldstein, R.E.R.; Gerdes, M.; Fix, S.T.; Vivino, A.A.; **Bernat, E.M.** (2019). Moving Beyond the ‘Yuck Factor:’ Measuring brain responses to water reuse terms and determining if natural environmental images change responses. Poster presented at the Brain and Behavior Initiative Seed Grant Symposium, University of Maryland, College Park.
7. Hu, M.; Simon, M.; Fix, S.T.; Vivino, A.A.; **Bernat, E.M.** (2019). Nexus between sustainable buildings and human health: A neuroscience approach. Poster presented at the Brain and Behavior Initiative Seed Grant Symposium, University of Maryland, College Park.
8. +Ajith, A., Patel, S., Arenson, M., Fix, S., **Bernat, E.** (2019, September). HRV During an Emotion Regulation Task Provides Unique Measures of ANS Activity, Relative to Resting HRV. Society for Psychophysiological Research Annual Meeting, Washington, D.C.
9. Chen-Sankey, J., Unger, J. B., Bansal-Travers, M., Niederdeppe, J., **Bernat, E.**, & Choi, K. (2019, November). Exposure to E-cigarette Marketing and Subsequent E-cigarette Use: A One-year Longitudinal Study among Youth and Young Adults. In APHA's 2019 Annual Meeting and Expo (Nov. 2-Nov. 6). American Public Health Association.
10. Bowers, M., Buzzell, G., Morales, S., Trooller-Renfree, S., **Bernat, E.**, Pine, D., & Fox N. (2019). Time-Frequency Approach to Studying Cognitive Control in Children: the Role of Theta and Delta Oscillations. Poster presented at the biennial meetings of the Society of Research in Child Development, March 21-23, Baltimore, Maryland, USA.
11. +Taylor, M.L.; Ajith, A.U.; Vivino, A.A.; Fix, S.T.; Bernat, D.H.; **Bernat, E.M.** (2018). “Time-frequency theta and heart rate variability modulated by e-cigarette withdrawal and satiation.” Poster presented at the international annual meeting of the Society for Psychophysiological Research, Quebec City, CAN.
12. Buzzell, G., Troller-Renfree, S., Barker, T., Bowers, M., Bowman, L., **Bernat, E.**, Pine, D., Henderson, H., Fox, N. (2018). Complex Dynamics of the Error-Monitoring System Reveal Insights Into Social Anxiety Within Structured and Unstructured Social Settings. *Biological Psychiatry* 83(9), Supplement, S243.
13. **Bernat, E.**, Fix, S., Andrews, M., Choi, K., and Bernat, D. (2018). Increases in attention and executive function associated with e-cigarette use. Poster presented at the meetings of the Society for Research on Nicotine and Tobacco (SRNT), Baltimore, MD.

14. +Massey, A., Askari, H.M., Novitskaya, M., Jalali, N., Aviyente, S., **Bernat, E.M.**, and Anokhin, A. (2017). Changes in response inhibition in adolescent development as indexed by time-frequency amplitude and functional connectivity EEG measures. Program No. 806.06, poster presented at the annual meetings of the Society for Neuroscience, Washington, DC.
15. +Rangel-Gomez, M., Ellis, J.S., Meeter, M., and **Bernat, E.M.** (2017). Norepinephrine modulates the attentional allocation in response to novelty: An electrophysiological and pharmacological study. Program No. 806.02, poster presented at the annual meetings of the Society for Neuroscience, Washington, DC.
16. +Vivino, A., Ellis, J.S., Massey, A., Schmidt, N., **Bernat, E.** (2017). Time-Frequency Delta explains anxiety-based modulation of the feedback negativity component in a gambling task. Program No. 806.03, poster presented at the annual meetings of the Society for Neuroscience, Washington, DC.
17. +Ellis, J.S., Gomez, M.R., Schmidt, N.B., **Bernat, E.M.** (2017). Time frequency delta underlying the N2 ERP component in a go/no-go task explains the differential modulation for internalizing and externalizing behaviors. Program No. 806.04, poster presented at the annual meetings of the Society for Neuroscience, Washington, DC.
18. +Tootell, A., Massey, A., Fix, S., Aviyente, S., **Bernat, E.** (2017). Theta and delta dynamics underlying ERPs in a gambling task: An assessment of FN and reward positivity. Program No. 806.05, poster presented at the annual meetings of the Society for Neuroscience, Washington, DC.
19. +Rangel-Gomez, M., Tootell, A.V., Bernat, D.H. and **Bernat, E.M.** (2017). Electrophysiological Correlates of the Cognitive Effects Associated with E-Cigarette Withdrawal. Poster presented at the meetings of the Society for Research on Nicotine and Tobacco (SRNT), Florence, Italy.
20. Bowers, M.E., Buzzell, G.A., Barker, T.V., **Bernat, E.M.**, & Fox, N.A. (2017). The Development of Feedback Processing in Adolescence: An Electrophysiological Study. Poster presented at the annual meeting of the International Society for Developmental Psychobiology, Washington, DC.
21. Clancy, K., Ding, M., **Bernat, E.**, Schmidt, N.B., Li, W. (2016), Restlessness in PTSD: Aberrant Resting-State alpha and Gamma Oscillation and Top-Down Causal Connectivity. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), E18.
22. +Fernandes, M.A., Ellis, J.S., Aviyente, S., Calhoun, V.D., **Bernat, E.M.** (2016) Resting EEG Dynamics: Amplitude and Functional Connectivity Changes Over Time. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F140.
23. +Duraismami, D.J., Ellis, J.S., Bachman, M., McTeague, L.M., Schmidt, B., **Bernat, E.M.** (2016, May) Affective Startle Modulation Following a Cognitive Training Intervention For Mood and Anxiety Disorders. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), E126.
24. +Ellis, J.S., Bachman, M.D., **Bernat, E.M.** (2016). P300 amplitude reduction as a neurobiological component for the general P factor of psychopathology: A preliminary finding. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F138.
25. +Wang, L., Tootell, A., Stern, E., and **Bernat, E.** (2016). Relationship between heart rate variability and time-frequency theta and delta measures during an inhibition task. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F139.
26. +Tootell, A., Steele, V., Aviyente, S., Calhoun, V., and **Bernat, E.** (2016). Decreased salience and control activity during inhibitory processing in cocaine users indexed using EEG time-frequency measures. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F136.
27. +Gradone, A.M., Tootell, A., Bachman, M., Aviyente, S., and **Bernat, E.M.** (2016). ERP measures of activity and functional connectivity index performance on a go/no-go task. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F141.

