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CURRENT
POSITION

2025-	Associate Professor, Department of Cognitive Sciences
2019-2025	Assistant Professor, Department of Cognitive Sciences
	Fellow, Center for the Neurobiology of Learning and Memory
	Faculty, Center for Theoretical Behavioral Sciences
	Faculty, Drury Institute for Translational Depression Discoveries
	University of California, Irvine

PREVIOUS
APPOINT-
MENTS

2018	Associate Research Scholar, Princeton Neuroscience Institute
2013-2018	Postdoctoral Research Associate, Princeton Neuroscience Institute
2007-2013	Graduate researcher, New York University
2006	Research assistant, Deicken lab, UCSF/VA
2005-2007	Research assistant, Wagner lab, Stanford

EDUCATION

2013	Ph.D., Cognition & Perception, **New York University**
2003	S.B., Mathematics (additional concentration in Economics)
	Massachusetts Institute of Technology

RESEARCH
FUNDING

Ongoing

2025-2030   NIMH R01MH061285 (subaward; PI SD Pollak)
"Emotion Processing: Risk for Psychopathology in Children"

2025-2030   NIA R01AG088306 (PI; MPI IJ Bennett)
"Memory-guided decision making across the lifespan"

2023-2028   NIMH R01MH128306 (Co-I; PI MA Yassa)
"Testing a memory-based hypothesis for anhedonia"

2022-2027   NINDS R01NS119468 (Co-I; PI ER Chrastil)
"Cognitive graphs, active decision making, and brain network dynamics"

Completed

2022-2025   NIMH P50MH096889 (Co-I; PI TZ Baram)
"Fragmented early-life experiences, aberrant circuit maturation, emotional vulnerabilities"

2022-2025   UK MRC MR/W028476/1 (Collaborator; PI M Field)
"Reinforcer-specific value-based decision-making in persistence of and recovery from alcohol use disorder"

2021-2025   NIA R21AG072673 (PI)
"Improving multi-step planning in aging by overcoming deficits in memory encoding"

2021-2023   BBRF NARSAD Young Investigator award (PI)
"Determining the role of episodic memory in substance use disorder"

2020-2021   NIMH P50MH096889 (seed grant; PI TZ Baram)
"Early life adversity effects on event segmentation"

2011-2013   NIMH F31MH095501 (PI)
"Computational mechanisms of goal-directed control"

To lab members/trainees

2026	UROP Undergraduate Research Support Award (Aidan Goeschel & Bryce Wilson)
2026	UROP Undergraduate Research Support Award (Annie Shen)
2025	NIA/SRNDNA Collaboration award (Shensheng Wang)
2025	UROP Undergraduate Research Support Award (Jianle Guo & Rohin Pasule)
2024	ARCS Foundation Scholar (Bianca Leonard)
2024	UCI Summer Undergraduate Research Fellowship (Meghan Johnson)
2024	Indow Fellowship for Research Excellence (Jungsun Yoo)
2024	NIA/SRNDNA Summer Research award (Melisa Azimihashemi)
2024	NIA/SRNDNA Summer Research award (Ami Yamamoto)
2024	UROP Research Experience Fellowship (Ami Yamamoto)
2023-2026	Hewitt Foundation postdoctoral fellowship (Dale Zhou)
2023-2025	NIMH F31MH134620 (Nora Harhen)
2023-2025	NIMH T32MH119049 (Ari Khoudary)
2023	Robert J. Glushko prize for best undergraduate thesis (Gloria Cheng)
2023	CNLM Jared M. Roberts Graduate Student Award (Ari Khoudary)
2023	CNLM Jared M. Roberts Graduate Student Award (Nidhi Banavar)
2022	UCI Summer Undergraduate Research Fellowship (Gloria Cheng)
2022	Lambert prize in Foundations of Science (Nidhi Banavar)
2022-2025	NIA F32AG072836 (Sharon Noh)
2020-2023	National Defense Science & Engineering Graduate fellowship (Nora Harhen)
2019	UCI Summer Undergraduate Research Fellowship (Brianna Sarcos)

PUBLICATIONS
(∗ = Equal contribution; + = UCI Lab member.)

