

# Cognitive Neuroscience

## Newsletter

April 18, 2022

Volume 2, Number 1

WELCOME  
TO THE M.S. PROGRAM IN  
COGNITIVE NEUROSCIENCE

Winter/Spring 2022

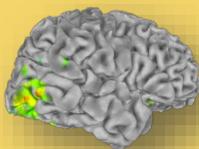
Students

Faculty

Events

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THE  
GRADUATE  
CENTER  
CITY UNIVERSITY  
OF NEW YORK



### WELCOME FROM THE DIRECTOR

In this Winter/Spring 2022 edition of the Newsletter for the M.S. Program in Cognitive Neuroscience, we highlight some of the remarkable research, publications, and other successes of our faculty and students. Although we continue to experience unprecedented challenges and disruptions to research and teaching as a result of the COVID-19 pandemic, our students have persevered and have often come up with creative ways to gather data and complete their theses.

Some of this research is highlighted in this issue.

Since our last newsletter, we have formed the Diversity, Equity, and Inclusion Committee (DEI), which is also highlighted in this issue. The committee, which has been meeting monthly, began its mission with a plan to increase diversity by contacting historically Black colleges and universities and minority serving institutions. I thank Dr. Martin Ruck, Senior Adviser to the President for Diversity and Inclusion, for his invaluable guidance and support. The MS Program in Cognitive Neuroscience is committed toward promoting inclusion at all levels. We are in the process of creating a DEI survey to help us in developing methods to better address diversity and inclusion, and we anticipate hosting events for students and faculty to engage, communicate, and more importantly, build a community where all have a space to share their voice.

Students and faculty continue to adapt their data collection protocols as we navigate these new stages of this pandemic. The Cognitive Neuroscience lounge is being retrofitted to accommodate data collection and is being equipped with state-of-the-art equipment for conducting cognitive neuroscience research, including a portable BrainProducts EEG system that is available for students to check out for at-home EEG data collection, as well as several portable Biopac modules for physiological monitoring.

This newsletter will be issued once per semester. If you would like to have your publications, grants, awards and other accomplishments included in future newsletters, please respond to the invitation for submissions that will come from our office or visit our website. We encourage you to participate, as it will give way to exciting and successful newsletters to share with current and prospective students.

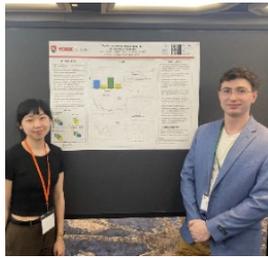
Thank you and stay safe and healthy!

## Alumni Spotlight: Bernard Gomez



"Covid-19 no doubt brought a myriad of challenges to most of us. However, I want to attest by sharing my experiences in the program to encourage others. The program helped me advance in my career as a Researcher, and I am grateful to have received the training and knowledge I gained from the program and under my mentor Dr. Timothy Ellmore. After the lockdown imposition, I was stymied like everyone else, not knowing how to proceed and complete the program. However, I was incredibly pleased by the faculty and administrators' support, especially Dr. Ro and Mercado Wanda, to help arrive at a plan for completion while dealing with a personal loss. With an impaired motivation but a little tenacity, I completed the program at the end of summer 2020. Being part of CUNY can also bring numerous opportunities. I was able to teach three courses, including Neuroscience, at Hunter College in the Department of Psychology while in the program. I will not forget the experiences and knowledge I have gained from my mentors. It is only for them and the program, I could land a full-time position as Research Associate II at Cedars Sinai Medical Center under Dr. Ueli Rutishauser's lab in Los Angeles. I am excited to continue in the field with a renewed sense of motivation."

## CUNY GC Students Present Their Research: 'Testing an overtraining protocol for fear learning in humans' at the 2022 Annual Meeting for the Eastern Psychological Association



Gordon Haskell (right)  
and Vivian Ho (left)

When faced with two threatening stimuli, how do we determine which stimulus is less threatening and does the amount of experience we have with each influence this decision? This is the question that Gordon Haskell and David Johnson have been tackling in their lab. Their project examines the impact of the number of learning trials on the strength of a conditioned fear memory. Gordon Haskell (CUNY Graduate Center) and Wingman Vivian Ho (York College) presented their research (in person!) at the 2022 annual meeting for the Eastern Psychological Association held at the Marriott Marquis In New York City on Friday, March 4, 2022.