28. +Massey, A.T., Fernandes, M.A., & **Bernat, E.M.** (2016). Reward positivity: Effects of gain, even, and loss contexts on EEG time-frequency delta. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F137.
29. +Semick, S. A., Bachman, M. D., & **Bernat, E.M.** (2016). Decomposing ERPs from 3 Hz Affective Picture Presentations. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), E127.
30. +Chandrasekar A, Bachman M, Gakavian N, Tootell A, Massey A, Ellis J, Bernat D, and **Bernat E.M.** (2016). An EEG study of e-cigarette related addiction and affective processes. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F33.
31. +Bachman, M.D., & **Bernat, E.M.** (2016). Independent Contributions of Theta and Delta Time-Frequency Activity to the Visual Oddball P300. *Journal of Cognitive Neuroscience*, 28(Suppl. 1), F135.
32. Allan, N., Massey, A., Albanese, B.J., Sutton, C.A., Bachman, M., Schmidt, N.B., and **Bernat, E.M.** (2015) Relations Between Anxiety Sensitivity and Event-Related Potentials From a Gambling Feedback Task. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), B30.
33. +Bachman, M., Lin, A., Kothur, S., Eckrich, S., **Bernat, E.M.** (2015). Sequential Gains and Losses During Gambling Feedback: Differential Effects In Time-Frequency Theta and Delta Measures. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), G35.
34. +Ellis, J.S., Bachman, M., Tootell, A.V., Massey, A.T., **Bernat, E.M.** (2015). Impulse Dysregulation and P300 Amplitude Reductions (P3AR) From a 3-Category Visual Oddball Task: Differential Sensitivity of Theta and Delta Time-Frequency Measures. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), G44.
35. +Massey, A., Bachman, A., Tootell, A.V., Ellis, J., Kothur, S., Eckrich, S., **Bernat, E.M.** (2015). Expectancy Effects in Feedback Processing Are Explained Primarily by Time-Frequency Delta Not Theta. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), G45.
36. +Tootell, A.V., Massey, A.T., Bachman, M.D., Ellis, J.S., Aviyente, S., **Bernat, E.M.** (2015). EEG Time-Frequency Dynamic Functional Connectivity With Medial-Frontal Regions: Indexing Executive Function and Motor Control During a Go/No-Go Task. *Journal of Cognitive Neuroscience*, 27(Suppl. 1), G105.
37. Aviyente, S., Zoltowski, D., Mahyari, A., **Bernat, E. M.** (2014). A tensor-based approach to tracking dynamics of functional connectivity in the brain. IEEE Brain Grand Challenges Workshop, 2014, August, Washington D.C.
38. +Olson, L., Byrnes, L., Diaz, J., Beyko, A., Mulligan, E., **Bernat, E.**, & Joiner, T. (2013). The influence of Dialectical Behavior Therapy skill use on emotional experience and risky behaviors. Poster presented at the 47th annual meetings of the Association for Behavioral and Cognitive Therapies, Nashville, TN
39. +Olson, L.A., **Bernat, E.M.**, Cole, A., & Anokhin, A. (2012). Genetic influences on neural correlates of emotional processing: Affective picture-related ERP's in female twins. *Psychophysiology*, 49(Suppl.1), S50.
40. +Olson, L.A., **Bernat, E.M.**, Cole, A., & Anokhin, A. (2012). Genetic influences on neural correlates of emotional processing: Affective picture-related ERP's in female twins. *International Journal of Psychophysiology*, 85(3), 401.
41. Burwell, S.J., Malone, S.M., **Bernat, E.M.**, & Iacono, W.G. (2012). Electrophysiological decomposition of motor response execution using cortical current density source modeling. *Psychophysiology*, 49(Suppl. 1), S87.
42. Klaphake, J.A., Viadyanathan, U., Malone, S.M., **Bernat, E.M.**, & Iacono, W.G. (2012). ERN amplitude associations with lifetime substance use and antisocial behavior. *Psychophysiology*, 49(Suppl. 1), S86.