Preprints

PP8 Banavar NV+, **Bornstein AM**. Variability in Complex Constructs: Inferring risk preference and temporal discounting. *PsyArXiv*.
doi:10.31234/osf.io/zdq5v

PP7 Harhen NC+, Budiono R, Hartley CA*, **Bornstein AM***. Developmental differences in exploration reveal underlying differences in structure inference. *PsyArXiv*.
doi:10.31234/osf.io/t8hpr_v1

PP6 Harhen NC+, **Bornstein AM***, Hartley CA*. Developmental changes in memory structure and precision alter the use of retrieved episodes during decisions for reward. *PsyArXiv*.
doi:10.31234/osf.io/78zmx

PP5 Noh SM+*, Cooper KW*, Guo S+, Zhou D+, Stark CEL, **Bornstein AM**. Multi-step inference can be improved across the lifespan with individualized memory interventions. *PsyArXiv*.
doi:10.31234/osf.io/3mhj6

PP4 Noh SM+*, Zhou D*+, Cooper KW+, Guo S+, Dinh ET+, **Bornstein AM.** Sparsity and memory constraints interact with training sequence to bias learning of associative maps. *PsyArXiv*.
doi:10.31234/osf.io/qb5z2

PP3 Wang W, Chierchia G, Cooley BJ, Chang T, **Bornstein AM**, Schweizer S. Social decision-making under uncertainty. *PsyArXiv*.
doi:10.31234/osf.io/z6vej

PP2 Yoo J+, **Bornstein AM**. Temporal dynamics of model-based control reveal arbitration between multiple task representations. *PsyArXiv*.
doi:10.31234/osf.io/sgcy5

PP1 Zhou D+, Noh SM+, Harhen NC+, Banavar NV+, Kirwan B, Yassa MA, **Bornstein AM**. A compressed code for memory discrimination. *bioRxiv*.
doi:10.1101/2025.10.12.681901

Peer-reviewed journal articles

JP24 Hadj-Amar B, **Bornstein AM**, Guindani M, Vannuci M (2025). Discrete Autoregressive Switching Processes with Cumulative Shrinkage Priors for Graphical Modeling of Time Series Data. *Journal of Computational and Graphical Statistics*.
doi:10.1080/10618600.2025.2551271

JP23 Schetzsle B, Lee J, **Bornstein AM**, Shahbaba B, Guindani M (2025). A Bayesian Time-Varying Psychophysiological Interaction Model. *Data Science in Science*, 4(1):2519436.
doi:10.1080/26941899.2025.2519436

JP22 Khoudary A+, Peters MAK*, **Bornstein AM*** (2025). Reasoning goals and representational decisions in computational cognitive neuroscience: lessons from the drift diffusion model. *European Journal of Neuroscience*, 61:e7009.
doi:10.1111/ejn.70098

JP21 Banavar NV+, Noh SM+, Wahlheim CN, Cassidy BS, Kirwan CB, Stark CEL, **Bornstein AM** (2024). A response time model of the three-choice Mnemonic Similarity Task provides stable, mechanistically interpretable individual-difference measures. *Frontiers in Human Neuroscience*, 18:137928.
doi:10.3389/fnhum.2024.137928

JP20 Yoo J+, Chrastil ER, **Bornstein AM** (2024). Cognitive graphs: Representational substrates for planning. *Decision*, 11(4), 537-556.
doi:10.1037/dec0000249

JP19 Chen J, **Bornstein AM** (2024). The causal structure and computational value of narratives. *Trends in Cognitive Sciences*, 28(8):769-781.
doi:10.1016/j.tics.2024.04.003

JP18 Harhen NC+, **Bornstein AM** (2024). Interval timing as a computational pathway from early life adversity to affective disorders. *Topics in Cognitive Science*, 16(2024):92-112.
doi:10.1111/tops.12701

JP17 Noh SM+, Singla UK, Bennett IJ, **Bornstein AM** (2023). Memory precision and age differentially predict the use of decision-making strategies across the lifespan. *Scientific Reports*, 13:17014.
doi:10.1038/s41598-023-44107-5

JP16 **Bornstein AM**, Aly M, Feng SF, Turk-Browne NB, Norman KA, Cohen JD (2023). Associative memory retrieval modulates upcoming perceptual decisions. *Cognitive, Affective, & Behavioral Neuroscience*, 23:645665.
doi:10.3758/s13415-023-01092-6
doi:10.18112/openneuro.ds001614.v1.0.1

