

Ido Haber

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Education - University of Wisconsin - Madison

PhD in Neuroengineering Focus: EEG, Temporal Interference, Multi-modal Simulation	September 2023 – Present
MSc in Biomedical Engineering Focus: Neural Plasticity, Electrophysiology	December 2023
BSc in Neurobiology & Psychology	December 2021

Academic Experience - University of Wisconsin-Madison

Researcher, Center of Sleep and Consciousness – Department of Psychiatry <ul style="list-style-type: none">Perform frequent hd-EEG data analysis in MATLABDeliver TES using temporal interference at kHz frequencies in a clinical settingLead researcher on a DARPA funded clinical study with a 15M\$ budgetDeveloped a multi-modal pipeline for in silico TES simulations using SimNIBS, Gmsh, Brainstorm, Freesurfer, Neuron	September 2022 – Present
Researcher, Hai's Lab - Department of Biological Engineering <ul style="list-style-type: none">Simulated behavior of magnetoelectric nanoparticles in COMSOL MultiphysicsInvestigate the effects of 5HT2A receptor agonists on the behavior of neural culturesPlate neuronal cultures for calcium imaging, MEA recordings, protein labeling, and protocol optimizationMentor an undergraduate student in day-to-day lab operations	January 2021 – Present
Graduate Teaching Assistant – Psych 225, Research Methods - Department of Psychology <ul style="list-style-type: none">Provide support for professors by holding office hours, teaching two labs a week, and exam proctoringFacilitate hands-on tasks in classroom while optimizing student's learningProvide feedback on writing assignments as part of Communication B coursework	August 2022 - Present
Undergraduate Research Assistant, Barnes Lab - Department of Kinesiology <ul style="list-style-type: none">Researched the effect of aging and lifestyle on cerebral blood flow regulation in humans and its association to age related diseasesAnalyzed changes in CBF in response to chemical and metabolic stressors pre & post administration of cyclooxygenase inhibitors	May 2018 - May 2019

Industry Experience

Business Consultant, Video Editor, Content Creator - Effectivate, Tel Aviv, Israel Intern - Effectivate, Tel Aviv, Israel <ul style="list-style-type: none">Conducted literature research and UX testing for the R&D teamIncreased sales and significantly lowered cost per lead in three monthsCreated content for the marketing division using Final Cut Pro, Photoshop, MailchimpWorked closely with the CEO on future business decisions - Manager of business development in the United States	August 2020 - July 2022 Summer 2020
Project Manager & National Expansion Committee Member - TAMID Group, Madison, WI <ul style="list-style-type: none">Advised top universities across the United States during their beta process on a student national teamLead teams of business-oriented UW students in pro bono consulting cases for innovative Israeli startupsUtilized strong communication and leadership skills by facilitating instruction from company executives to team members	September 2019 - December 2020

Skills

- BioMEMs, Microfabrication, Calcium Imaging, MEA recording, Protein labeling
- Modeling: LTspice, TI Planning Tool, COMSOL Multiphysics, Altium Designer, Adobe Illustrator
- Programming: Unix, Python, MATLAB, HTML, CSS, C++
- Other: ImageJ, TouchDesigner, Ableton Live, Final Cut Pro, MyBusiness CRM
- Languages - Hebrew (Native)

Leadership Experience

National Athlete & Swim Instructor - Israeli National Swimming Team, UW Madison Varsity Team April 2010 - October 2019

- Israeli record holder in 400m free and 800m free relays from 2014 - 2019
- Volunteered to engage children with disabilities in water activities
- Learned the importance of diligence, goal setting and dedication
- Balanced more than 20 hours of weekly practice in addition to competition, travel, and schoolwork

Air Force Sergeant - Israeli Defense Force, Haifa, Israel

October 2014 - August 2017

- Worked in a small team to facilitate communication inside the base
- Developed personal characteristics - work ethic, critical thinking, attention to details, and work under pressure
- Honorably discharged as a sergeant

Publications, Projects, Posters

- I. Bok, **I. Haber**, X. Qu, and A. Hai, "In silico assessment of electrophysiological neuronal recordings mediated by magnetoelectric nanoparticles," *Sci Rep*, vol. 12, no. 1, p. 8386, May 2022, doi: 10.1038/s41598-022-12303-4.
- ECG + Pulse Ox - <https://drive.google.com/drive/folders/10uGYS7CXJQ75INF3P9uFTWZWvPvpn-pI?usp=sharing>
- Force Sensor for Robotic Arm - https://drive.google.com/file/d/18JYXeTpfGz7B70NRjXhDZeID5ZKbVr_p/view?usp=drive_link
- Microfluidic Devices to Study Neuronal Axon Networks in A Biomimetic Alzheimer Milieu - https://drive.google.com/file/d/1zZdL_4StZs66zeTL4-Baq-r7gIvAQwHX/view?usp=share_link
- Toward Translational Optogenetics: A Survey of The Limitations and Advancement in Bringing Light-Induced Neuromodulation To The Clinic - https://drive.google.com/file/d/11VW9P2xVTX1k5K0X5pmi_cuzPJvIxAOZ/view?usp=share_link
- A Mini Review of 5HT2A Receptor Agonists: From Microtubules to Altered States of Consciousness - https://drive.google.com/file/d/1TxeOF0kBGyJLVv1BN6UxITUtsFrNbsjJ/view?usp=share_link
- The Effects of Habitual Exercise and Age on the Cerebrovascular Response to a Metabolic Stimulus - https://drive.google.com/file/d/1FOSIfUoLN_rWCcrzQT1CcUdT_nzHnOq3/view?usp=sharing
- Psychedelic-Assisted Psychotherapy for Treatment of Persistent and Unresponsive Depression - https://docs.google.com/presentation/d/1XKgcA6d26i9wmO4iLF1yyR_ivx5lg8Fm/edit?usp=share_link&ouid=100516471992997923965&rtpof=true&sd=true

References:

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Professor Aviad Hai

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