

## SASI MADUGULA

MD/PhD, Neuroscientist

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### EDUCATION

**Stanford University** — MD/PhD, Neuroscience

*Aug 2013 – Jun 2024*

- Advised by Prof. EJ Chichilnisky
- Neurobiology Teaching Assistant
- VP & Treasurer, Stanford Student Medical Association
- Flu Crew volunteer

**University of Oxford** — MSc, Clinical Neuroscience

*Sep 2012 – Aug 2013*

- Thesis: “Changes in Functional Connectivity Due to Modulation by Task and Disease”
- Advised by Prof. Heidi Johansen-Berg

**University of Illinois at Chicago** — BS, Bioengineering (Math minor)

*Aug 2009 – May 2012*

- Research with Prof. Shekhar Mayanil (neural development) & Prof. Laxman Saggere (MEMS bioprosthesis)
  - Tau Beta Pi member, Honors College Scholar
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### SELECTED PUBLICATIONS

- Madugula, S. S., et al. *Inference of electrical stimulation sensitivity...* J. Neurosci. (2023)
  - Gogliettino, A. R., Madugula, S. S., et al. *High-fidelity reproduction of visual signals...* J. Neurosci. (2023)
  - Madugula, S. S., et al. *Focal electrical stimulation of human retinal ganglion cells...* J. Neural Eng. (2022)
  - Vilkhu, R. S., Madugula, S. S., et al. *Bi-electrode epiretinal stimulation...* J. Neural Eng. (2021)
  - Fan, V. H., Madugula, S. S., et al. *Local return epiretinal stimulation...* J. Neural Eng. (2019)
  - Kieliba, P., Madugula, S., et al. *Intrinsic connectivity across task demands...* PLoS One (2019)
  - Mena, G. E., Madugula, S., et al. *Electrical artifact cancellation on MEAs...* PLoS Comput. Biol. (2017)
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### POSTER PRESENTATIONS

- Madugula, S. S., et al. *Paired-pulse stimulation for RGC activation.* IEEE/EMBS NER (2023)
  - Madugula, S., et al. *Predicting receptive fields via electrical images.* The Eye and the Chip (2019)
  - Shah, N. P., Madugula, S., et al. *Optimizing artificial retina stimulation.* IEEE/EMBS NER (2019)
  - Madugula, S., et al. *Depolarizing prepulse for axon avoidance.* The Eye and the Chip (2016)
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## WORK EXPERIENCE

### Postdoctoral Fellow

Neural Prosthetics Translational Lab, Stanford — *Aug 2024 – Present*

- Developing high-fidelity speech decoding BCI systems
- Investigating precise electrical control of neural activity

### Head Teaching Assistant, Neurobiology

Stanford School of Medicine — *Dec 2013 – Mar 2019*

- Delivered M1 lectures; revised textbook with Prof. Baccus
- Led small-group labs; trained incoming TAs

### Carnatic Violin Instructor & Co-Founder

Raaga School of Music, San Jose — *Jun 2016 – Present*

- Trained students to performance level; co-founder

### Engineer

MedWhat Inc., Palo Alto — *Apr 2014 – Feb 2017*

- Designed prototypes for digital health QA platforms
  - Contributed to fundraising and technical strategy
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## AWARDS

- F30 NRSA Fellowship (2017–2023)
  - IEEE International Conference on Neural Engineering Best Poster Award (2021)
  - Eye and the Chip Best Poster (2016, 2019)
  - Medical Scientist Training Program Fellowship (2015–2024)
  - Medical Scholars Stanford Research Fellowship (2014)
  - Human Brain Mapping Trainee Abstract Award (2013)
  - Whitaker International Fellows and Scholars Program Fellowship (2012)
  - National Merit Scholarship (2009)
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## HOBBIES

- Indian Classical Violin (teaching and performing since 2000)
- Wilderness camping and backpacking