JP15 Harhen NC+, **Bornstein AM** (2023). Overharvesting in human patch foraging reflects rational structure learning and adaptive planning. *Proceedings of the National Academy of Sciences*, 120(13):e2216524120.
doi:10.1073/pnas.2216524120

JP14 Otto AR, Devine S, Schultz E, **Bornstein AM***, Louie K* (2022). Context-dependent choice and evaluation in real-world consumer behavior. *Scientific Reports*, 12:17744.
doi:10.1038/s41598-022-22416-5
doi:10.17605/OSF.IO/EC5DX

JP13 Rmus M, Ritz H, Hunter LE, **Bornstein AM***, Shenhav A* (2022). Humans can navigate complex graph structures acquired during latent learning. *Cognition*, 225:105103.
doi:10.1016/j.cognition.2022.105103

JP12 Wang S, Feng SF, **Bornstein AM** (2021). Mixing memory and desire: How decisions for reward depend on the dynamics and content of memory reinstatement. *Wiley Interdisciplinary Reviews: Cognitive Science*, e1581.
doi:10.1002/wcs.1581
Featured on the cover.
Recognized as one of the top-ten most-cited papers from this journal/year.

JP11 Rouhani N, Norman KA, Niv Y, **Bornstein AM** (2020). Reward prediction errors create event boundaries in memory. *Cognition*, 203:104269.
doi:10.1016/j.cognition.2020.104269

JP10 **Bornstein AM***, Pickard H* (2020). Chasing the first high: Memory sampling in drug choice. *Neuropsychopharmacology*, 45(6):907-915.
doi:10.1038/s41386-019-0594-2 **Featured on the cover.**

JP9 Kane GA, **Bornstein AM**, Shenhav A, Wilson RC, Daw ND, Cohen JD (2019). Rats exhibit similar biases in foraging and intertemporal choice tasks. *eLife*, 8:e48429.
doi:10.7554/eLife.48429

JP8 Millner AJ, den Ouden HEM, Gershman SJ, Glenn CR, Kearns J, **Bornstein AM**, Marx BP, Keane TM, Nock MK (2019). Suicidal thoughts and behaviors are associated

with an increased decision-making bias for active responses to escape aversive states. *Journal of Abnormal Psychology*, 128(2):106-118.
doi:10.1037/abn0000395

JP7 Hoskin AN, **Bornstein AM**, Norman KA, Cohen JD (2018). Refresh my memory: Episodic memory reinstatements intrude on working memory maintenance. *Cognitive, Affective, & Behavioral Neuroscience*, 19:338-354.
doi:10.3758/s13415-018-00674-z
doi:10.18112/openneuro.ds001576.v1.0.0

JP6 **Bornstein AM**, Khaw MW, Shohamy D, Daw ND (2017). Reminders of past choices bias decisions for reward in humans. *Nature Communications*, 8:15958.
doi:10.1038/ncomms15958

JP5 **Bornstein AM**, Norman KA (2017). Reinstated episodic context guides sampling-based decisions for reward. *Nature Neuroscience*, 20:997-1003.
doi:10.1038/nn.4573
doi:10.18112/openneuro.ds001607.v1.0.1

JP4 **Bornstein AM**, Daw ND (2013). Cortical and hippocampal correlates of deliberation during model-based decisions for rewards in humans. *PLoS Computational Biology*, 9(12):e1003387.
doi:10.1371/journal.pcbi.1003387

JP3 **Bornstein AM**, Daw ND (2012). Dissociating hippocampal and striatal contributions to sequential prediction learning. *European Journal of Neuroscience*, 35:1011-1023.
doi:10.1111/j.1460-9568.2011.07920.x

JP2 **Bornstein AM**, Daw ND (2011). Multiplicity of control in the basal ganglia: computational roles of striatal subregions. *Current Opinion in Neurobiology*, 21(3):374-380.
doi:10.1016/j.conb.2011.02.009

JP1 Preston AR, **Bornstein AM**, Hutchinson JB, Gaare ME, Glover GH, Wagner AD (2010). High-resolution fMRI of content-sensitive subsequent memory responses in human medial temporal lobe. *Journal of Cognitive Neuroscience*, 22:156-173.
doi:10.1162/jocn.2009.21195

