Aditya Upadhyayula

Center for Mind and Brain
University of California - Davis, USA

Immigration status : OPT, F-1 visa

https://adibuoy23.github.io/
+1 919 931 8018
aditya.usa8@gmail.com
github.com/Adibuoy23

Education

2021	**Johns Hopkins University, USA**, PhD, Psychological & Brain Sciences
2018	**Johns Hopkins University, USA**,M.A, Psychological & Brain Sciences
2016	**North Carolina State University, USA**, M.S, Electrical & Computer Engineering
2013	**Birla Institute of Technology & Science - Hyderabad, India**, M.Sc.(Hons.), Physics
2013	**Birla Institute of Technology & Science - Hyderabad, India**, B.E.(Hons.), Electronics & Communications Engineering

Academic Appointments

Present	**Post Doctoral Scholar, Center for Mind & Brain, University of California, Davis, CA**
July 2021	Investigating how scene semantics informs eye movements in naturalistic images and videos using eye tracking, computational modelling and behavioral analyses
	Mentor : John Henderson, PhD

Honors and Awards

2021	G. Stanley Hall Scholar Award - Awarded to a student who has demonstrated exceptional scholarly progress in dissertation research ($500)
2019	Travel Award, Object Perception Attention and Memory conference ($250)
2019	Departmental Collaborative Research Grant Award ($1000)
2016	Robert S. Waldrop Graduate Student Fellowship
2021	

Skills

Programming	**Python**, **Matlab**, **R**, **C**, Javascript, HTML, Java
Methodology	**Computational Cognitive Science**, **Eye Tracking**, **Psychophysics**, EEG processing
OS	MacOS, Linux, Windows
Software	**PyTroch**, **Psychopy**, **Psychtoolbox**, **Plotly**, Tensorflow, Experiment Builder, EEGLAB, E, NLTK, spaCy

Teaching

Spring 2020	Instructor - Cognitive Neuroscience, Johns Hopkins University
Fall 2019	Instructor - Research Methods, Johns Hopkins University
Spring 2019	Instructor - Design & Experimental Analysis, Johns Hopkins University
Fall 2018	Teaching Assistant - Sensation & Perception, Johns Hopkins University
Spring 2018	Teaching Assistant - Introduction to Cognitive Psychology, Johns Hopkins University
Fall 2017	Teaching Assistant - Introduction to Psychology, Johns Hopkins University

Research Experience

Present — **Visiting Researcher, Tilburg University, Netherlands**
August 2019 — Developing computational methods using psycholinguistic theories to understand narrative comprehension in comics

Mentor : Neil Cohn, PhD

May 2021 — **Graduate Researcher, Johns Hopkins University, Baltimore, MD**
August 2016 — Developed computational methods, used psychophysics tools & eye tracking to understand performance limits in visual cognition & perception

Advisor : Jonathan Flombaum, PhD

May 2016 — **Graduate Researcher, North Carolina University, Raleigh, NC**
January 2015 — Developed computational methods using signal & image processing to remove respiratory artifacts in MRI scans

Mentor : David Lalush, PhD

May 2016 — **Graduate Research Assistant, University of North Carolina, Chapel Hill, NC**
January 2016 — Built an EEG processing pipeline & analyzed for frontal asymmetries in the resting state EEG data of patients with Major Depressive Disorder

Mentor : Flavio Frohlich, PhD

December 2014 — **Research Assistant, Indian Institute of Science, Bengaluru, India**
August 2014 — Programmed & Assisted in building a robotic arm to study motor control of eye-hand coordination in humans

Mentor : Aditya Murthy, PhD

July 2014 — **Research Assistant, Indian Institute of Science, Bengaluru, India**
January 2013 — Developed prototypes & wrote algorithms for an autonomous Indoor Positioning System that can be used for navigating first responders during disaster management

Mentor : K.V.S. Hari, PhD

Publications (Manuscripts in prep & under review)

2021 **Upadhyayula S.A.**., & Neil Cohn. (In prep). Hierarchical processing in visual narratives : Insights from behavior and computational psycholinguistics [Watch the talk]

2021 **Upadhyayula S.A.**., Ian B. Phillips & Flombaum. J.I. (In prep). Space and time dissociate in the construction of a Visual Moment [Watch the talk]

2021 **Upadhyayula S.A.**., Ian B. Phillips & Flombaum. J.I. (In prep). Subjective expansion of Time happens in our immediate memory, but not perceptual experience [See the poster]

2021 **Upadhyayula S.A.**., Ian B. Phillips & Flombaum. J.I. (In prep). Before, Now & After. A review on temporal properties of perception

2020 **Upadhyayula S.A.**., & Flombaum. J.I. (2020). "A model that adopts human fixations explains individual differences in multiple object tracking." Cognition (2020) : 104418.g [link]

Conferences

2020 **Upadhyayula S.A.** ,& Neil Cohn. Hierarchical Structure in Processing Visual Narratives : A computational investigation, talk presented part of symposium at CogSci. 2020

2020 **Upadhyayula S.A.**, Ian Phillips & Flombaum. J.I. Space and Time Dissociate in the construction of the Visual Now, talk presented at V-VSS 2020

2020 Ian Phillips, **Upadhyayula S.A.** & Flombaum. J.I. Tachyspychia - subjective expansion of time - happens in immediate memory, and not in perceptual experience, poster presented at V-VSS 2020

2019 **Upadhyayula S.A.**, & Jonathan Flombaum, "Distortions of time perception", presented at Mid Atlantic Memory and Attention conference

2019 **Upadhyayula, S.A.**, & Jonathan Flombaum, Two distortions of perceived space and time, presented at Object Perception Attention & Memory (OPAM)

2019 **Upadhyayula S.A.**, & Jonathan Flombaum, The Visual Now across the visual field, presented at Captial Area Cognition Action & Perception

2018 **Upadhyayula S.A.**, & Jonathan Flombaum, "Object size affects multiple object tracking performance (but not via frequency of close encounters)." Journal of Vision 18.10 (2018) : 1020-1020

Selected Invited Talks

2021 Yale University, CT - Cognitive & Neural Computation Lab (PI : Ilker Yildirim)
2021 University of California, Davis, CA - Visual Cognition Group (PI : John Henderson)
2021 New York University - Ma Lab (PI : Weiji Ma)
2021 University of California, Davis, CA - Visual Cognition Group (PI : John Henderson)
2020 Tilburg University, Netherlands - Groningen-Tilburg joint workshop on Pictorial narrative comprehension
2020 University of California, San Diego, CA - Cognitive tools lab (PI : Judith Fan)
2019 Villanova University, PA - Mid Atlantic meeting on Memory & Action
2018 Georgetown University, DC - Captiol Area conference on Cognition, Action & Perception
2018 Johns Hopkins University - Seminar on Computational Psycholinguistics (PI : Tal Linzen)
2018 Johns Hopkins University - Dynamic Perception Group (PI : Jason Fischer)
2017 Johns Hopkins University - Computational Cognition, Vision & Learning group (PI : Alan Yuille)
2017 Johns Hopkins University - Honey Lab (PI : Chris Honey)

References

Jonathan Flombaum
Associate Professor
Johns Hopkins University
flombaum@jhu.edu

Justin Halberda
Professor
Johns Hopkins University
halberda@jhu.edu

Neil Cohn
Associate Professor
Tilburg University
neilcohn@emaki.net

Ian Phillips
Professor
Johns Hopkins University
ianbphillips@jhu.edu