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ACADEMIC POSITIONS

2017– Postdoctoral Associate Yale University, New Haven, CT
Advisors: BJ Casey & Avram Holmes

EDUCATION

2017 Ph.D. with distinction Yale University, New Haven, CT
Psychology (Cognitive Neuroscience)
Advisor: Marvin Chun

2015 M.S., M.Phil. Yale University, New Haven, CT
Psychology (Cognitive Neuroscience)

2010 Sc.B. Brown University, Providence, RI
Cognitive Neuroscience

HONORS & AWARDS

2017 *Trainee Professional Development Award*, Society for Neuroscience

2017–18 *Theresa Seessel Postdoctoral Fellowship*, Yale University

2017 *30 Under 30: Science*, Forbes

2016 *Dissertation Research Award*, American Psychological Association

2016 *Best Talk Award*, Object Perception, Attention, & Memory meeting, Boston, MA

2016 *Brains, Minds, & Machines Workshop Fellowship*, Marine Biology Laboratory

2014–17 *Graduate Research Fellowship*, National Science Foundation

2010 *Phi Beta Kappa*, Brown University

PUBLICATIONS

Rosenberg, M. D., Casey, B. J., Holmes, A. J. (in press). Prediction complements explanation in understanding the developing brain. *Nature Communications*.

Beaty, R. E., Kenett, Y. N., Christensen, A. P., Rosenberg, M. D., Benedek, M., Chen, Q., Fink, A., Qiu, J., Kwapil, T. R., Kane, M., Silvia, P. J. (2018). Robust prediction of individual creative ability from brain functional connectivity. *Proceedings of the National Academy of Sciences*.

- Yoo, K., Rosenberg, M. D., Hsu, W.-T., Zhang, S., Li, C.-S. R., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Connectome-based predictive modeling of attention: Comparing different functional connectivity measures and prediction methods across datasets. *NeuroImage*, *167*, 11–22.
- Jangraw, D. C., Gonzalez-Castillo, J., Handwerker, D. A., Ghane, M., Rosenberg, M. D., Panwar, P., Bandettini, P. A. (2018). A functional connectivity-based neuromarker of sustained attention generalizes to predict recall in a reading task. *NeuroImage*, *166*, 99–109.
- Rosenberg, M. D., Hsu, W.-T., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Connectome-based models predict separable components of attention in novel individuals. *Journal of Cognitive Neuroscience*, *30*(2): 160–173.
- List, A., Rosenberg, M. D., Sherman, A., Esterman, M. (2017). Pattern classification of EEG signals reveals perceptual and attentional states. *PLoS ONE*, *12*(4): e0176349.
- Rosenberg, M. D., Finn, E. S., Scheinost, D., Constable, R. T., Chun, M. M. (2017). Characterizing attention with predictive network models. *Trends in Cognitive Sciences*, *21*(4): 290–302. [Cover article]
- Shen, X., Finn, E. S., Scheinost, D., Rosenberg, M. D., Chun, M. M., Papademetris, X., Constable, R. T. (2017). Using connectome-based predictive modeling to predict individual behavior from brain connectivity. *Nature Protocols*, *12*(3): 506–518.
- Rosenberg, M. D., Zhang, S., Hsu, W.-T., Scheinost, D., Finn, E. S., Shen, X., Constable, R. T., Li, C.-S. R., Chun, M. M. (2016). Methylphenidate modulates functional network connectivity to enhance attention. *Journal of Neuroscience*, *36*(37): 9547–9557.
- Chekroud, A. M., Ward, E. J., Rosenberg, M. D., Holmes, A. J. (2016). Patterns in the human brain mosaic discriminate males from females. *Proceedings of the National Academy of Sciences*, pii: 201523888.
- Rosenberg, M. D., Finn, E. S., Scheinost, D., Papademetris, X., Shen, X., Constable, R. T., Chun, M. M. (2016). A neuromarker of sustained attention from whole-brain functional connectivity. *Nature Neuroscience*, *19*(1): 165–171. [Featured in [News and Views](#) by Smith (2016), [Science Magazine](#), and [NPR](#)]
- Finn, E. S., Shen, X., Scheinost, D., Rosenberg, M. D., Huang, J., Chun, M. M., Papademetris, X., Constable, R. T. (2015). Functional connectome fingerprinting: identifying individuals using patterns of brain connectivity. *Nature Neuroscience*, *18*(11): 1664–1671. [Cover article featured in [Nature News](#), [BBC News](#), and [Wired](#)]
- Rosenberg, M. D., Finn, E. S., Constable, R. T., Chun, M. M. (2015). Predicting moment-to-moment attentional state. *NeuroImage*, *114*: 249–256.
- Esterman, M., Rosenberg, M. D., Noonan, S. (2014). Intrinsic fluctuations in sustained attention and distractor processing. *Journal of Neuroscience*, *34*(5): 1724–1730.
- Rosenberg, M., Noonan, S., DeGutis, J., Esterman, M. (2013). Sustaining visual attention in the face of distraction: A novel gradual-onset continuous performance task. *Attention, Perception, & Psychophysics*, *75*(3): 426–439.