Articles in conference proceedings

CP16 Khoudary A+, **Bornstein AM***, Peters MAK* (2025). Subjective and objective cue probability interact to shape perceptual decisions. *Proceedings of the 47th Annual Conference of the Cognitive Science Society.*

CP15 Chen Y+, Harhen NC+, Stout DA, **Bornstein AM** (2024). Early life unpredictability modulates planning horizon in a structured foraging task. *Cognitive Computational Neuroscience.*

CP14 Harhen NC+, Hartley CA*, **Bornstein AM*** (2024). Development of structure inference contributes to age-related differences in exploration. *Cognitive Computational Neuroscience.*

CP13 Yoo J+, Zhou D+, **Bornstein AM** (2024). Latent cause inference as an efficient and flexible learning rule for cognitive graphs. *Cognitive Computational Neuroscience.*

CP12 Zhou D+, Noh SM+, Yassa MA, **Bornstein AM** (2024). Pattern separation using compressed and semantic representations of memory. *Cognitive Computational Neuroscience.*

CP11 Khoudary A+, Peters MAK*, **Bornstein AM*** (2022). Precision-weighted evidence integration predicts time-varying influence of memory on perceptual decisions. *Cognitive Computational Neuroscience.*

CP10 Banavar NV+, **Bornstein AM** (2022). Response time modeling provides stable and mechanistically interpretable measures of individual differences in behavioral pattern separation. *Proceedings of the 20th International Conference on Cognitive Modeling.*
Selected for a talk.

CP9 Harhen NC+, **Bornstein AM** (2022). Learning to expect change: Volatility during early experience alters reward expectations in a model of interval timing. *Proceedings of the 20th International Conference on Cognitive Modeling.*
Selected for a talk.
Selected for a best paper award.

CP8 Banavar NV+, **Bornstein AM** (2022). Decision difficulty modulates the re-use of computations across trials in non-sequential decision tasks. *Proceedings of the 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM 2022)*

CP7 Harhen NC+, **Bornstein AM** (2022). Humans adapt their foraging strategies and computations to environment complexity. *Proceedings of the 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM 2022)*

CP6 Yoo J+, **Bornstein AM** (2022). Two-stage task with increased state space complexity to assess online planning. *Proceedings of the 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM 2022)*

CP5 Banavar NV+, Lee MD, **Bornstein AM** (2021). Sequential effects in non-sequential tasks. *Proceedings of the 19th International Conference on Cognitive Modeling.*

CP4 Harhen NC+, **Bornstein AM** (2021). Structure learning as a mechanism of overharvesting. *Proceedings of the 19th International Conference on Cognitive Modeling.*

CP3 Harhen NC+, Hartley CA, **Bornstein AM** (2021). Model-based foraging using latent-cause inference. *Proceedings of the 43rd Annual Conference of the Cognitive Science Society.*
doi:10.31234/osf.io/dfztu
https://github.com/uciccnl/CogSci2021-HarhenHartleyBornstein

CP2 Kane GA, **Bornstein AM**, Shenhav A, Wilson RC, Daw ND, Cohen JD (2017). Mechanisms of overharvesting in patch foraging. *Proceedings of the 39th Annual Conference of the Cognitive Science Society*, 637-642.

CP1 Floares A, Jakary A, **Bornstein A**, Deicken R (2006). Neural networks and classification and regression trees are able to distinguish females with major depression from healthy controls using neuroimaging data. *Proceedings of the IEEE International Joint Conference of Neural Networks, 2006*, 4605-4611.
doi:10.1109/ijcnn.2006.247090

Commentaries & Book Chapters

RP6 Zhou D+, **Bornstein AM** (2024). Expanding horizons in reinforcement learning for curious exploration and creative planning (Commentary on Ivancovsky et al). *Behavioral and Brain Sciences*, 47, e118.
doi:10.1017/S0140525X23003394

RP5 Banavar NV+, **Bornstein AM** (2024). Multi-plasticities: Distinguishing context-specific habits from complex perseverations. In Y. Vandaele (Ed.). *Habits - Their Definition, Neurobiology and Role in Addiction.* Cham, Switzerland: Springer Nature.