43. Yoon, J.S., Harper, J., Boot, W.R., Ericsson, K.A., **Bernat, E.M.** (2012) Development of expert digit-span performance using deliberate practice: electrocortical indices of encoding digits into long-term working memory. *Psychophysiology*, 49(Suppl.1), S51.
44. +Harper, J., Aviyente, S., Malone, S.M., **Bernat, E.M.** (2012). Functional integration between medial and lateral prefrontal cortex (MPFC-LPFC) during action monitoring and response inhibition: a time-frequency power and phase-synchrony analysis of theta activity. *Psychophysiology*, 49(Suppl.1), S51.
45. Eisenbarth, H., Harper, J., Olson, L.A., Calogero, A., Angrilli, A., **Bernat, E.M.** (2012). Event-related potentials during perception of emotional facial expressions in psychopathic female inpatients. *Psychophysiology*, 49(Suppl.1), S52.
46. +Klein, K.M., Harper, J., **Bernat, E.M.**, Anokhin, A.P. (2012). Development of response inhibition in early adolescence: a longitudinal study of time-frequency theta and delta components. *Psychophysiology*, 49(Suppl.1), S51.
47. +Harper, J., Malone, S.M., **Bernat, E.M.** (2012). Behavioral disinhibition is related to n2/theta activity in a go/no-go task: a time-frequency analysis. *Psychophysiology*, 49(Suppl.1), S51.
48. +Harper, J., Aviyente, S., Malone, S.M., **Bernat, E.M.** (2012). Functional integration between medial and lateral prefrontal cortex (mPFC-lPFC) during action monitoring and response inhibition: a time-frequency power and phase-synchrony analysis of theta activity. *International Journal of Psychophysiology*, 85, 343.
49. +Klein, K., Harper, J., **Bernat, E.M.**, Anokhin, A.P. (2012). Development of response inhibition in early adolescence: A longitudinal study of time-frequency theta and delta components. *International Journal of Psychophysiology*, 85, 343.
50. **Bernat, E.**, Nelson, L., Baskin-Sommers, A. (2012), Time-frequency theta and delta measures index separable components of feedback processing. *International Journal of Psychophysiology*, 85, 291.
51. +Harper, J., Olson, L.A.,\* Bache, K., Kiehl, K., & **Bernat, E.M.** (2011). P3 is negatively related to PCL-R Factor 1 and Factor 2 shared variance. Poster Presentation. Society of the Scientific Study of Psychopathy, Montreal, Canada.
52. +Harper, J., Olson, L., Kothur, S., Burwell., S., Aviyente, S., Malone, S.M., **Bernat, E.M.** (2011). Assessing inhibition-related functional networks in a Go/Nogo task using time-frequency phase-synchrony. *Psychophysiology*, 48(Suppl.1), S98.
53. +Harper, J., Olson, L., Nelson, L. D., **Bernat, E.M.** (2011). Delta-band reward processing occurring during the feedback-related negativity (FRN). *Psychophysiology*, 48(Suppl. 1), S49.
54. +Olson, L. A., Harper, J., Golosheykin, S., **Bernat, E. M.**, & Anokhin A.P. (2011). Development of the feedback-related negativity in early adolescence: a longitudinal study of time-frequency theta and delta components. *Psychophysiology*, 48(Suppl. 1), S50.
55. +Kothur, S., Harper, J., Olson, L., **Bernat, E.** (2011). Separable theta and delta processes underlying the time-domain P3: a multi-task evaluation. *Psychophysiology*, 48(Suppl 1), S99.
56. \*Hall, J.R., **Bernat, E.M.**, Schrager, B.M., Venables, N.C., Kimonis, E.R., Poythress, N.G., Patrick, C.J. (2011). Facets of Psychopathy and ERP Response to Affective Pictures: Specific Versus Generalized Deficits. *Psychophysiology*, 48(Suppl, 1), S22
57. \*Howard, A.L., Hall, J.R., **Bernat, E.M.**, Venables, N.C., Kimonis, E.R., Poythress, N.G., Patrick, C.J. (2011). Trait Fearlessness and Disinhibition in a Simulated Gambling Task: Separating Distinct Processes Using Time-Frequency ERP Analyses. *Psychophysiology*, 48(Suppl, 1), S34

58. Foti, D., **Bernat, E.M.**, Hajcak, G. (2011). Bridging the Feedback Negativity and the Reward Positivity: Evidence from Time-Frequency Decomposition and Source Localization. *Psychophysiology*, 48(Suppl, 1), S48
59. Vidovic, D., **Bernat, E.M.**, Malone, S.M., Iacono, W.G. (2011). Mismatch Negativity and Substance Use Disorders: A Time-Frequency Analysis. *Psychophysiology*, 48(Suppl, 1), S106
60. Welo, E.J., Burwell., S.J., **Bernat, E.M.**, Hammer, M.A., Malone, S.M., Iacono, W.G. (2011). Substance Abuse and Time-Frequency ERP Reductions for Target and Novel Stimuli. *Psychophysiology*, 48(Suppl, 1), S105
61. Burwell, S.J., **Bernat, E.M.**, Aviyente, S., Iacono, W.G., Malone, S.M. (2011). Theta-Band Phase Synchrony and Response Inhibition. *Psychophysiology*, 48(Suppl, 1), S107.
62. Moser, J.S., Moran, T.P., Aviyente, S., **Bernat, E.**, and Jendrusina, A. (2011). Unraveling relationships between action monitoring brain activity and dimensions of anxiety and depression. *Psychophysiology*, 48(Suppl. 1), S15.
63. \*Nelson, L. D., Descallar, E. A., Harper, J. B., Patrick, C. J., Aviyente, S., **Bernat, E. M.** (2010). Role of intertrial phase synchrony in predicting P300 amplitude and externalizing proneness. *Psychophysiology*, 47(Suppl 1), S53.
64. \*Shannon, R. W., Patrick, C. J., **Bernat, E. M.**, & He, S. (2010). Dispositional fear and electrocortical reactivity to suppressed fear images. Presented at the 7th Annual International Conference on Cognitive Science, Beijing, China.
65. Burwell, S. J., Malone, S. M., **Bernat, E. M.**, Aviyente, S., Hammer, M. A., McLaughlin, I. B., Vidovic, D., Yoon, H. H., & Iacono, W. G. (2010). Reduced intertrial EEG phase synchrony and substance abuse. *Psychophysiology*, 47(Suppl 1), S40.
66. McLaughlin, I. B., **Bernat, E. M.**, Vidovic, D., Burwell, S. J., Hammer, M. A., Bedford, D. W., Klaphake, J. A., Gilmore, C. S., Iacono, W. G., & Malone, S. M. (2010). ERP and personality correlates of executive control: Time-frequency decomposition of the Go/No-go ERP task in adolescent subjects. *Psychophysiology*, 47(Suppl 1), S40.
67. Vidovic, D. **Bernat, E. M.**, Burwell, S. J., Hammer, M. A., McLaughlin, I. B., Bedford, D. W., Klaphake, J. A., Gilmore, C. S., Iacono, W. G., & Malone, S. M. (2010). Decomposing the mismatch negativity using time-frequency analysis. *Psychophysiology*, 47(Suppl 1), S40.
68. \*Vaidyanathan, U., **Bernat, E.M.**, Harper, J., Yancey, J., Hall, J.R., & Patrick, C.J. (2010). Clarifying the role of fear deficits in psychopathy and antisocial personality using startle reflex methodology. *Psychophysiology*, 47(Suppl 1), S28.
69. +Olson, L.A.,\* Block, J., Greenstein, J., Patrick, C. J., Aviyente, S., & **Bernat, E. M.** (October 2010). Affective late positive potential (LPP) is consistent across passive and incidental picture viewing: A time-frequency approach. *Psychophysiology*, 47(Suppl 1), S55.
70. +Drislane, L.E., Vaidyanathan, U., **Bernat, E.M.**, Patrick, C.J. (2010). Differing Responses to Startle Probe Stimuli Account for Unique Variance In Psychopathy Factor 1 *Psychophysiology*, 45(Suppl. 1), S53.
71. \*Lucy, M. D., Patrick, S. K., **Bernat, E. M.**, & Patrick, C. J. (2010). Heritability of LPP in a picture-viewing paradigm within a community twin sample. *Psychophysiology*, 47(Suppl 1), S53.
72. \*Venables, N. C., Patrick, C. J., Hohman, K., Tennenbaum, R., & **Bernat, E. M.** (2010). Coherence among variants of P3 from differing tasks as indicators of the antisocial deviance factor of criminal psychopathy. *Psychophysiology*, 47(Suppl 1), S53-54.