## Kunhee Lee: Be honest with yourself; you soon will be doing what you love.



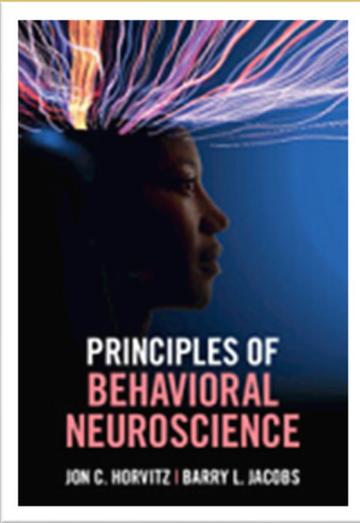
Our society does a pretty good job of making you someone other than being your genuine self. Essentially, that is why I became a pharmacist. However, when I graduated from pharmacy school, I knew this was not it, although I enjoyed learning about pharmacology. Instead of working at the pharmacy upon my graduation, I decided to work for a lab. The lab I worked at studied aging and dementia. Working at the lab was intriguing because my grandmother had been diagnosed with Alzheimer's disease. However, my curiosity was not fulfilled enough. Therefore, I decided to go to graduate school. That is how I ended up moving to NYC and started at the Cognitive Neuroscience Program at The Graduate Center. I enjoyed taking interesting classes and I loved reading research papers. It was the first time in my life that I am reading something that I enjoy so much. I loved it so much that thinking about my research project has never been boring. In sum, I love what I am doing for the first time. Additionally, I figured out my dream while working on my thesis. I now realize how limited pharmacological treatment can be for certain neuro-psychiatric disorders. For example, pharmacological interventions can only do so much for structural / functional damage observed in neurodegenerative disorders such as Parkinson's disease and Alzheimer's disease. I see the necessity to approach from different directions to enhance our current treatment options. Thinking about limitless possibilities through science is something I enjoy. The Cognitive Neuroscience program at The Graduate Center has helped me figure out what my passion is, and I couldn't be more thankful.

## ONWARD AND BEYOND

Accepted to PhD Programs:  
Trevor Caruso  
Daniela Echeverria  
Cassandra Engstrom  
Sameer Sabharwal-Siddiqi  
Kennedy Stomberg

*Congratulations!*

Behavioral Neuroscience  
Textbook by Faculty  
Member, Dr. Jon Horvitz  
– July 2022



Our Colleague, Jon Horvitz, in the CCNY Psychology Department is publishing an undergraduate textbook, *Principles of Behavioral Neuroscience*. The textbook, written with the late Barry Jacobs, examines neuroanatomy, neural communication, the neural basis of sleep, learning, memory, attention, and other topics in brain/mind relations. It will be published in July 2022 with Cambridge University Press.

Submit Content for the  
*Cognitive Neuroscience*  
Newsletter

Share news and events to highlight in our *Cognitive Neuroscience Newsletter* by using the following link or scan the QR code:  
<https://www.gc.cuny.edu/cognitive-neuroscience/news-and-events/newsletter-submission-form>



## Anatomical inputs to visual cerebral cortex

The Levitt laboratory studies brain circuits for visual perception and has previously described the organization and development of anatomical inputs to primary visual cortex. This [study](#) describes the pattern of thalamic and cortical inputs to an area of visual cortex just anterior to primary visual cortex, area 18. Similar to cortical inputs to primary visual cortex, the bulk of the input to area 18 arises from the cortical area just anterior to it. An important difference in cortical connectivity however is that the portion of area 18 responsive to visual stimuli in the lower visual field seems to receive a significant input from brain regions responsive to visual stimuli in the upper visual field. This is unlike primary visual cortex, might reflect differences in visual field representations in the two areas, and suggests that one role of area 18 may be for perceptual completion or contextual modulation across the horizontal meridian.



## The M.S. Program in Cognitive Neuroscience Celebrates Women's History Month – March 2022



1<sup>st</sup> row (left to right): Dr. Chua, Dr. Dennis, Dr. Emmanouil, Dr. Gao  
2<sup>nd</sup> row (left to right): Dr. Lipkind, Dr. Mangels, Dr. Martin, Dr. Marton  
3<sup>rd</sup> row (left to right): Dr. Mingote, Dr. Nomura, Dr. Obler, Dr. Shafer  
4<sup>th</sup> row (left to right): Dr. Tian, Dr. Unger, Dr. Wagner, Dr. Walder

We recognize the great contributions of women who have and continue to make a tremendous mark in our world. Our program is proud to honor the women cognitive neuroscientists that make up a solid portion of our faculty. They are researchers and scientists who bring a wealth of expertise and knowledge to a field that is primarily on a quest to find out how our brains contribute to our cognitive function.