RP4 **Bornstein AM***, Constantino SM* (2017). Nudge back: Towards a taxonomy of scientific rationalities. *London Conference in Critical Thought.*

RP3 **Bornstein AM**, Miller KJ, Shenhav A (2015). Walking bundles of habits (and Response-Outcome associations). *European Journal of Neuroscience*, 41:1356-1357.
doi:10.1111/ejn.12906

RP2 **Bornstein AM** (2014). Functions of the hippocampal memory system in instrumental control (Doctoral dissertation).
Available from ProQuest Dissertations & Theses Global (3614853).

RP1 **Bornstein AM**, Nylen EL, Steele SA (2011). Unblocking the neural substrates of model-based value. *Journal of Neuroscience*, 31(28):10117-10118.
doi:10.1523/jneurosci.1883-11.2011

Accepted conference abstracts (since 2019)

CA51 Booras A+, Chrastil ER*, **Bornstein AM*** (2025). Humans adaptively discount successor representations when navigating graph-structured spaces. *Bay Area Memory Meeting.*

CA50 Khoudary A+, Peters MAK*, **Bornstein AM*** (2025). Uncertainty resolution explains dynamic effects of memory on perceptual decisions *Bay Area Memory Meeting.*
Selected for a talk.

CA49 Zhou D+, Yassa MA*, **Bornstein AM*** (2025). A lossy compression account of mnemonic discrimination: Computational theory and multimodal evidence. *Bay Area Memory Meeting.*
Selected for a talk.

CA48 Booras A+, Chrastil ER, **Bornstein AM** (2025). Humans adaptively discount successor representations when navigating graph-structured spaces. *Society for Neuroscience Annual Meeting.*

CA47 Guo S+*, Palsule R+*, Noh SM+*, Preston AR, **Bornstein AM** (2025). The impact of learning sequences in encouraging distinct memory representations to support associative inference in older-adults. *Society for Neuroscience Annual Meeting.*

CA46 Khoudary A+, **Bornstein AM***, Peters MAK* (2025). A philosophical toolkit for computational modeling of cognition. *Society for Neuroscience Annual Meeting.*

CA45 Khoudary A+, Peters MAK*, **Bornstein AM*** (2025). Precision-weighted integration explains dynamic effects of expectations on perceptual decisions. *Society for Neuroscience Annual Meeting.*

CA44 Leonard BT+, Martínez-Ortíz MA, Hartley CA, Yassa MA, **Bornstein AM** (2025). Motivational conflict resolution is shaped by early life unpredictability. *Society for Neuroscience Annual Meeting.*

CA43 Palsule R+*, Guo S+*, Noh SM+*, **Bornstein AM** (2025). Naturalistic task framing improves older adults' ability to infer and navigate complex associative networks. *Society for Neuroscience Annual Meeting.*

CA42 Yoo J+, Zhou D+, Goeschel A+, **Bornstein AM** (2025). Contingency-dependent state augmentation as a normative learning rule for non-Markovian tasks. *Society for Neuroscience Annual Meeting.*

CA41 Field M, Copeland A, Hogarth L, Pun M, Ryan F, Pickard H, **Bornstein AM**, Murphy J, Strickland J (2025). Meaning in life and value-based decision-making in alcohol use disorder. *55th EABCT Congress.*

CA40 Zhou D*, Noh SM*, Cooper KW, Guo S, Dinh ET, **Bornstein AM** (2025). Sparse and distributed memory constraints drive representational change as a function of temporal learning sequence. *47th Annual Conference of the Cognitive Science Society.*

CA39 Khoudary A+, Peters MAK*, **Bornstein AM*** (2025). A principled model of uncertainty resolution explains dynamic effects of expectations in perceptual decision making. *Society for Philosophy and Neuroscience 2025.*
Selected for a talk.

CA38 Kapogianis T, **Bornstein AM**, Chrastil ER (2024). Size and community structure affect abstract graph learning. *45th Annual Conference of the Cognitive Science Society.*

CA37 Azimihashemi M+, Banavar NV+, Guo S+, **Bornstein AM** (2024). Does alcohol dependence differentially influence episodic and semantic contributions to recognition priming in older adults? *SRNDNA Summer Symposium 2024.*

CA36 Yamamoto A+, Guo S+, Nadkarni M+, Rouhani N, **Bornstein AM** (2024). Alcohol Prediction Errors in Individuals With Varying Levels of Alcohol Use. *SRNDNA Summer Symposium 2024.*