73. \*Vaidyanathan, U., **Bernat, E.M.**, Hall, J.R., Cermak, J., and Patrick, C.J. (2009). Indexing the core emotional deficit in psychopathy using the startle blink reflex. Poster presented at the 23rd meeting of the Society for Research in Psychopathology, Minneapolis, MN.
74. \*Vaidyanathan, U., Patrick, C.J., and **Bernat, E.M.** (2009). Startle modulation in internalizing disorders and psychopathy: Trait Fear as a bridging construct. In S. Lissek (Chair), *Toward a Unified Account of Fear-potentiated Startle Findings in the Anxiety Disorders and Affiliated Traits*. Annual meeting of the Society for Psychophysiological Research, Berlin, Germany.
75. \*Venables, N.C., Jobelius, J.L., Nelson, L., **Bernat, E.M.**, and Patrick, C.J. (2009). Reduced P300 Amplitude in Criminal Psychopathy is Related to Externalizing Tendencies: Evidence from a Simulated Gambling Task. *Psychophysiology*, 46, s110.
76. \*Shannon, R.W., Venables, N.C., Jobelius, J.L., **Bernat, E.M.**, He, S., and Patrick, C.J. (2009). Psychopaths show deficits in subconscious processing of fear faces. *Psychophysiology*, 46(Suppl. 1), s110-111.
77. \*Nelson, L. D., **Bernat, E. M.**, Lang, A. R., and Patrick, C. J. (2009). Alcohol placebo selectively increases the feedback-related negativity in a gambling task. *Psychophysiology*, 46(Suppl. 1), S97.
78. \*Nelson, L. D., Patrick, C. J., and **Bernat, E. M.** (2009). Indexing externalizing psychopathology as a multivariate physiological phenotype. *Psychophysiology*, 46(Suppl. 1), S97.
79. \*Olson, L. A., Nelson, L. D., **Bernat, E. M.**, & Patrick, C. J. (2009). Indexing cognitive control processes in a Stroop task using time-frequency decomposition of event-related potentials. *Psychophysiology*, 46(Suppl. 1), S107.
80. \*Vaidyanathan, U., **Bernat, E.M.**, Hall, J.R., and Patrick, C.J. (2009). Startle blinks in psychopathy are uniquely associated with interpersonal-affective traits. *Psychophysiology*, 46(Suppl. 1), S110.
81. \*Steele, V. R., **Bernat E. M.**, Schoeppner, W. L., and Patrick, C. J. (2009). Using time-frequency analysis to disentangle processes in a cued Go/NoGo task. Presented at the Society for Psychophysiological Research Annual Meeting, Berlin, Germany. *Psychophysiology*, 46(Suppl. 1).
82. \*Vaidyanathan, U., **Bernat, E.M.**, and Patrick, C.J.. (2008). Trait Fear predicts brain response differences in auditory startle probe processing. *Psychophysiology*, 45(Suppl. 1), S79.
83. \*Ameri, S. S., Vaidyanathan, U., **Bernat, E.M.**, and Patrick, C.J.. (2008). Sex differences in electroencephalography (EEG), electromyography (EMG), and skin conductance reactivity to pleasant and unpleasant startle responding. *Psychophysiology*, 45(Suppl. 1), S112.
84. \*Scott, S., Vaidyanathan, U., **Bernat, E.M.**, and Patrick, C.J.. (2008). Affective increases in the late positive potential (LPP) are evident during continuous and fast (3 Hz) picture presentations. *Psychophysiology*, 45(Suppl. 1), S93.
85. \*Venables, N. C., Reich, E., **Bernat, E. M.**, Hall, J. R., and Patrick, C. J. (2008). Reduced P300 amplitude in criminal psychopathy is related to externalizing tendencies. *Psychophysiology*, 45(Suppl. 1), s46.
86. \*Venables, N. C., **Bernat, E. M.**, Aviyente, S., and Patrick, C. J. (2008). Reduced error-related phase synchrony in externalizing. *Psychophysiology*, 45(Suppl. 1), s44.
87. \*Kang, S. S., Venables, N. C., **Bernat, E. M.**, Aviyente, S., and Sponheim, S. R. (2008). Neural phase synchrony during resting state in schizophrenia patients and their unaffected biological relatives. *Psychophysiology*, 45(Suppl. 1), s52.

