# Augustin C Hennings, PhD

Princeton Neuroscience Institute, Princeton University

email: gus.hennings@princeton.edu website: achennings.github.io

#### PROFESSIONAL APPOINTMENTS

2022 – Current **Princeton University** 

Postdoctoral Research Associate, Princeton Neuroscience Institute

Laboratory of Ken Norman, PhD

### **EDUCATION**

2022 The University of Texas at Austin

PhD, Institute for Neuroscience

Advisors: Dr. Joseph Dunsmoor & Dr. Jarrod Lewis-Peacock

Dissertation: Contextual processes in Pavlovian conditioning and extinction: insights

from episodic memory

2016 The College of William and Mary

BS, Neuroscience, Departmental Honors

Major in Hispanic Studies

## **PEER-REVIEWED PUBLICATIONS**

- Cooper SE, **Hennings AC**, Bibb SA, Lewis-Peacock JA, & Dunsmoor JE (2024). Semantic structures facilitate threat memory integration throughout the medial temporal lobe and medial prefrontal cortex. *Current Biology*.
- **Hennings AC**, Cooper SE, Lewis-Peacock JA, & Dunsmoor JE (2022). Pattern analysis of neuroimaging data reveals novel insights on threat learning and extinction in humans. *Neuroscience & Biobehavioral Reviews*.
- Keller NE, **Hennings AC**, Leiker EK, Lewis-Peacock JA, & Dunsmoor JE (2022). Rewarded extinction increases amygdalar connectivity and stabilizes long-term memory traces in the vmPFC. *Journal of Neuroscience*.
- **Hennings AC,** McClay M, Lewis-Peacock JA, & Dunsmoor JE (2022). Neural reinstatement reveals divided organization of fear and extinction memories in the human brain. *Current Biology*.
- **Hennings AC**, Lewis-Peacock JA, & Dunsmoor JE (2021). Emotional learning retroactively enhances item memory but distorts source attribution. *Learning & Memory*.
- **Hennings AC**, Bibb SA, Lewis-Peacock JA, Dunsmoor JE (2021). The effect of top-down thought suppression on fear extinction generalization. *Behavioural Brain Research*.
- McClay M, **Hennings AC**, Reidel A, & Dunsmoor JE (2020). The features that shape fear: How emotional intensity and threat relevance interact to guide fear learning. *Neuropsychologia*.
- **Hennings AC**, McClay M, Lewis-Peacock JA, & Dunsmoor JE (2020). Contextual reinstatement promotes extinction generalization in healthy adults but not PTSD. *Neuropsychologia*.

Keller NE, **Hennings AC**, & Dunsmoor JE (2020). Behavioral and neural processes in counterconditioning: past and future directions. *Behaviour Research and Therapy*.

### **IN-PROGRESS MANUSCRIPTS**

- **Hennings AC**, Bibb SA, Lewis-Peacock JA, & Dunsmoor JE (*submitted*). Neural reinstatement of encoding context mediates the switch between fear and extinction recall. *Preprint available on PsyRxiv*.
- **Hennings AC** & Norman KA. Enhancing inhibitory control of memory via real-time fMRI neurofeedback. *In prep.*
- Brooks PP\*, **Hennings AC\***, Guzman BA, Norman KA^, & Ritchey M^. Eye movements reveal the cognitive dynamics supporting successful memory suppression. \*^denotes equal contribution. In prep.

### FELLOWSHIPS, HONORS, & AWARDS

2020 – 2022	Individual NIH Predoctoral Fellowship (NRSA) – F31 MH124360
2020	Graduate School Summer Fellowship, UT Austin
2019	Big Data in Neuroscience Workshop Trainee Travel Award, UM Ann Arbor
2019	Wisconsin Symposium on Emotion Trainee Travel Award, UW Madison
2018	Office of Graduate Studies Professional Development Award, UT Austin
2015	Charles Center Summer Scholarship, W&M
2013	HHMI Freshman Research Award, W&M

#### **SELECTED PRESENTATIONS AND INVITED TALKS**

Includes only items for which I was the presenting author.

