

Cody Zhewei Cao

updated Feb 2023

Contact

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3071 East Hall
University of Michigan

Research Interests

Audiovisual communication, multisensory processes, neural oscillations

Education

- Aug 2020-** **PhD Candidate, Cognition and Cognitive Neuroscience**
Joint Dual PhD program, Scientific Computing, MICDE
University of Michigan
Advisor: David Brang, Jon Brennan
- May 2020** **B.S., Brain & Cognitive Sciences, Honors**
University of Rochester
Advisor: John Foxe, Edmund Lalor
Thesis: Visual Cortical Tracking of Categorical Speech Features Is Enhanced for Trained Lip-readers During Silent Lipreading

Awards & Honors

- 2022** **John Lustig & Irmgard Stahl Lustig Graduate Travel Fund, University of Michigan**
- 2022** **Kavli Summer institute in Cognitive Neuroscience, UC Santa Barbara/Davis**
- 2022** **Rackham Pre-candidate Research Fund, University of Michigan**
- 2019 – 2020** **Take Five Scholar, University of Rochester**
- 2017 – 2020** **Dean's Scholarship, University of Rochester**

Publications

Assessing combinatorial effects of HIV infection and former cocaine dependence on cognitive control processes: A high-density electrical mapping study of response inhibition; Wakim K-M, Freedman EG, Molloy CJ, Vieyto N, Cao Z, Foxe JJ
[Neuropharmacology, 2021](#)

The strength and timing of feedback processing is associated with resistance to visual backward masking during illusory contour processing ([link](#))

Neuroimage, 2022

Foxe JJ, Myers EJ, Knight EJ, Cao CZ, Nicholas EP, Molholm S, Freedman EG

Severely attenuated visual feedback processing in children on the autism spectrum
Journal of Neuroscience, in press

Knight EJ, Freedman EG, Myers EJ, Berruti AS, Oakes LA, Cao CZ, Molholm. S, Foxe JJ

In review:

Human auditory cortex encodes lipreading information through spatially distributed activity [[Preprint](#)]

G Karthik, Cao CZ, Demidenko MI, Jahn A, Stacey WC, Wasade VS, Brang DJ*

A linguistic representation of visual speech underlies successful lipreading [[Preprint](#)]

Nidiffer AR, Cao CZ (co-first author), O'Sullivan AE, Szymula LA, Lalor EC

In prep:

Distinct Mechanisms for Onset and Ongoing Visual Timing Information in the Auditory Cortex

Cao, CZ*, Stacey WC, Wasade VS, Towle VL 5, Tao JL5, Wu S, Issa NP, Brang DJ*

Invited Talks:

Apr 2022 Cognitive Neuroscience Society (CNS) Data Blitz

Listeners extract spectral and temporal information from the mouth during naturalistic audiovisual speech; Cao, CZ, Plass J, Weissman DH, Brang DJ

Feb 2022 Department of Psychology CCN forum, University of Michigan

Listeners extract spectral and temporal information from the mouth during naturalistic audiovisual speech; Cao, CZ, Plass J, Weissman DH, Brang DJ

Refereed conference abstracts *: Presenting

Apr 2023 Cognitive Neuroscience Society (CNS)

- Visual Speech Differently Restores Temporal and Spectral Speech Information in the Auditory Cortex; Cao, CZ*, Karthik G; Majumbar A; Jahn A; Brang DJ**
- Apr 2022** Cognitive Neuroscience Society (CNS)
- Listeners extract spectral and temporal information from the mouth during naturalistic audiovisual speech; Cao, CZ*, Plass J, Weissman DH, Brang DJ**
- Nov 2021** Society for Neuroscience (SfN)
- Auditory Cortex Uses Visual Timing Information to Enhance Auditory Speech Perception; Cao, CZ*, Ganesan K, Stacey WC, Brang DJ**
- Successful decoding of lipreading information in auditory areas; Ganesan K., Jahn A., Cao CZ, Fine C, Brang DJ**
- May 2021** International Society for Autism Research (INSAR)
- Altered Visual Evoked Potentials to Illusory Contour Integration Among Children on the Autism Spectrum; Knight EJ, Myers EJ, Cao Z, Oakes LA, Nicholas EP, Freedman EG, Foxe JJ**
- Oct 2020** Advances and Perspectives in Auditory Neuroscience (APAN)
- Does auditory cortex receive linguistic information from visual cortex? Nidiffer AR*, Cao Z, O'Sullivan AE, Lalor EC**
- May 2020** Cognitive Neuroscience Society (CNS)
- Prior Exposure Enhances Cortical Entrainment to Unheard Speech During Silent Lipreading; Cao Z*, O'Sullivan AE, Szymula LA, Nidiffer AR, Lalor EC**
- Oct 2019** Society for Neuroscience (SfN)
- Putting on the brakes: An EEG investigation of inhibitory control and action monitoring in HIV+ abstinent substance users; Wakim K-M *, Veyto N, Molloy CJ, Cao Z, Freedman EG, Foxe JJ**
- April 2019** The British Neuroscience Association (BNA)
- Altered VEP responses to illusory contours in children on the autism spectrum; Myers EJ*, Cao Z, Nicholas EP, Freedman EG, Foxe JJ**
- The Neurobiology of Inhibitory Control in HIV+ Individuals with a History of Cocaine Dependence; Wakim K-M*, Molloy CJ, Cao Z, Freedman EG, Foxe JJ**
- The Neurobiology of Error Processing in HIV+ Individuals with a History of Cocaine Dependence; Veyto N*, Wakim K-M, Cao Z, Freedman EG, Foxe JJ**

July 2018 Federation of European Neuroscience Societies (FENS)

Inhibitory control in abstinent cocaine users with and without HIV:

A preliminary fMRI study; Molloy CJ*, Wakim K-M, Cao Z, Havens AK, Freedman EG, Foxxe JJ

Electrophysiological correlates of inhibitory control in abstinent cocaine users with and without HIV; Wakim K-M *, Molloy CJ, Nicholas EP, Cao Z, Havens AK, Freedman EG, Foxxe JJ

Teaching

Introduction to Cognitive Science, Fall 2021, Fall 2022, Winter 2023, University of Michigan

Research Methods in Human Electroencephalography, Winter 2022, University of Michigan

Introduction to Cognitive Psychology, Winter 2021, University of Michigan

Professional Societies

2019 – present Cognitive Neuroscience Society

2020 – present International Multisensory Research Forum

2020 – present Society for Neuroscience