88. \*Vaidyanathan, U., **Bernat, E.M.**, Aviyente, S., and Patrick, C.J.. (2008). Source localization of time and time-frequency measures of the ERN. *Psychophysiology*, 45(Suppl. 1), S37.
89. \*Steele, V. R., Deason, R. G., **Bernat, E. M.**, Patrick, C. J., Schnyer, D. M., and Marsolek, C. J. (2008, Oct). Early and late effects in event-related potentials differentiate visual object priming and antipriming. *Psychophysiology*, 45(Suppl.1), 23.
90. \*Vizueta, N., Jiang, Y., Shannon, R.W., **Bernat, E.M.**, Patrick, C.J., and He, S. (2007). Processing invisible faces: brain response differentiation between fearful and neutral expressions in an interocular suppression paradigm. *Psychophysiology*, 44(Suppl. 1), S26.
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93. \*Vizueta, N., **Bernat, E.**, Scott, S.A., Cheng, C.K., Cadwallader, M.L., Vaidyanathan, U., Dicks, B.A., Christensen, J.C., and Patrick, C.J. (2007). Individual differences in trait fear and fearlessness predict enhanced automatic affective processing. *Neuroimage*, 36:1 (Suppl.), S130.
94. Malone, S.M., **Bernat, E.M.**, and Iacono, W.G. (2007). Developmental change in event-related time-frequency components. *Psychophysiology*, 44(Suppl. 1). S101.
95. \*Hall, J.R., **Bernat, E.M.**, Venables, N., Cadwallader, M., and Patrick, C.J. (2007). Psychopathy, trait fear, and affective modulation of the startle blink reflex. *Psychophysiology*, 44(Suppl. 1), S25.
96. \*Nelson, L.D., **Bernat, E.M.**, and Patrick, C.J. (2007). Performance Monitoring, the P300, and externalizing: what relationships among ERP measures tell us about the neural substrates of impulse control problems. *Psychophysiology*, 44(Suppl. 1), S77.
97. \*Sadeh, N., Verona, E., **Bernat, E.M.**, and Patrick, C., J. (2007). Alpha-asymmetry and differential approach processes in psychopathic prison inmates. *Psychophysiology*, 44(Suppl. 1), S50.
98. **Bernat, E.M.**, and Patrick, C.J. (2007). Improved source localization of error-related negativities (ERNs) using principal components analysis (PCA) of time-frequency activity. *Neuroimage*, 36:1 (Suppl.), S124.
99. \*Deason, R.G., Steele, V.R., **Bernat, E.**, Patrick, C.J., and Marsolek, C.J. (2007). Indexing early visual object priming with event-related potentials: A time-frequency analysis. *Neuroimage*, 36:1 (Suppl.), S84.
100. \*Steele, V. R., **Bernat, E. M.**, Collins, P. F., van den Broek, P., Patrick, C. J., & Marsolek, C. J. (2007, November). Separable electrophysiological effects underlie N400s elicited by new versus inferred information during comprehension. Presented at the Psychonomic Society Annual Meeting, Long Beach, CA, 12, 51
101. \*Seo D., **Bernat E.M.**, Stanwick J.J., and Sponheim S.R. (2007, May) Neural Correlates of Verbal Recall Deficits in Schizophrenia Patients and their Unaffected Biological relatives. *Journal of Cognitive Neuroscience*, 19(Suppl. 1).
102. \*Seo D., **Bernat E.M.**, and Patrick C.J. (2007) Differential Emotion Regulatory Patterns in the Interpersonal Dimensions of Affiliation and Dominance, Poster presented at Association for Psychological Science, Washington, D.C.
103. \*Lindsay D. Nelson, L.D., Bernat, E.M., Holroyd, C.B., Gehring, W.G., Patrick, C.J. (2007).

- Relative Influence of Loss and Error on the Feedback-Related Negativity in a Gambling Task. Poster presented at the 20th annual meetings of the American Psychological Society, Chicago, IL.
104. \*Steele, V. R., **Bernat, E. M.**, Collins, P. F., van den Broek, P., Patrick, C.J., and Marsolek, C. J.(2007, March). Conflict and resolution in semantic processing comprehension: An ERP time-frequency analysis. Presented at Brain Mechanism and Cognitive Processes in the Comprehension of Discourse workshop, Lorentz Center, Lieden, The Netherlands.
  105. \*Vaidyanathan, U., **Bernat, E.**, Hall, J., Steffen, B., and Patrick, C.J.. (2006). Temperament traits predict affective cortical reactivity in incarcerated participants. *Psychophysiology*, 43(Suppl. 1), S99.
  106. \*Cadwallader, M., **Bernat, E.**, Patrick, C.J. (2006). Cortical slow wave reactivity during explicit and incidental affective processing *Journal of Cognitive Neuroscience*, 18(Suppl. 1).
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  113. \*Vaidyanathan, U., **Bernat, E.**, Hall, J., Steffen, B., Patrick, C.J. (2005). Psychopathy and brain response to noxious noise probes. *Psychophysiology*, 42(Suppl 1).
  114. \*Venables, N. C., **Bernat, E. M.**, Hall, J. R., Steffen, B. V., Cadwallader, M., Krueger, R. F., and Patrick, C. J. (2005). Neurophysiological correlates of behavioral disinhibition: Separable contributions of distinct personality traits. *Psychophysiology*, 42(Suppl. 1), S126.
  115. \*Steele, V.R., Marsolek, C, J., **Bernat, E.M.**, Collins, P.F., Lando, E.A.H., Venables, N.C., van den Broek, P., Lang, A.R., and Patrick, C.J. (2005). Does alcohol intoxication affect comprehension? An event-related potential investigation. *Journal of Cognitive Neuroscience*, 17(Suppl. 1), 171.
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135. \*Starr, M.J., **Bernat, E.**, Benning, S.D., Steffen, B.V., Patrick, C.J., and Gewirtz, J.C. (2003). Facilitory effects of awareness on differential delay fear conditioning. *Psychophysiology*, 40(Suppl. 1), S83.