Esterman, M., Noonan, S., Rosenberg, M., DeGutis, J. (2013). In the zone or zoning out? Tracking neural and behavioral fluctuations in sustained visual attention. *Cerebral Cortex*, 23(11): 2712–2723.

MANUSCRIPTS

Hsu, W.-T., Rosenberg, M. D., Scheinost, D., Constable, R. T., Chun, M. M. (in revision). Resting-state functional connectivity in large-scale brain networks predicts neuroticism and extraversion in novel individuals.

Lin, Q., Rosenberg, M. D., Yoo, K., Hsu, W.-T., O'Connell, T. P., Chun, M. M. (under review). Resting-state functional connectivity predicts cognitive impairment related to Alzheimer's disease.

Salehi, M., Scheinost, D., Rosenberg, M. D., Finn, E. S., Chun, M. M., Constable, R. T. (in revision). Network connectivity changes between task and resting-state fMRI data reveal flexibility and generalize attention prediction.

INVITED COLLOQUIA

- 2017 *Computational Biology Seminar Series*, IBM Research
- 2016 *Psychology Department Seminar*, Columbia University
- 2015 *Yale Institute for Network Science/Kavli Institute for Neuroscience Lecture*, Yale University
- 2015 *Methods & Tutorial Series*, VA Boston Neuroimaging Research Center
- 2014 *Current Works in Cognitive Psychology*, Yale University
- 2014 *Magnetic Resonance Research Center fMRI Seminar*, Yale University School of Medicine
- 2013 *Current Works in Cognitive Psychology*, Yale University

INVITED CONFERENCE & WORKSHOP PRESENTATIONS

- 2017 *Flux: The International Congress for Integrative Developmental Cognitive Neuroscience*, Portland, Oregon
- 2017 *Brainhack NYC* (Keynote), Child Mind Institute
- 2016 *Young European Scientist Meeting*, Faculty of Medicine of University of Porto, Portugal
- 2016 *3rd Biennial Brain Function Workshop*, Whistler-Blackcomb, BC, Canada
- 2014 *2nd Biennial Brain Function Workshop*, Whistler-Blackcomb, BC, Canada

CONTRIBUTED CONFERENCE PRESENTATIONS

Rosenberg, M. D., Scheinost, D., Hsu, W.-T., Avery, E., Hampson, M., Constable, R. T., Chun, M. M. (2018). Real-time neurofeedback of large-scale brain networks predicting attention. Talk presented at *Alpine Brain Imaging Meeting*, Champéry, Switzerland.

Rosenberg, M. D., Scheinost, D., Hsu, W.-T., Constable, R. T., Chun, M. M. (2017). Real-time neurofeedback of functional connectivity in large-scale brain networks that predict attention. Talk presented at *Society for Neuroscience*, Washington, DC.