CA35 Dinh ET+, Zhou D+, Guo S+, Noh SM+, Cooper KW, **Bornstein AM** (2024). Autoencoder models of human graph learning reveal that sparse and dense representations differentially support planning and recall *Society for Neuroscience Annual Meeting.*

CA34 Harhen NC+, **Bornstein AM***, Hartley CA* (2024). Reinstated episodes and context differentially guide decision making across development. *Society for Neuroscience Annual Meeting.*

CA33 Chen Y+, Harhen NC+, Stout DA, **Bornstein AM** (2024). Early-life unpredictability modulates planning horizon in a structured foraging task. *Society for Neuroscience Annual Meeting.*

CA32 Yoo J+, **Bornstein AM** (2024). Goal-directed control evolves in tandem with multiple task representations. *Society for Neuroscience Annual Meeting.*

CA31 Khoudary A+, **Bornstein AM***, Peters MAK* (2024). Reasoning goals and representational decisions in computational cognitive neuroscience: a case study from bounded evidence accumulation. *Philosophy and Neuroscience at the Gulf VII.*

CA30 Martínez-Ortiz MA, Leonard B+, Yassa MA, **Bornstein AM**, Hartley CA (2024). Exploring the relationship between Early Life Adversity (ELA) dimensions and the development of decision-making strategies under motivational conflict. *The Flux Society Congress for Integrative Developmental Neuroscience.*

CA29 Khoudary A+, Peters MAK*, **Bornstein AM*** (2024). Explaining dynamic effects of memory on perceptual decisions. *Learning and Memory 2024.*

CA28 Khoudary A, **Bornstein AM***, Peters MAK* (2023). Characterizing dynamic effects of memory on perceptual evidence accumulation. *RIKEN CBS Summer Program*

CA27 Chen Y+, Yoo J+,Harhen NC+, Noh SM+, Stout DA*, **Bornstein AM*** (2023). Adult and early-life adversity influences on memory-guided planning. *UCI Conte Center annual symposium.*

CA26 Harhen NC+, Noh SM+, Stough-Lacking S+, **Bornstein AM** (2023). Suboptimal or locally rational? Foraging as a window onto the universal mechanisms of decisions under uncertainty. *Healing the Brain: Bridging the Gap in Low-and Middle-Income Countries.*

CA25 Harhen NC+, **Bornstein AM** (2023). Temporal representation optimization provides a computational link between early life adversity and anhedonia. *Computational Psychiatry 2023.*

CA24 Banavar NV+, **Bornstein AM** (2023). Decomposing behavioral pattern separation: A model-based analysis. *Learning and Memory 2023.*

CA23 Harhen NC+, **Bornstein AM** (2023). Temporal representation adaptation as a computational link between early life unpredictability and anhedonia. *Learning and Memory 2023.*

CA22 Khoudary A+, Peters MAK*, **Bornstein AM*** (2023). Characterizing dynamic effects of memory on perceptual decisions. *Learning and Memory 2023.*

CA21 Noh SM+, **Bornstein AM** (2023). Memory encoding ability interacts with training interventions to improve memory-guided inference decisions *Learning and Memory 2023.*

CA20 Yoo J+, **Bornstein AM** (2023). Humans build configural representations for planning in complex environments *Learning and Memory 2023.*

CA19 Stout DM, Harhen NC+, **Bornstein AM**, Vinograd M, Spadoni A, Simmons AN, Yassa MA, Davis EP, Glynn LM, Baram TZ, Baker DG, Risbrough VB (2023). Unpredictable early-life experiences moderate the effect of anhedonia and PTSD symptoms on neural measures of reward learning in adulthood. *Anxiety and Depression Association of America.*

CA18 Harhen NC+, **Bornstein AM** (2023). Interval timing as a computational framework for examining the pathway from early life unpredictability to affective disorders. *UCI Conte Center annual symposium.*
Best abstract award.
Selected for a short talk.

CA17 Khoudary A+, **Bornstein AM***, Peters MAK* (2023). Perceptual decisions result from dynamic precision-weighted integration of memory and visual information. *Association of Scientific Studies of Consciousness.*
Selected for a talk.