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137. Broom, I., Forth, A., and **Bernat, E.** (2003). Psychopathic traits, anxiety, and emotionally primed startle-blink in a university student sample. Poster presented at the Developmental and Neuroscience Perspectives on Psychopathy conference. University of Wisconsin. Madison, WI.
138. **Bernat, E.**, Patrick, C.J., Benning, S., Blonigen, D., and Hicks, B. (2002). Parsing effects of affective stimulus content on startle reflex modulation in men. *Psychophysiology*, 39(Suppl. 1), S21.
139. **Bernat, E.**, Patrick, C.J., and Benning, S. (2002). Effects of affective content and intensity on startle blink and ERP in women. *Psychophysiology*, 39(Suppl. 1), S21.
140. Patrick C. J., Malone, S.M., **Bernat, E.**, Hicks, B., Kreuger, R.F., and Iacono, W.G. (2002). Reduced P300 and externalizing: evidence for genetic mediation. *Psychophysiology*, 39(Suppl. 1), S64.
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142. **Bernat, E.**, Williams, W.J., Gehring, W.J., Lorenz, J., and Casey, K. (2002). Separation of overlapping brain events by decomposing time-frequency transforms: application to error-related negativity, laser evoked potentials, and simulated data. *Journal of Cognitive Neuroscience*, 14(Suppl. 1).
143. **Bernat, E.**, Patrick, C.J., Amrhein, C., Benning, S., Eickhoff, S., Sass, S., Ward, M. (2001). ERP Concomitants of Startle Blink Responses. Poster presented at the Emotion conference at the University of Minnesota, Minneapolis, MN.
144. **Bernat, E.**, Patrick, C.J., Benning, S., and Amrhein C. (2001). ERP concomitants of startle blink responses. *Psychophysiology*, 38(Suppl. 1), S75.
145. Patrick C.J., Iacono, W.G., **Bernat, E.**, Malone, S.M., Kreuger, R.F., and McGue, M. (2001). Brain potential correlates of the latent externalizing dimension of psychopathology. *Psychophysiology*, 38(Suppl. 1), S19.
146. **Bernat, E.** and Shevrin, H. (2000). ERP Evidence for unconscious aversive conditioning with unpleasant semantic stimuli. *Psychophysiology*, 37(Suppl. 1).
147. **Bernat E.**, Williams W.J., and Shevrin H. (2000). Analysis of joint time-frequency data using PCA: multiple measures of P300. *Psychophysiology*, 37(Suppl. 1).
148. **Bernat, E.**, Shevrin, H., and Snodgrass, J.M. (1999). Subliminal oddball P300 ERP component. Paper presented at the 3rd annual meeting of the Association for the Scientific Study of Consciousness, June 4-7, London, Ontario.
149. **Bernat, E.**, Bunce, S.C., and Shevrin, H. (1998). Late positive potential as a marker of affective valence in supraliminal and subliminal ERPs. *Psychophysiology*, 35(Suppl. 1), S19.
150. **Bernat, E.**, Sang, T., Williams, W., Bunce, S.C., and Shevrin, H. (1997). Using time-frequency to model multiple dimensions of P300. *Psychophysiology*, 34(Suppl. 1), S20.
151. Bunce, S.C., **Bernat, E.**, Shevrin, H., and Hibbard, S. (1997). Subliminal (but not supraliminal) presentation of affective words elicits differential corrugator EMG. *Psychophysiology*, 34(Suppl. 1), S25.
152. **Bernat, E.**, Bunce, S.C., Shevrin, H., Hibbard, S., and Snodgrass, M. (1996). Affect and unconscious processing: an event-related potential study. *Psychophysiology*, 33(Suppl. 1), S22.
153. Bunce, S.C., **Bernat, E.**, Hibbard, S., and Shevrin, H. (1996). When positive becomes negative: ERP evidence for differential processing of affective stimuli in subjects with parental loss. *Psychophysiology*, 33(Suppl. 1), S26.
154. **Bernat, E.**, Wong, P.S., Bunce, S.C., and Shevrin, H. (1995). Cerebral EEG asymmetry

in emotional processing: State of consciousness and subjective experience as explanatory factors. *Psychophysiology*, 32(Suppl. 3A), S19.

155. Bunce, S.C., **Bernat, E.**, Wong, P.S., and Shevrin, H. (1995). Event-related potential and facial EMG indicators of unconscious emotion-relevant learning. Poster presented at the 7th annual meeting of the American Psychological Society.
156. Bunce, S.C., Wong, P.S., **Bernat, E.**, and Shevrin, H. (1995). Evidence for unconscious learning: Conditioning of facial EMG to subliminal facial stimuli. Poster presented at the 103rd annual meeting of the American Psychological Association.
157. Wong, P.S., **Bernat, E.**, Bunce, S.C., and Shevrin, H. (1995). Brain activity reflects acquisition of a conditional response to visually masked stimuli. Poster presented at the 7th annual meeting of the American Psychological Society.
158. **Bernat, E.** and Shevrin, H. (1992). Differential brain responses to symptom-context and autonomic reaction words in social phobics and pathological grief patients. Poster presented at the University of Michigan Department of Psychiatry, Third Annual Albert J. Silverman Research Conference.

### *Workshops*

**Time-Frequency Workshop.** I have developed a workshop to train researchers in time-frequency EEG/ERP signal processing approaches implemented in the Psychophysiology Toolbox for Matlab (below). The workshop can be delivered in a 2-day format or a longer 4-day format with more hands-on practice.

2013-Present	Instructor, Time-Frequency Workshop, University of Maryland, College Park, MD. Four-day workshop. Conducted each summer since coming to UMD, to train students, collaborators, visitors, etc..
2011	Instructor, FSU Time-Frequency Workshop, Florida State University, Tallahassee, FL. Four-day workshop to train researchers in the use of time-frequency signal processing methods. Thirty-five national and international attendees.
2009	Instructor, SPR Time-Frequency Preconference Workshop, Berlin, Germany. Preceding the Society for Psychophysiological Research 49 <sup>th</sup> annual meetings. Included over 100 North American and international attendees.

### *Software and Applications*

**Psychophysiology Toolbox for Matlab.** A toolbox implementing time-frequency analysis of EEG/MEG data, including principal components analysis (PCA) and region of interest (ROI) approaches. Additional functionality includes time and frequency domain component measures (e.g. P300 and alpha, respectively). Overall functionality includes reduction, processing, and statistical evaluation of multiple types of data including, EEG, MEG, and peripheral psychophysiological measures such as heart rate, skin conductance, and EMG. The toolbox has served as the primary data processing and analysis environment for over 30 peer-reviewed papers and over 100 conference presentations. It is also currently being used in number of laboratories nationally and internationally. It is available under the GNU General Public License (GPL).

[http://www.ccnlab.umd.edu/Psychophysiology\\_Toolbox](http://www.ccnlab.umd.edu/Psychophysiology_Toolbox)

### **SPONSORED RESEARCH**

**Grants*****Active***

National Institute of Mental Health (NIMH), R01, “Cognitive Control in Anxiety: The Role of Ovarian Hormones”. **Co-Investigator** (PI: Moser, J.), \$2,259,943 (direct costs). Active 3/25/2016-2/28/2021.