Yoo, K., Rosenberg, M. D., Hsu, W.-T., Zhang, S., Li, C.-S. R., Scheinost, D., Constable, R. T., Chun, M. M. (2017). Connectome-based predictive modeling (CPM) of sustained attention: Comparing different methods for feature selection and prediction. Talk presented at *Society for Neuroscience*, Washington, DC.

Lin, Q., Rosenberg, M. D., Yoo, K., Hsu, W.-T., O'Connell, T. P., Chun, M. M. (2017). Resting-state functional connectivity in large-scale brain networks predicts Alzheimer's disease symptom severity in novel individuals. Poster presented at *Society for Neuroscience*, Washington, DC.

Jangraw, D. C., Gonzalez-Castillo, J., Handwerker, D. A., Ghane, M., Rosenberg, M. D., Panwar, P., Bandettini, P. A. (2017). Functional connectivity-based neuromarker outperforms gaze, pupillary, and fMRI activation-based markers in predicting reading comprehension. Talk presented at *Society for Neuroscience*, Washington, DC.

Rosenberg, M. D.*, Scheinost, D., Hsu, W.-T., Finn, E. S.*, Constable, R. T., Chun, M. M. (2017). Large-scale functional connectivity networks predict individual differences and fluctuations in attention. Talk presented at *Organization for Human Brain Mapping*, Vancouver, BC, Canada. (*Symposium organizers)

Rosenberg, M. D., Scheinost, D., Hsu, W.-T., Finn, E. S., Constable, R. T., Chun, M. M. (2017). Large-scale functional connectivity networks predict attention fluctuations. Poster presented at *Organization for Human Brain Mapping*, Vancouver, BC, Canada.

Jangraw, D. C., Gonzalez-Castillo, J., Handwerker, D. A., Ghane, M., Rosenberg, M. D., Panwar, P., Gutierrez, B., Bandettini, P. A. (2017) Functional connectivity-based predictors of naturalistic reading comprehension. Poster presented at *Organization for Human Brain Mapping*, Vancouver, BC, Canada.

Hsu, W.-T., Rosenberg, M. D., Scheinost, D., Finn, E. S., Constable, R. T., Chun, M. M. (2017). Resting-state functional connectivity in large-scale brain networks predicts neuroticism and extraversion in novel individuals. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.

Rosenberg, M. D., Hsu, W.-T., Scheinost, D., Finn, E. S., Constable, R. T., Chun, M. M. (2016). Connectome-based fMRI models predict separable components of attention in novel individuals. Talk presented at *Object Perception, Attention, & Memory*, Boston, MA.

Salehi, M., Scheinost, D., Finn, E. S., Rosenberg, M. D., Chun, M. M., Constable, R. T. (2016). Network changes between task- and resting-state functional connectivity predict behavior across datasets. Poster presented at *Society for Neuroscience*, San Diego, CA.