- **Hennings AC**, Bibb SA, Lewis-Peacock JA, & Dunsmoor JE (2024) *Contextual reinstatement of threat and safety resolves threat ambiguity in humans.* Poster presented at the Society for Biological Psychiatry. Austin, TX.
- Brooks PP\*, **Hennings AC**\*, Guzman BA, Norman KA^, Ritchey M^ (2024) *Eye movements reveal the dynamics of memory reactivation supporting successful memory suppression.* Talk presented at the Manhattan Area Memory Meeting. New Haven, CT.
- **Hennings AC**, Scotti PS, Kempner RP, Nguyen A, McDevitt E, Wallace G, Li K, Turk-Browne NB, Cohen JD, & Norman KA (2024) *Cloud-based software framework to simplify and standardize real-time fMRI*. Poster presented at the NIH BRAIN initiative conference. Bethesda, MD.
- Brooks PP\*, **Hennings AC\***, Guzman BA, Norman KA^, Ritchey M^ (2024) *Eye movements reveal the dynamics of memory reactivation supporting successful memory suppression.* Poster presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- Scotti PS\*, **Hennings AC**\*, Wallace G, Polcyn S, Brooks PP, Mennen A, Michelmann S, Li K, Turk-Browne NB, Cohen JD, & Norman KA (2023) *Cloud-based software framework to simplify and standardize real-time fMRI.* Poster presented at the NIH BRAIN initiative conference. Bethesda, MD.
- Scotti PS, **Hennings AC**, & Norman KA. *Conducting studies with the realtime fMRI cloud framework (RT-cloud)* (2022). Workshop presented at the Real-time functional Imaging and neurofeedback meeting. New Haven, CT.
- **Hennings AC**, Bibb SA, Lewis-Peacock JA, & Dunsmoor JE (2022) Competition between contextual representations of threat and safety determines the success of extinction recall in humans.

- Nanosymposium presentation given at the Society for Neuroscience Annual Meeting. San Diego, CA.
- **Hennings AC,** Lewis-Peacock JA, & Dunsmoor JE (2021). *Emotional learning retroactively enhances item memory but distorts source attribution*. Poster presented at the Context and Episodic Memory Symposium. Philadelphia, PA.
- **Hennings AC,** McClay M, Lewis-Peacock JA, & Dunsmoor JE (2020). *Dissociable reinstatement of emotional memories in the human PFC.* Talk presented at the UT Institute for Neuroscience Dialogues Series. Virtual.
- **Hennings AC,** McClay M, Lewis-Peacock JA, & Dunsmoor JE (2020). *Dissociable reinstatement of emotional memories in the human PFC*. Poster presented at the Cognitive Neuroscience Society Meeting. Virtual.
- **Hennings AC,** McClay M, Lewis-Peacock JA, & Dunsmoor JE (2019). *Reinstatement of mental context resolves conflicts between fear and extinction memories.* Poster presented at the Wisconsin Symposium on Emotion, Madison, WI.
- **Hennings AC**, Lewis-Peacock JA, & Dunsmoor JE (2019). *Reinstatement of mental context facilitates retrieval of extinction memories.* Poster presented at the Cognitive Neuroscience Society Meeting. San Francisco, CA.
- **Hennings AC**, Lewis-Peacock JA, & Dunsmoor JE (2018). *Mental context tagging reveals deficits of extinction learning in PTSD.* Nanosymposium presentation given at the Society for Neuroscience Annual Meeting. San Diego, CA.
- **Hennings AC**, Lewis-Peacock JA, & Dunsmoor JE (2018). *Mental context reinstatement determines successful retrieval of extinction memories.* Poster presented at the Context and Episodic Memory Symposium, Philadelphia, PA.
- **Hennings AC**, Lewis-Peacock JA, & Dunsmoor JE (2018). *Mental context reinstatement may underlie successful retrieval of extinction memories.* Poster presented at the Cognitive Neuroscience Meeting, Boston, MA.
- **Hennings AC**, Jeanneret S, Dutcher A, Hollenbeck M, & Lewis-Peacock JA (2017). *Competition and forgetting during context-based episodic memory retrieval*. Poster presented at the Austin Conference on Learning and Memory, Austin, TX.
- Barnet RC & **Hennings AC** (2016). *Light-enhanced startle sensitivity to acute nicotine withdrawal*. Poster presented at the Society for Neuroscience annual meeting. San Diego, CA.

### **TEACHING, MENTORSHIP, & SERVICE**

2022- Undergraduate research assistant supervisor, Princeton University

Senior thesis advisees: Ahlanna Olson, Shirley Xue

Trainees: Angel Toasakul

2016 – 2022 Undergraduate research assistant supervisor, UT Austin

Trainees: Sophia Bibb, Stephanie Jeanneret, Swecha Ramireddy, Brandon Torio,

Phillip Taboada

2020, Spring Teaching assistant, UT Austin

NEU337 Programming & Data Analysis for Modern Neuroscience

Instructor: Dr. Marcel Goldschen-Ohm

2017 – 2020	Mentor for Neuroscience Undergraduate Research Program, UT Austin Trainees include: Mahaly Baptise, Marissa Alverez, Angelica Garcia, Alejandro Hipolito, Stephanie Root
2017 – 2019	Volunteer for Dell Medical School Health Sciences Summer Camp
2014 – 2016	Undergraduate research assistant supervisor, W&M