National Institute of Child Health and Human Development (NICHD), P01HD064653 (core B) Functions and Development of the Mirror Neuron System, **Co-Investigator** (PI: Woodward), \$6,075,585 (total direct costs across P01), Active 7/01/2016-6/30/2021

***Completed***

National Cancer Institute (NCI) and Federal Drug Administration (FDA), R01 1P50CA180523-01, Project 2, “Consumer Acceptability Testing of New and Manipulated Products”. **Co-Investigator** (PI: Clarke, P.), \$19,000,000 (total direct costs across P50 and subprojects), Active 9/18/2013 – 9/17/18

National Institutes of Mental Health (NIMH), U01MH093349 (supplement). “Trajectories of Behavioral Inhibition and Risk for Anxiety”, **Co-Investigator** (PI: Fox, N.), \$131,090 direct costs, 4/01/2015-3/31/2017.

Military Suicide Research Consortium. Department of Defense (DOD). W81. “Development and Evaluation of a Brief, Suicide Prevention Intervention Targeting Anxiety and Mood Vulnerabilities”. **Co-Investigator** (PI: Schmidt, B.). \$1,600,000 direct costs, 2/24/2014-9/20/2016.

National Institute on Drug Abuse (NIDA), R01 1R01DA031142. “Rapid response human testing of Smokeless Tobacco Products”. **Co-Investigator** (PI: Clarke, P.). \$1,800,000 direct costs, 8/31/13-9/1/16

National Institute on Drug Abuse (NIDA), R03, “EEG/ERP Risk Markers as Predictors and Outcomes of SUD Treatment in Adolescents”. **Principal Investigator** (MPI with Brian Hicks), \$164,524 direct costs, 9/1/2013-2/29/2016.

National Cancer Institute (NCI) and Food and Drug Administration (FDA), P50 Seed Grant, “Cognitive, Affective, and Neurophysiological Processes Underlying Nicotine Withdrawal and Satiation”. **Principal Investigator** (MPI with Debra Bernat), \$33,339 direct costs, 1/1/2015-12/31/2015.

National Institute of Mental Health (NIMH), K08, “Neurobiological Mechanisms of Impulse Control Problems”. **Principal Investigator**, \$725,069 direct costs, 9/1/2008-7/31/2013.

National Institute of Mental Health, RC1, “Neurobiology of Trait Fear and Disinhibition in Impulse Control Disorders”. **Co-Investigator** (PI: Patrick, C.J.), \$992,766 direct costs, 7/1/2009-6/30/2011.

National Institute on Alcohol Abuse and Alcoholism (NIAAA), R21, “Effects on the Adolescent Brain: A Study of Monozygotic Twin Differences”. **Co-Investigator** (PI: Malone, S.M.), \$698,340 direct costs, 8/1/2007-7/31/2010.

**Mentored Trainee Awards*****Active***



Instructor, Undergraduate Research Methods with lab, Psychology, University Maryland, College Park. Upper division research methods for majors. This course is setup for 96 students per section, with 6 lab sections of 16 students and 3 TAs with 2 lab sections each. I have taught 2 sections each fall (i.e. 192 students, 6 TAs, 12 lab sections).

PSY3213 Spring 2010, 2011, 2012, 4-units

Instructor, Undergraduate Research Methods, Psychology, Florida State University. Upper division research methods for majors. This course was setup for 60 students, with 4 lab sections of 15 students and 2 TAs with 2 lab sections each. I taught 1 section in 2010 and 2011, and 2 sections in spring of 2012.

PSY5735 Fall 2010, 2011, 2012, 3-units

Instructor, Graduate Research Methods, Clinical Psychology, Florida State University. (Dean's recognition for highest teacher ratings, 2010). Enrollment was 4-10.

### **Course or Curriculum Development**

PSYC 300 Renovation of PSYC300 was undertaken leading up to Fall 2016. In consultation with two departmental faculty (Dave Yager and Ryan Curtis), I conducted an extensive renovation of the PSY300 course. This included flipping and blending some material in the course, and refocusing towards a stream of hands-on research experiences with data.

### **Advising: Research or Clinical**

#### *Undergraduate*

##### University of Maryland

Andrew Gradone, Undergraduate Honors Thesis Chair (Psychology)

##### Florida State University

Matthew Bachman, Undergraduate Honors Thesis Chair (Psychology)

Daphne A. Durmaz, Undergraduate Honors Thesis Member (Psychology)

Elizabeth Mulligan, Undergraduate Honors Thesis Chair (Psychology)

Matt Cartabuke, Undergraduate Honors Thesis Chair (Psychology)

Matthew Bachman, Undergraduate Honors Thesis Chair (Psychology)

#### *Master's*

##### University of Maryland

Anne Tootell, Master's Thesis Committee Chair (Clinical Psychology)

Adreanna Massey, Master's Thesis Committee Chair (Clinical Psychology)

Jessica Ellis, Master's Thesis Committee Chair (NACS)

Merhnoosh Ahmadi, Master's Committee Chair (NACS)

Christopher Jonathan Seitz-Brown, Master's Thesis Member (Clinical Psychology)  
Claire Kaplan, Master's Thesis Committee Member (Clinical Psychology)  
Rosalind-Nguyen\_Masters-Proposal, Master's Thesis Committee Member (CNS Psychology)  
Stephanie Merwin, Master's Thesis Committee Member (Clinical Psychology)  
Andrew Ninnemann, Master's Thesis Committee Member (Clinical Psychology)  
Tara Augenstein, Master's Thesis Committee Member (Clinical Psychology)

Florida State University

Kothur, Srikant; Master's Thesis Committee Chair (Clinical Psychology)  
Olson, Lacy; Master's Thesis Committee Chair (Clinical Psychology)  
Towne, Tyler James; Master's Thesis Committee Member (Clinical Psychology)  
Gottfried, Emily; Master's Thesis Committee Member (Clinical Psychology)  
Holland, Lauren; Master's Thesis Committee Member (Clinical Psychology)  
Silva, Caroline, Master's Committee Member (Clinical Psychology)  
Wright, Tim, Master's Thesis Committee Member (Cognitive Psychology)

