MATTHEW GERARD SCHAFER

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RESEARCH EXPERIENCE

2023-	*Postdoctoral Fellow,* Columbia University Horga Lab (Advisor: Guillermo Horga) Iigaya Lab (Advisor: Kyo Iigaya)
2018-2023	*PhD Student*, Mount Sinai School of Medicine Schiller Lab (Advisor: Dr. Daniela Schiller)
2017-2018	*PhD Student*, Mount Sinai School of Medicine Rotation in the NARC Lab (Advisors: Drs. Rita Goldstein & Muhammad Parvaz) Rotation in the Frangou Group Lab (Advisors: Drs. Sophia Frangou & Gaelle Doucet)
2014-2017	*Research Assistant*, Yale University School of Medicine Clinical and Affective Neuroscience (CAN) Lab (Advisor: Dr. Hedy Kober)
2013-2014	*Senior Honors Thesis,* The College of William and Mary Social Cognition Lab (Advisor: Dr. Cheryl Dickter)
2013	*Research Assistant*, University of South Carolina Affect and Decision-Making Lab (Advisor: Dr. Doug Wedell)
2012-2013	*Research Assistant*, The College of William & Mary Social Cognition Lab (Advisor: Dr. Cheryl Dickter)

EDUCATION

2017-2023	Mount Sinai School of Medicine Neuroscience PhD Program
2010-2014	The College of William and Mary B.A., *Magna Cum Laude*, Psychology

PUBLICATIONS: PUBLISHED, PREPRINTS, IN PRESS AND UNDER REVIEW

Schafer, M., & Schiller, D. Social avoidance as multidimensional navigation. (2024). *Submitted.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Bachi, K.*, & Schiller, D.* (2024). Neural trajectories of conceptually related events. *Accepted at eLife.*
* indicates equal contribution

Schafer, M., Kamilar-Britt, P., Sahani, V., Bachi, K.*, & Schiller, D.* (2023). Hippocampal place-like signal in latent space. *BioArxiv.*

Kulkarni, K.*, **Schafer, M.*,** Pandey, G., Filbey, F., Calhoun, V., Schiller, D. & Gu, X. (2023).

An interpretable and predictive connectivity-based neural signature for chronic cannabis use. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 8(3), 320-330.

Schafer, M. & Schiller, D. (2022). A dominant role for serotonin in the formation of human social hierarchies. *Neuropscyhopharamacology,* 47(13), 2177-2178.

Ceceli, A., Parvaz, M., King, S., **Schafer, M.,** Sharma, A., Alia-Klein, N., & Goldstein, R. (2022). Altered prefrontal signaling during inhibitory control in a salient drug context in human cocaine addiction**.** *Cerebral Cortex,* 33(3), 597-611.

Zhang, L., Chen, P., **Schafer, M.,** Zheng, S., Chen, L., Wang S., Qi, Q., Zhang, Y. & Huang, R. (2022). A specific social navigation network comprising the hippocampus, precuneus, insula and prefrontal cortex in the human brain. *Scientific Reports,* 12(1), 1-16.

Schafer, M., & Schiller, D. (2020). The brain's life navigation system. *Scientific American. Featured on cover & reprinted in special issue on human consciousness (2022)*

Schafer, M., & Schiller, D. (2018). The hippocampus and social impairment in psychiatric disorders. *Cold Spring Harbor Symposia on Quantitative Biology* (Vol. 83, pp. 105-118). Cold Spring Harbor Laboratory Press.

Schafer, M., & Schiller, D. (2018). Navigating social space. *Neuron,* 100(2), 476-489. *Featured in Neuron's 30th year anniversary edition.*

Schafer, M., Kim, J., Joseph, J., Xu, J., Frangou, S., & Doucet, G. (2018). Imaging habenula volume in schizophrenia and bipolar disorder. *Frontiers in psychiatry,* 9, 456.

PUBLICATIONS: IN PREPARATION

Schafer, M., Simon, K., Lane, R., Nadel, L., Ulrich, K.* & Schiller, D.* Memory reconsolidation in naturalistic social interactions.

Schafer, M., Kamilar-Britt, P., Sahani, V., Schiller, D.* & Bachi, K.* Social navigation in cocaine use disorder.

Schafer, M., Potenza, M. & Kober, H. Neural correlates of the regulation of craving in cocaine dependence.

