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ACADEMIC APPOINTMENTS

2019– Assistant Professor Department of Psychology, The University of Chicago
2018–19 Visiting Assistant Professor Department of Psychology, The University of Chicago
2017–19 Postdoctoral Associate Department of Psychology, Yale University
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

Scheinost, D., Noble, S., Horien, C., Green, A. S., Lake, E. M. R., Salehi, M., Gao, S., Shen, X., O'Connor, D., Barron, D. S., Yip, S. W., Rosenberg, M. D., Constable, R. T. (in press). Ten simple rules for predictive modeling of individual differences in neuroimaging. *NeuroImage*.

- Fong, A. H. C., Yoo, K., Rosenberg, M. D., Zhang, S., Li, C.-S. R., Scheinost, D., Constable, R. T., Chun, M. M. (2019). Dynamic functional connectivity during task performance and rest predicts individual differences in attention across studies. *NeuroImage*, *188*: 14–25.
- Fountain-Zaragoza, S., Samimy, S., Rosenberg, M. D., Prakash, R. S. (2019). Connectome-based models predict attentional control in aging adults. *NeuroImage*, *186*: 1–13.
- Rosenberg, M. D. (2018). Baby brains reflect maternal inflammation. *Nature Neuroscience*, *21*: 651–653. (News & Views).
- Rosenberg, M. D., Casey, B. J., Holmes, A. J. (2018). Prediction complements explanation in understanding the developing brain. *Nature Communications*, *9*: 589.
- Casey, B. J., Cannonier, T., Conley, M. I., Cohen, A. O., Barch, D. M., ..., the ABCD Imaging Acquisition Workgroup (2018). The Adolescent Brain Cognitive Development (ABCD) study: Imaging acquisition across 21 sites. *Developmental Cognitive Neuroscience*, *32*: 43–54.
- Lin, Q., Rosenberg, M. D., Yoo, K., Hsu, W.-T., O'Connell, T. P., Chun, M. M. (2018). Resting-state functional connectivity predicts cognitive impairment related to Alzheimer's disease. *Frontiers in Aging Neuroscience*, *10*:94.
- Hsu, W.-T., Rosenberg, M. D., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Resting-state functional connectivity in large-scale brain networks predicts neuroticism and extraversion in novel individuals. *Social Cognitive and Affective Neuroscience*, *13*(2): 224–232.
- 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*, *115*(5): 1087–1092. [Featured in [The Guardian](#)]
- 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. (Letter).

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.

BOOK CHAPTERS

Rosenberg, M. D. & Chun, M. M. (in press). Network models of attention and working memory. In M. Gazzaniga & D. Poeppel (Eds.), *The Cognitive Neurosciences VI*. MIT Press.

MANUSCRIPTS

Avery, E. W., Yoo, K., Rosenberg, M. D., Na, D. L., Greene, A. S., Gao, S., Scheinost, D., Constable, R. T., Chun, M. M. (under review). Whole-brain functional connectivity predicts working memory performance in novel healthy and memory-impaired individuals.

Gruskin, D. C., Rosenberg, M. D., Holmes, A. J. (under review). Relationships between depressive symptoms and brain responses during emotional movie viewing emerge in adolescence.

Hagler, D. J., Hatton, S. N., Makowski, C., Cornejo, M. D., Fair, D. A., (under review). Image processing and analysis methods for the Adolescent Brain Cognitive Development study.

Kumar, S., Yoo, K., Rosenberg, M. D., Scheinost, D., Constable, R. T., Zhang, S., Li, C.-S. R., Chun, M. M. (in revision). An information network flow approach for measuring functional connectivity and predicting behavior.

Lake, E., Finn, E. S., Noble, S., Vanderwal, T., Shen, X., Rosenberg, M. D., Spann, M. N., Chun, M. M., Scheinost, D., Constable, R. T. (in revision). The functional brain organization of an individual predicts measures of social abilities in autism spectrum disorder.

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.

Yoo, K., Rosenberg, M. D., Noble, S., Scheinost, D., Constable, R. T., Chun, M. M. (in revision). Multivariate approaches improve the reliability and validity of functional connectivity and prediction of individual behaviors.