***Doctoral***

University of Maryland

Christopher Jonathan Seitz-Brown, Dissertation Committee Chair (Clinical Psychology)  
Jessica Ellis, Dissertation Committee Chair (NACS)  
Adreanna Watts, Dissertation Committee Chair (Clinical Psychology)  
Anne Tootell, Dissertation Committee Chair (Clinical Psychology)  
Jessica Ellis, Qualifying Exam Committee Chair (NACS)  
Ying Tan, Dissertation Committee Member (Kinesiology, School of Public Health)  
Lauren Catalano, Dissertation Committee Member (Clinical Psychology)  
Sarah Thomas, Disserttion Committee Member (Clinical Psychology)  
Mark Saffer, Dissertation Committee Member (Social Psychology)  
Tara Augenstein, Dissertation Committee Member (Clinical Psychology)  
Isabelle Shuggi, Qualifying Exam Committee Member (NACS)  
Maureen Bowers, Qualifying Exam Committee Member (NACS)

Florida State University

Nelson, Lindsay; Dissertation Committee Co-Chair (Clinical Psychology)  
Anestis, Joye Cox; Dissertation Committee Member (Clinical Psychology)  
Blagg, Chris; Dissertation Committee Member (Clinical Psychology)  
Yoon, Jong Sung, Prelim Committee Member (Cognitive Psychology)

***Post-doctoral***

Fix, Spener, Postdoctoral Fellow, University of Maryland, 2017-Present

Nair-Collins, Sangeeta, Postdoctoral Fellow, Florida State University, 2011-2013.

### **Other Teaching Activities**

2016-Present Faculty Leader, First-Year Innovation and Research Experience (FIRE) program, Addiction Science (AS) stream. University of Maryland, Department of Psychology. With a fulltime Research Educator (Cristina Risco, Clinical Assistant Professor), our FIRE-AS stream engages some 40-45 undergraduate students per year in a coordinated combination of coursework and active research experiences focused on cognitive-neuroscience and the study of addiction.

### **Teaching Awards**

2016-2017 Philip Merrill Presidential Scholars Program, Faculty Mentor.

### **SERVICE AND OUTREACH**

#### **Editorships, Editorial Boards, and Reviewing Activities**

##### *Editorships*

Associate Editor, International Journal of Psychophysiology (2011-present).

##### *Editorial Boards*

Review Editor, Frontiers in Human Neuroscience. (2016-present).

##### *Reviewing Activities for Journals and Presses*

Ad Hoc Reviewer: Science, Biological Psychiatry, Human Brain Mapping; Cerebral Cortex; Journal of Neuroscience Methods; Neuroscience and Biobehavioral Reviews; Journal of Abnormal Psychology, Clin. Neurophys.; Psychophysiology; Journal of Vision; Cognitive, Affective, & Behavioral Neuroscience; Emotion; International Journal of Psychophysiology; Cognitive Brain Research.

#### **Reviewing Activities for Agencies and Foundations**

Grant Reviewer. National Institutes of Health (NIH); ZMH1-ERB-D-03-R, Emotional Regulation in aging. Dec 2016.

Grant Reviewer. National Institutes of Health (NIH); ZRG1\_IFCN-T. PAR Panel: Temporal Dynamics of Neurophysiological Patterns as Potential Targets for Treating Cognitive Deficits in Brain Disorders. June, 2016

Grant Reviewer. National Institutes of Health (NIH); ZRG1\_IFCN-Q. Temporal dynamics of Neurophysiological Patterns as Potential Targets for Treating Cognitive Deficits in Brain Disorders. Sept., 2015

Grant Reviewer. National Science Foundation (NSF). Cognitive Neuroscience Program. April, 2015.

Grant Reviewer. National Science Foundation (NSF). Graduate Research Fellowship Program (GRFP). January 2013, 2014, and 2015.

Grant Reviewer. National Institutes of Health (NIH). Decision Making: Cognitive, Affective, and Developmental Perspectives. April, 2012.

Grant Reviewer. American Institute of Biological Sciences (AIBS). Workplace Violence in the Military; issued by the United States Army Medical Research Acquisition Activity (USAMRAA). May, 2012.

### **Committees, Professional & Campus Service**

#### ***Campus Service – Department***

- 2019 Chair, Graduate Recruitment (“NACS-fest”), Neuroscience and Cognitive Science Program, University of Maryland.
- 2015- Member, Graduate Committee, Department of Psychology, University of Maryland.
- 2014- Coordinator, Department of Psychology Brain and Behavior Physiology Lab, Department of Psychology, University of Maryland.
- 2016 Member, Quantitative Faculty Search Committee, Department of Psychology, University of Maryland.
- 2011-2013 Chair, Committee on Diversity in Clinical Science (CDCS), Department of Psychology, Florida State University.
- 2010-2013 Faculty Contact, Psychology Graduate Students for Diversity (PGSD), Department of Psychology, Florida State University.
- 2012-2013 Member, Elections Committee, Department of Psychology, Florida State University.
- 2010-2012 Member, Admissions Committee, Department of Psychology, Florida State University.
- 2009-2013 Member, IT Committee, Department of Psychology, Florida State University.
- 2010-2011 Member, Interview Committee, Department of Psychology, Florida State University.
- 2005-2008 Member, Research Infrastructure Committee, Department of Psychology, University of Minnesota.

#### ***Campus Service – College***

- 2017, 2018 Grant Reviewer, BSOS Summer Scholars Program, University of Maryland.
- 2018 Grant Reviewer, BSOS All S.T.A.R, University of Maryland.

#### ***Campus Service – University***

- 2018 Grant Reviewer, Tier 1 Faculty Incentive Program, University of Maryland
- 2012 Grant Reviewer, Council on Research and Creativity (CRC), Florida State University
- 2012 Grant Reviewer, Committee on Faculty Research Support (COFRS), Florida State University
- 2010-2012 Senator, Florida State University Faculty Senate

#### ***Leadership Roles in Meetings and Conferences***

- 2012-2016 Member, Program Committee, International Organization of Psychophysiology.
- 2007-2013 Member, Public Relations Committee, Society for Psychophysiological Research.
- 2008-2010 Member, Program Committee, Society for Psychophysiological Research.

2007-2011 Member, Education and Training Committee, Society for Psychophysiological Research.

2004-2005 Member, Program Committee, Society for Psychophysiological Research.

***Other Non-University Committees, Memberships, Panels, etc.***

2006-2009 Minnesota Department of Corrections (DOC) Institutional Review Board (IRB),  
Committee Member.