POSTERS AND PRESENTATIONS

Schafer, M., Velikovskaya, A., Aitsahalia, I., Gungi, A., Iigaya, K., & Horga, G. Common cause inference as a generative model of delusions (2024). *Poster accepted for presentation at Computational Psychiatry Conference.*

Banker, S., **Schafer, M.,** Barkley, S., Trayvick, J., Peters, A., Thinakaran, A., Chen, A., Gu, X., Foss-Feig, J., & Schiller, D. Navigating Dynamic Social Interactions: Neural and Behavioral Insights in Autism Spectrum Disorder. (2024). *Poster accepted for presentation at Computational Psychiatry Conference.*

Gungi, A., Aitsahalia, I., Sepulveda Delgado, P., **Schafer, M.,** & Iigaya, K. Bridging reinforcement learning and causal inference: Emergence of grid cells in abstract tasks. (2024). *Poster presented at COSYNE Annual Meeting.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Hurd, Y., Schiller, D. & Bachi, K. (2022). Social Navigation in Individuals with Cocaine Use Disorder and Childhood Trauma. *Poster accepted for presentation at the American College of Neuropsychopharmacology Annual Meeting.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Bachi, K., & Schiller, D. (2022). Hippocampal place-like signal in latent social space. *Poster presented at the Society for*

Neuroscience Annual Meeting.

Rhoads, S., **Schafer, M.,** Na, Soojung, Heflin, M., Schiller, D. & Gu, X. (2022). Assessing social forward planning reliably across in-person, web-based, and mobile-app based platforms. *Poster abstract submitted to the Society for Neuroeconomics Annual Meeting.*

Banker, S.M., **Schafer, M.,** Barkley, S., Trayvick, J., Gu, X., Schiller, D., Foss-Feig, J. (2022). Impaired Neural and Behavioral Navigation of Dynamic Social Relationships in Autism Spectrum Disorder. *Poster presented at the Society for Neuroscience Annual Meeting.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Bachi, K., & Schiller, D. (2022). Hippocampal place-like signal in latent social space. *Poster presented at the Computational Psychiatry Course Annual Meeting.*

Bucaille, E., **Schafer, M.,** Schiller, D. Lane, R.D., Nadel, L., Simon, K.N.S., Draganski, B., Soelch, C.H., & Kramer, U. (2022). Inducing change in an episodic memory: Is it possible to change the social perception of an episodic memory through reconsolidation process? *Poster presented at the Society for the Exploration of Psychotherapy Integration Annual Meeting,*

Schafer, M. (2022). Social Relationships: Navigating Social Space. *Talk presented at the Social Networks and Real-world Interaction symposium at the Social and Affective Neuroscience Society Annual Meeting.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Moeller, S., Gabbay, V., Hurd, Y., Bachi, K., & Schiller, D. (2022). The Hippocampus Represents Place in Abstract Social Space: Encoding and Decoding Evidence in Independent Samples. *Poster at the Cognitive Neuroscience Society Annual Meeting.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Moeller, S., Gabbay, V., Hurd, Y., Bachi, K., & Schiller, D. (2022). The Hippocampus Represents Place in Abstract Social Space: Encoding and Decoding Evidence in Independent Samples. *Poster presented at the Society of Biological Psychiatry Annual Meeting.*

Schafer, M. (2021). Mapping Social Space: Brain and Behavior. *Talk presented during the Neurobiological Underpinnings of Psychiatric Disorders and Their Treatment symposium during the 49th meeting of the European Brain and Behaviour Society.*

Schafer, M., Kamilar-Britt, P., Sahani, V., Moeller, S., Gabbay, V., Hurd, Y., Bachi, K., & Schiller, D. (2021). The Hippocampus Represents Place in Abstract Social Space: Encoding and Decoding Evidence in Independent Samples. *Poster presented at Innovators in Neuroscience: From Molecules to Mind.*

Perl, O., **Schafer, M.,** Weiss, T, Ravia, A., Karagach, S., Soroka, T., Gorodisky, L., Livne, E., Furmna-Haran, E., Sobel, N., & Schiller, D. (2021). Neural Correlates of Trajectory Encoding in Olfactory Perceptual Space. *Poster presented at Innovators in Neuroscience: From Molecules to Mind.*

Kulkarni, K., **Schafer, M.,** Berner, L., Fiore, V., Heflin, M., Hutchison, K., Calhoun, V., Filbey, F., Schiller, D., & Gu, X. (2021). Interpretable connectivity-based decoding model for chronic marijuana use. *Poster presented at Innovators in Neuroscience: From Molecules to Mind.*