## M.S. Program in Cognitive Neuroscience Workshops

- Faculty Mentor Workshop, Hosted by Dr. Tatiana Emmanouil, Dr. Tony Ro, Dr. Martin Ruck, and Dr. Peter Serrano
- Fiscal Responsibility Workshop, Hosted by Phyllis Schulz, the Executive Director of Fellowships and Financial Aid
- Applying to Ph.D. Programs, Hosted by Dr. Tony Ro
- Career Planning & Professional Development, Hosted by Jennifer Furlong, the Director of the Office of Career Planning & Professional Development
- Steps to Submitting Your Thesis Workshop, Hosted by Daisy Reyes and Roxanne Shirazi, Dissertation/Thesis Librarian
- Writing a Thesis Workshop, Hosted by Dr. Valerie Shafer
- Library Resources Workshop, Hosted by Mason Brown

## Student Resources: Questions or Concerns

Ombuds Office:

<https://www.gc.cuny.edu/ombuds-office>

Anonymous Submissions:

<https://www.gc.cuny.edu/cognitive-neuroscience/student-resources/questions-or-concerns>

The Director of the program, Professor Tony Ro, and Assistant Program Officer, Wanda Mercado, are available to meet with students on a one-to-one. Email us at [cogneuro@gc.cuny.edu](mailto:cogneuro@gc.cuny.edu) to schedule a Zoom meeting.

## M.S. Program in Cognitive Neuroscience Faculty Members' 2022 Publications

### Marom Bikson

Williams, P.T. J. A., Truong D, Q., Seifert, A.C., Xu, K., Bikson, M., Martin, J.H. (2022). Selective augmentation of corticospinal motor drive with trans-spinal direct current stimulation in the cat. *Brain Stimulation*. doi: <https://doi.org/10.1016/j.brs.2022.03.007>

Baker, T.S., Zannou, A.L., Cruz, D., Khadka, N., Kellner, C., Tyc, R., Bikson, M., Costa, A. (2022). Development and Clinical Validation of a Finite Element Method Model Mapping Focal Intracranial Cooling. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*. doi: [10.1109/TNSRE.2022.3161085](https://doi.org/10.1109/TNSRE.2022.3161085).

Khadka, N. & Bikson, M. (2022). Noninvasive Electrical Brain Stimulation of the Central Nervous System. In: Thakor N.V. (Eds.), *Handbook of Neuroengineering* (pp. 1-33). Springer Nature. doi: [doi.org/10.1007/978-981-15-2848-4\\_59-1](https://doi.org/10.1007/978-981-15-2848-4_59-1)

Jeong, H., Song, I.-U., Chung, Y.-A., Park, J.-S., Na, S.-H., Im, J. J., Bikson, M., Lee, W., & Yoo, S.-S. (2022). Short-Term Efficacy of Transcranial Focused Ultrasound to the Hippocampus in Alzheimer's Disease: A Preliminary Study. *Journal of Personalized Medicine*, *12*(2), 250. doi: [doi.org/10.3390/jpm12020250](https://doi.org/10.3390/jpm12020250)

### Tracy Dennis

Cho, H., Myruski, S., Denefrio, S., Mennin, D., & Dennis-Tiwary, T. (2022). Associations between GAD Symptom Severity and Error Monitoring Depend on Neural Quenching Variability. *Motivation and Emotion*, *46*, 254-263.

### Timothy Ellmore

Pena, D., Suescun, J., Schiess, M., Ellmore, T. M., Giancardo, L., & Alzheimer's Diseases NeuroImaging Initiative. (2022). Toward a multimodal computer-aided diagnostic tool for Alzheimer's Disease conversion. *Frontiers in Neuroscience*, *15*:744190. doi: [10.3389/fnins.2021.744190](https://doi.org/10.3389/fnins.2021.744190)

### Yu Gao

Wu, Z., Cao, M., Di, X., Wu, K., Gao, Y., & Li, X. (2022). Regional topological aberrances of white matter- and gray matter-based functional networks for attention processing may foster traumatic brain injury-related attention deficits in adults. *Brain Sciences*, *12*, 16. doi: [10.3390/brainsci12010016](https://doi.org/10.3390/brainsci12010016)

### Lucas Parra

Madsen, J., & Parra, L. C. (2022). Cognitive processing of a common stimulus synchronizes brains, hearts, and eyes. *PNAS Nexus*, pgac020. doi: <https://doi.org/10.1093/pnasnexus/pgac020>

### Marom Bikson & Lucas Parra

Sharma, M., Farahani, F., Bikson, M., Parra, L. C. (2022). Weak DCS causes a relatively strong cumulative boost of synaptic plasticity with spaced learning. *Brain Stimulation*, *15*(1), 57-62.