INVITED COLLOQUIA

- 2019 *Computational Social Sciences Workshop*, The University of Chicago
- 2018 *Cognitive Brown Bag*, Dartmouth College
- 2018 *Patrick Holden Lecture*, UT Health San Antonio
- 2018 *Center for Cognitive and Behavioral Brain Imaging Seminar*, The Ohio State University
- 2018 *Clinical Psychology Brown Bag*, The Ohio State University
- 2018 *Psychology Department Seminar*, The University of Chicago
- 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

- 2018 *Neuroimaging Workshop*, Bill & Melinda Gates Foundation, Seattle, WA
- 2018 *Summer Institute in Cognitive Neuroscience*, Tahoe, CA
- 2017 *Flux: The International Congress for Integrative Developmental Cognitive Neuroscience*, Portland, Oregon
- 2017 *Brainhack NYC (Keynote)*, Child Mind Institute, New York, NY
- 2016 *Young European Scientist Meeting*, Faculty of Medicine of University of Porto, Portugal
- 2016 *3rd Biennial Brain Function Workshop*, Whistler-Blackcomb, BC, Canada

CONTRIBUTED CONFERENCE PRESENTATIONS

Rosenberg, M. D., Gruskin, D. C., Finn, E. S., Holmes, A. J. (2018). Inter-subject dynamic functional connectivity: Tracking functional network fluctuations during movie watching. Poster presented at *Society For Neuroscience*, San Diego, CA.

Avery, E. W., Yoo, K., Rosenberg, M. D., Na, D. L., Greene, A. S., Gao, S., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Whole-brain functional connectivity predicts working memory performance in novel healthy and memory-impaired individuals. Poster presented at *Society For Neuroscience*, San Diego, CA.

Yoo, K., Rosenberg, M. D., Noble, S., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Multivariate distance correlation features of functional connectivity improve the reliability and power of connectome-based predictive modeling. Poster presented at *Society For Neuroscience*, San Diego, CA.

Rosenberg, M. D., Gruskin, D. C., Finn, E. S., Holmes, A. J. (2018). Tracking network fluctuations during movie watching with inter-subject dynamic functional connectivity. Poster presented at *Resting State and Brain Connectivity*, Montreal, Canada.

Gruskin, D. C., Rosenberg, M. D., Holmes, A. J. (2018). Altered inter-subject correlation scales with depressive symptom severity in children and adolescents. Poster presented at *Resting State and Brain Connectivity*, Montreal, Canada.

Joëssel, A., Magontier, M., Rosenberg, M. D., Pichon, S., Chun, M. M., Bavelier, D. (2018). Investigating the neural correlates of flow in fMRI. *Lemanic Neuroscience Annual Meeting*, Les Diablerets, Switzerland.

Jangraw, D. C., Finn, E. S., Gonzalez-Castillo, J., Handwerker, D. A., Ghane, M., Rosenberg, M. D., Panwar, P., Bandettini, P. A. (2018). Functional connectivity-based predictor of reading recall generalizes to multi-task data. Talk presented at *Organization for Human Brain Mapping*, Singapore.

Fountain-Zaragoza, S., Samimy, S., Rosenberg, M. D., Wolfe, T., & Prakash, R. S. (2018). Investigation of a functional connectivity-based neuromarker of attention in older and younger adults. Poster presented at *Global Brain Health and Performance Summit*, Columbus, OH.

Fong, A. H. C., Yoo, K., Rosenberg, M. D., Scheinost, D., Constable, R. T., Chun, M. M. (2018). Dynamic functional connectivity predicts individual differences in attention. Poster presented at *Cognitive Neuroscience Society*, Boston, MA.

Kumar, S., Rosenberg, M. D., Yoo, K., Scheinost, D., Constable, R. T., Chun, M. M. (2018). An information network flow approach to measuring functional connectivity and predicting behavior. Poster presented at *Cognitive Neuroscience Society*, Boston, MA.

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, D.C.

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, D.C.

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, D.C.

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, D.C.

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*, Québec City, Canada.

AD HOC REVIEWING

Acta Neuropsychiatrica

The American Journal of Psychiatry

Applied Cognitive Psychology

Attention, Perception, & Psychophysics

Biological Psychiatry

*Biological Psychiatry: Cognitive Neuroscience and
Neuroimaging*

Brain Connectivity

Cerebral Cortex

Cognition

Cognitive, Affective, & Behavioral Neuroscience

Current Opinion in Behavioral Sciences

Developmental Cognitive Neuroscience

eLife

*International Journal of Psychiatry in Clinical
Practice*

Journal of Clinical Child & Adolescent Psychology

Journal of Cognitive Neuroscience

*Journal of Experimental Psychology: Human
Perception & Performance*

The Journal of Neuroscience

Journal of Neurophysiology

Molecular Psychiatry

Nature Communications

Nature Neuroscience

NeuroImage

NeuroImage: Clinical

PLOS Biology

*Progress in Neuro-Psychopharmacology &
Biological Psychiatry*

Psychological Medicine

Scientific Reports

EDITORIAL BOARDS

2018– *NeuroImage*

TEACHING

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

PHD COMMITTEES

2019 Elliot Layden (The University of Chicago), Stephanie Fountain-Zaragoza (The Ohio State University)