- Rosenberg, M. D., Zhang, S., Hsu, W.-T., Scheinost, D., Finn, E. S., Shen, X., Constable, R. T., Li, C-S. R., Chun, M. M. (2016). Methylphenidate modulates attention network strength. Poster presented at *Resting State and Brain Connectivity*, Vienna, Austria.
- Rosenberg, M. D., Finn, E. S., Scheinost, D., Papademetris, X., Shen, X., Constable, R. T., Chun, M. M. (2015). Resting-state brain connectivity predicts ADHD symptom severity in individual children. Poster presented at *Organization for Human Brain Mapping*, Honolulu, HI.
- Rosenberg, M. D., Finn, E. S., Shen, X., Scheinost, D., Papademetris, X., Constable, R. T., Chun, M. M. (2014). Strength of task-relevant networks at rest predicts sustained attention performance. Poster presented at *Society for Neuroscience*, Washington, D.C.
- Rosenberg, M. D., Finn, E. S., Constable, R. T., Chun, M. M. (2014). Predicting moment-to-moment attentional state. Poster presented at *Vision Sciences Society*, St. Pete Beach, FL.
- Finn, E. S., Rosenberg, M. D., Shen, X., Scheinost, D., Papademetris, X., Chun, M. M., Constable, R. T. (2014). Predicting working memory and attentional performance from complex networks during task and at rest. Poster presented at *The Organization for Human Brain Mapping*, Hamburg, Germany.
- Rosenberg, M. D., Finn, E. S., Chun, M. M. (2013). Tracking fluctuations in sustained attention under varying degrees and types of task load. Poster presented at *Society for Neuroscience*, San Diego, CA.
- Finn, E. S., Rosenberg, M. D., Shen, X., Constable, R. T., Chun, M. M. (2013). Predicting attention and performance across varying task loads from complex networks during task and at rest. Poster presented at *Society for Neuroscience*, San Diego, CA.
- Noonan, S., Esterman, M., Rosenberg, M. (2013). Neural signatures of individual differences in sustained attention. Poster presented at *Organization for Human Brain Mapping*, Seattle, WA.
- List, A., Rosenberg, M., Sherman, A., Grabowecky, M., Suzuki, S., Esterman, M. (2013). EEG pattern classification reveals the scope of local vs. global attention. Poster presented at *Vision Sciences Society*, Naples, FL.
- List, A., Rosenberg, M., Sherman, A., Grabowecky, M., Suzuki, S., Esterman, M. (2013). Neural correlates of local vs. global attentional scope revealed via EEG pattern classification. Poster presented at *Cognitive Neuroscience Society*, San Francisco, CA.
- Rosenberg, M., List, A., Sherman, A., Grabowecky, M., Suzuki, S., Esterman, M. (2012). Decoding EEG data reveals dynamic spatiotemporal patterns in perceptual processing. Poster presented at *Vision Sciences Society*, Naples, FL.
- Esterman, M., Noonan, S., Rosenberg, M. (2012). In the zone or zoning out? Behavioral and neural evidence for distinct attentional states. Poster presented at *Vision Sciences Society*, Naples, FL.
- Rosenberg, M., List, A., Sherman, A., Grabowecky, M., Suzuki, S., Esterman, M. (2012). Classifying visual perception on a trial-by-trial basis using EEG signals. Poster presented at *Cognitive Neuroscience Society*, Chicago, IL.

Rosenberg, M., Noonan, S., DeGutis, J., Esterman, M. (2011). Sustaining visual attention in the face of distraction: A novel gradual onset continuous performance task. Poster presented at *Vision Sciences Society*, Naples, FL.

Esterman, M., Noonan, S., Rosenberg, M., DeGutis, J. (2011). In the zone or zoning out? Tracking neural and behavioral fluctuations in sustained visual attention. Poster presented at *Vision Sciences Society*, Naples, FL.

Noonan, S., Rosenberg, M., DeGutis, J., Esterman, M. (2011). In the zone or zoned out? Performance variability and BOLD fluctuations in the default-mode network. Poster presented at *Organization for Human Brain Mapping*, Quebec City, Canada.

TEACHING EXPERIENCE

2014 The Human Brain, Yale University, Teaching Fellow
2014 Introduction to Psychology, Yale University, Teaching Fellow
2013 Introduction to Cognitive Science, Yale University, Teaching Fellow

AD HOC REVIEWING

Acta Neuropsychiatrica
Applied Cognitive Psychology
Attention, Perception, & Psychophysics
Developmental Cognitive Neuroscience
Journal of Clinical Child and Adolescent Psychology
Journal of Cognitive Neuroscience
Journal of Neuroscience
Nature Communications
Nature Neuroscience
NeuroImage
NeuroImage: Clinical
Progress in Neuropsychopharmacology & Biological Psychiatry
Psychological Medicine
Scientific Reports