### Marom Bikson & Tracy Dennis

Cho, H., Razza, L.B., Borrione, L., Bikson, M., Charvet, L., Dennis-Tiwary, T.A., Brunoni, A.R., & Sudbrack-Oliveira, P. (2022) Transcranial Electrical Stimulation for Psychiatric Disorders in Adults: A Primer. *Focus*, *20*(1), 19-31. doi: <https://doi.org/10.1176/appi.focus.20210020>

### Tony Ro & Zhigang Zhu

Chen, J., Ro, T., Zhu, Z. (2022). Emotion Recognition With Audio, Video, EEG, and EMG: A Dataset and Baseline Approaches. *IEEE Access*, *10*, 13229-13242, doi: [10.1109/ACCESS.2022.3146729](https://doi.org/10.1109/ACCESS.2022.3146729).

## Upcoming Events

- End of The Year Event
- Alumni Event



## Commencement 2022

The Graduate Center will celebrate the achievements of the classes of 2020, 2021, and 2022!

**Date:** Thursday, June 9, 2022

**Location:** Barclay's Center  
620 Atlantic Avenue  
Brooklyn, NY 11217

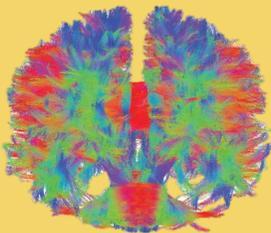
**Time:** 3:30 PM

**RSVP by:** Thursday, May 12, 2022

For more information, visit <https://www.gc.cuny.edu/commencement/commencement-2022>

## 2021-2022 Articles Featuring Our Students

- [Caesar Ekya](#)
- [Cassandra Engstrom](#)
- [Nikki Gerohristodoulos](#)
- [Kathleen Rowe](#)



## Diversity, Equity, & Inclusion to ENRICH Neuroscience

Members of the M.S. Program in Cognitive Neuroscience formed a Diversity, Equity, and Inclusion Committee in Fall 2020. The M.S. Program in Cognitive Neuroscience is proud to be a part of the City University of New York, a diverse and inclusive public institution known to be a vehicle for upward mobility. We acknowledge that racism and social injustice still exist, and we are committed to fostering a diverse, equitable and inclusive environment for our students, faculty, and staff. We believe that diversity in race, ethnicity, gender, sexual orientation, (dis)ability, socio-economic background, and age are factors that ENRICH our community and our contributions to science. We aim to: EMPOWER individuals from underrepresented groups to set and reach the highest goals for themselves in their programs and their careers. NURTURE the education and career plans of individuals from underrepresented groups. RECRUIT more individuals from underrepresented groups to apply to the program. IDENTIFY sources of inequity in the program and work to combat them. COMMIT to values and policies that promote respect for individuals and their cultures. HEAR and learn from the stories of those affected by inequity. Faculty members: Elizabeth Chua (chair), Jennifer Mangels (secretary), Tony Ro, and Peter Serrano. Student members: Michael Garcia, Margaret Grinshtein, Jeante Jackson, Tikva Nabatian, Daisy Reyes, and Kathleen Rowe. Staff member: Wanda Mercado. The committee is always looking for new members, please email [echua@brooklyn.cuny.edu](mailto:echua@brooklyn.cuny.edu) if you would like to join.

## Current Students and Faculty Convened at the Neuroscience Virtual and In-Person Meet and Greet

In response to these difficult times, the M.S. Program in Cognitive Neuroscience's and the CUNY Neuroscience Collaborative's students and faculty convened virtually on September 25 through a platform known as Gather. This platform allowed attendees to simulate in-person gatherings by allowing them to move around and have one-on-one or group discussions. After two years, on March 11, 2022, students and faculty were able to convene in-person at The Graduate Center! During both Meet and Greet, students and faculty discussed their current research, future research, and shared resources to overcome research obstacles as a result of the COVID-19 pandemic.

## M.S. Program in Cognitive Neuroscience Student Engagement Event



*Trevor Caruso, Caesar Ekya, Anastasiya Kharlamova, Kunhee Lee, Rebecca McCune, Dillon Freed, Nikki Gerohristodoulos, Denis Shor, Aline Durney, Jeante Jackson, Yuga Kothari*

Since its inaugural meeting, the Diversity, Equity, and Inclusion (DEI) Committee has been committed to fostering a diverse, equitable, and inclusive environment for our students, faculty, and staff. To help with feelings of isolation and promote inclusivity, the DEI Committee proposed a Student Engagement Event. This event provided students with some well-received time to de-stress, share tips, guide, and consult with their peers.