Bachi, K., Kim-Schulze, S., **Schafer, M.,** Kamilar-Britt, P., Sahani, V., Moeller, S.J., Schiller, D., Gabbay, V., & Hurd, Y. (2020). Neuroimmune underpinning of social factors in cocaine addiction. *Poster presented at the American College of Neuropsychopharmacology Annual Meeting.*

Ceceli, A.O., Parvaz, M.A., **Schafer, M.,** Malaker, P., Alia-Klein, N., & Goldstein, R.Z. (2020). Neuroimaging the effects of drug-related cue-reactivity on inhibitory control in cocaine

used disorder. *Poster presented at the American College of Neuropsychopharmacology Annual Meeting.*

Schafer, M., Schiller, D., Monti, E., Khan, U., Perez-Rodriguez M.M., & Feder, A. (2020). Social navigation in trauma-exposed World Trade Center rescue and recovery workers. *Poster presented at the American College of Neuropsychopharmacology Annual Meeting.*

Schafer, M., Feder, A., Monti, E., Perez-Rodriguez M.M., & Schiller, D. (2020). Social consistency is related to social support and social network size in PTSD. *Poster presented at the Social and Affective Neuroscience Society Annual Meeting.*

Schafer, M., Mclaughlin, C., Banker, S., Foss-Feig, J., & Schiller, D. (2020). The hippocampus tracks social relationships in autism spectrum disorder. *Poster presented at the Society of Biological Psychiatry Annual Meeting.*

Schafer, M., Kamilar-Britt, P., Moeller, S.J., Gabbay, V., Hurd, Y.L., Schiller, D., & Bachi, K. (2020). Hippocampal representations of social information in cocaine use disorder. *Poster presented at the Society of Biological Psychiatry Annual Meeting.*

Bachi, K., **Schafer, M.,** Kamilar-Britt, P., Moeller, S.J., Gabbay, V., Schiller, D., & Hurd, Y.L. (2019). Neurocircuitry of simulated social interactions in cocaine addiction: implications for real-world competence. *Talk presented during symposium at the American College of Neuropsychopharmacology Annual Meeting.*

Schafer, M. (2019). Mapping the social landscape. *Talk presented during Selected Topics in Neuroscience Course at Mount Sinai.*

Schafer, M. (2018). Common currency encoding. *Talk presented during Selected Topics in Neuroscience Course at Mount Sinai.*

Schafer, M. (2014). Racial Expectancy Violations with Mixed-Race Minimal Groups. *Talk presented for undergraduate Honors Thesis at the College of William and Mary.*

Gyurovski, I., Cloutier, J., **Schafer, M.**, & Dickter, C. L. (2014). An Event-related Potential Investigation of Politically-based Social Expectancy Violations during Impression Formation and Categorization. *Poster presented at the Social and Affective Neuroscience Society Annual Meeting.*

Schafer, M. (2013). The Physiological Underpinnings of Affective Responses to Music and Pictures. *Talk presented at S.R.E.B.C.S. at University of South Carolina.*

GRANTS AND AWARDS

2023-	NIH/NIMH Ruth L. Kirschstein Institutional National Research Service Award (T32)
2020-2023	NIH/NIMH Ruth L. Kirschstein Predoctoral Individual National Research Service Award (F31)
2020	Winner of Data Blitz competition at Mount Sinai's Neuroscience Retreat
2019	Fellow at the Kavli Summer Institute in Cognitive Neuroscience at UC Santa Barbara
	Fellow at Methods In Neuroscience at Dartmouth (MIND) Computational Summer School
	Honorable mention for NSF Graduate Research Fellowship Program Award
2018-2019	NIA Institutional National Research Service Award (T32)
2013-2014	Honorary Member of Pi Kappa Delta National Forensics
2013-2014	Member of National Society of Collegiate Scholars
2013	NSF Summer Research in the Brain and Cognitive Sciences (SREBCS) Grant
2013	The College of William and Mary Charles Center Student Research Grant

2012	The College of William and Mary Charles Center Student Research Grant
2011-2012	Dean's List at The College of William and Mary
2009	President's Education Award
2009	Academic scholarship to St. Francis University in PA
2009	Basketball scholarship to Long Island University CW Post in NY