CA16 Kapogianis T, **Bornstein AM**, Chrastil ER (2022). Graph Metrics and Non-Spatial Navigational Learning. *Society for Neuroscience Annual Meeting.*

CA15 Harhen NC+, Hartley CA*, **Bornstein AM*** (2022). Memory-guided decision-making develops alongside model-based planning. *The Flux Society Congress for Integrative Developmental Neuroscience.*

CA14 Harhen NC+, **Bornstein AM** (2022). Representation learning & adaptation in human foraging. *CNLM annual meeting.*
Selected for a short talk.

CA13 Yoo J+, **Bornstein AM** (2022). Task complexity and experience modulate the use of online planning. *CNLM annual meeting.*

CA12 Noh SM+, Stark CEL, **Bornstein AM** (2022). Mnemonic Discrimination Ability Predicts Optimal Training Condition for Memory-Guided Inference Decisions. *Annual meeting of the Cognitive Neuroscience Society.*
Selected for a short talk.

CA11 Yoo J+, **Bornstein AM** (2021). Task complexity and experience dictate the use of online, versus offline, planning in humans. *Annual meeting of the Society for Neuroeconomics.*

CA10 Noh SM+, Kerr T, Bennett IA*, **Bornstein AM*** (2021). Age-related differences in memory-guided decisions are driven by a trade-off between multiple decision systems. *Society for Neuroscience Annual Meeting.*

CA9 Noh SM+, Kerr T, **Bornstein AM** (2021). Pattern Separation Predicts Which Memories Are Sampled During Decisions for Reward *Psychonomics.*

CA8 Noh SM+, **Bornstein AM** (2021). Pattern separation mediates the types of memories sampled during decisions for reward. *CNLM annual meeting.*

CA7 Banavar NV+, **Bornstein AM** (2021). Deliberative evaluation in intertemporal choice is shaped by experiment structure. *Annual meeting of the Society for Neuroeconomics* **Selected for a short talk.**

CA6 Devine SM, Otto AR, **Bornstein AM***, Louie K* (2021). Context-dependent choice and evaluation in real-world consumer behavior *Mathematical Psychology*

CA5 Harhen NC+, Yassa MA, Baram TZ, **Bornstein AM** (2021). Exploring a latent cause model of substance use disorder symptoms. *Biological Psychiatry* doi:10.1016/j.biopsych.2021.02.479

CA4 Cooper KW+, Li L, Agostinelli F, Saraf M, Elias GA, Baldi P, **Bornstein AM**, Shahbaba B, Fortin N (2021). Theta-associated nonspatial sequence coding in hippocampus. *Society for Neuroscience Global Connectome.*

CA3 Harhen NC+, Hartley CA, **Bornstein AM** (2020). Foraging behavior adjusts to multiple scales of context. *Annual meeting of the Society for Neuroeconomics* **Selected for a talk.**

CA2 Vlasceanu M, Morais MJ, Zhao Z, **Bornstein AM**, Norman KA, Coman AC (2020). Self-Other Similarity Modulates the Socially-Triggered Context-Based Prediction Error Effect on Memory. *41st Annual Conference of the Cognitive Science Society*

CA1 Rouhani N, Norman KA, Niv Y, **Bornstein AM** (2019). Reward prediction errors create event boundaries in memory *Psychonomics*

Awards

2024	CNLM Exceptional Mentor Award
2023	Election to the Memory Disorders Research Society
2020	Association for Psychological Science "Rising Star" Award
2020	Brain and Behavior Research Foundation NARSAD Young Investigator Award
2005,6,8	Honorable mention, NSF Graduate Research Fellowship
2000	Runner up, MIT $50k Business Plan competition

Talks

Invited

Nov 2025	Mechanistic Basis of Foraging, Birmingham, UK
Mar 2025	Rutgers-Princeton Center for Computational Cognitive Neuro-Psychiatry
Feb 2025	University of California, Berkeley
Feb 2025	National Institute of Drug Abuse
Nov 2024	Singidunum University, Belgrade, Serbia
Sep 2024	New York University
Feb 2024	University of California Los Angeles
Feb 2024	University of Miami
Jan 2024	Virginia Tech
Dec 2023	University of California Davis
Dec 2023	Brown University
May 2023	Future of Foraging seminar series
Apr 2023	Johns Hopkins University
Mar 2023	Northeastern University
Feb 2023	Center for the Neurobiology of Learning & Memory
Dec 2022	City University of New York
Feb 2021	University of California Los Angeles
Feb 2021	Context and Affective Memory meeting
Aug 2020	University of California Los Angeles
Mar 2020	Claremont Colleges
Feb 2020	University of California Riverside
Sep 2019	Facebook Research Labs
May 2019	University of California Los Angeles
Apr 2019	Brown University
Jan 2019	National Institute of Drug Abuse
Dec 2017	Cambridge University
Oct 2017	Johns Hopkins University
Feb 2015	Mount Sinai School of Medicine
Jun 2014	Weill-Cornell Medical College
Jun 2011	Memory and Decisions meeting, Stanford University
Jan 2011	Parallel Distributed Processing meeting, Princeton University
Jan 2011	Kavli Institute, Harvard University

Contributed

Apr 2025	Cognitive Neuroscience Society symposium, "Uncertainty Resolution across Learning, Memory, and Decision-making"
Jan 2025	Workshop on Self-assembling Games, UC Irvine
May 2024	American Psychological Society (Presenter: +Sharon M Noh)

May 2022   Center for the Neurobiology of Learning and Memory Annual Meeting

Apr 2021   Society of Biological Psychiatry symposium "Advancing Treatment of Substance Use Disorders Through Computational Modeling"

Jan 2020 Winter Conference on the Neurobiology of Learning and Memory symposium "Mnemonic contributions to reinforcement learning and decision making"

Mar 2018 Cosyne workshop "Hippocampal computations and interactions supporting statistical learning and decision-making"

Nov 2015 SFN symposium "Understanding Goal-Directed Decision-Making in Humans: Computations and Circuits"

Mar 2014   Workshop on the Neurobiology of Prediction and Surprise, Rutgers University

TEACHING/SERVICE

UC Irvine

Fall 2025   Resisting "Neuro-narratives" (Undergraduate)

Winter 2025   LIFTED UC Irvine Prison Education Program (Memory course)

Spring 2023-   Memory (Undergraduate)

Spring 2023-24,Fall 2025-   Decision making (Graduate)

Spring 2021-22 Decision making & Problem solving (Graduate; with Prof. Zygmunt Pizlo)

Spring 2020 Topics in Reinforcement Learning (Graduate; with Prof. Mimi Liljeholm)

Spring 2019-22 Research in Exp Psych (Undergraduate; with Prof. Nadia Chernyak)

Winter 2019-22   Advanced Experimental Psychology (Undergraduate)

Other teaching/mentorship

Fall 2020   Neuromatch academy mentor

Summer 2020   Neuromatch academy group leader

Summer 2020   GSMI Cientifico Latino

2019   MEET alumni mentor

Summer 2018 Computational & Cognitive Neuroscience Summer School, Suzhou, China

2016-2018   Princeton Prison Teaching Initiative

Summer 2007,08 MIT Middle East Education through Technology (MEET), Jerusalem

University/Department service

2024-   UCI Research Imaging Equipment Committee

2022-2025   Cognitive Sciences Colloquium committee, faculty advisor

2021- Irvine Faculty Association, Executive board member; 2023-2025 Treasurer; 2025- Co-Chair

2020   CNLM "Evening to Remember" organizational committee

2019-   First-Generation Faculty Initiative

2019- UCI Prison Education Program, advisory board, curriculum committee

2019,23   Cognitive Sciences faculty search committee

2018,20,22,24   Cognitive Sciences PhD admissions committee

Organizational/Field service

2025- Associate Editor, *Cognitive Science.*

2025- Justice, Diversity, Equity, and Inclusion Committee, *Memory Disorders Research Society.*

2025- Advisor, *All People's Health Collective.*

2024- Editorial board, *Translational Neuroscience.*

2023 UCI Conte Center annual symposium, organized with the Conte Center Team.

2022 NSF/Simons NeuroDataScience workshop, Co-Organizer (with Norbert Fortin and Babak Shahbaba)

2021 Center for Neurobiology of Learning and Memory Spring Meeting Co-organizer (with Lulu Chen)

2018 Princeton Neuroscience Institute "Inside-Out" seminar series Co-organizer (with Ahmed El Hady)

2018 "Goal-Directed Decision Making: Computations and Circuits" *Elsevier* Co-editor (with Richard Morris & Amitai Shenhav)

2015 COSYNE Workshop "Memory in action: The role(s) of the hippocampus in decisions for reward" Co-organizer (with G. Elliott Wimmer)