AMEYA C. NANIVADEKAR

3520 Fifth Avenue, Ste 319 ◇ Pittsburgh, PA 15213
(215) · 828 · 6865 ◇ amn69 AT pitt DOT edu
https://acnani.github.io

EDUCATION

University of Pittsburgh — **Pittsburgh, PA**
Ph.D. Candidate in Bioengineering — *expected 2020*
Research Track: Neural Engineering

University of Pennsylvania — **Philadelphia, PA**
M.S.E. in Bioengineering — *May 2013*
Thesis: *Mechanism of Memory Dysfunction due to Inter-Ictal Spike Activity in Epilepsy Patients*

University of Pennsylvania — **Philadelphia, PA**
B.S.E. in Bioengineering — *May 2012*
Minor in Mathematics and Cognitive Science

RESEARCH AND PROFESSIONAL EXPERIENCE

Rehabilitation and Neural Engineering Laboratory — August 2014-present
Graduate Student Researcher; Advisor: Lee Fisher — *Pittsburgh, PA*

- Designed and executed spinal cord stimulation experiments in upper and lower limb amputees to restore sensation
- Designed and deployed a touchscreen interface to report sensations evoked via spinal cord stimulation amputees (github)
- Implemented a distributed system architecture to program stimulation and visualize data in real-time used in human trials
- Designed and executed feline neurophysiological experiments and analyzed collected data
- Developed computational models to study the effect of electrical stimulation on neurons and neural tissue
- Assisted in development of a MongoDB-based data management system for organizing and visualizing electrophysiology data (github)

Litt lab for Translational Neuroengineering — August 2012-July 2014
Research Associate; Advisor: Brian Litt — *Philadelphia, PA*

- Examined the effect of inter-ictal spiking in epileptic networks on memory encoding and recall in humans
- Analyzed electrocorticography recordings from 17 epilepsy patients performing an episodic memory task
- Developed mimetic-based seizure detection and spike detection tools hosted at the International Epilepsy Electrophysiology Portal (IEEG.org)

Center for Functional Neuroimaging — June 2011-October 2012
Research Student — *Philadelphia PA*

- Developed a working memory task using MATLAB and its Psychtoolbox extensions to study the role of trauma and post traumatic stress on memory and emotion processing
- Segmented cortical regions of interest using ITK-SNAP to study cortico-thalamic coupling and network connectivity in the human brain

Department of Biology, University of Pennsylvania — January-August 2009
Research Assistant — *Philadelphia PA*

- Performed archaeal transformations, PCR, gel electrophoresis to identify transposon insertion sites
- Successfully isolated a single non motile archaea mutant

PEER-REVIEWED PUBLICATIONS

* contributed equally

Chandrasekaran, S.*, **Nanivadekar, A.***, McKernan G., Helm, E., Boninger, M., Collinger, J., Gaunt, R., Fisher, L. (2020). *Sensory restoration by epidural stimulation of the lateral spinal cord in upper-limb amputees.* eLife

Nanivadekar, A., Ayers, C., Gaunt, R., Weber, D., Fisher, L. (2019). *Selectivity of afferent microstimulation at the DRG using epineural and penetrating electrode arrays.* Journal of Neural Engineering

Nanivadekar, A., Miller, D., Fulton, S., Wong, L., Ogren, J., Chitnis, G., McLaughlin, B., Zhai, S., Fisher, L., Yates, B., Horn, C. (2019). *Machine learning prediction of emesis and gastrointestinal state in ferrets.* PLOS One

King, K., Cusack, W., **Nanivadekar, A.**, Ayers, C., Urbin, M., Gaunt, R., Weber, D., Fisher, L. (2019). *DRG microstimulation evokes postural responses in awake, standing felines.* Journal of Neural Engineering

Petersen, B., **Nanivadekar, A.**, Chandrasekaran, S., Fisher, L. (2018). *Phantom limb pain: peripheral neuromodulatory and neuroprosthetic approaches to treatment.* Muscle & Nerve

Ung, H., Cazares, C., **Nanivadekar, A.**, Kini, L., Wagenaar, J., Becker, D., Krieger, A., Lucas, T., Litt, B. and Davis, K. (2017). *Interictal epileptiform activity outside the seizure onset zone impacts cognition.* Brain

GRANTS

Pitt Innovation Challenge, Clinical and Translational Science Institute, $25,000 *1/18-12/18*
One of 7 teams in the final poster round

Biomedical Modeling Pilot Grant, Clinical and Translational Science Institute, $25,000 *2/17-7/17*
One of 4 teams to be awarded this grant

HONORS AND AWARDS

NIH Outstanding Scholar in Neuroscience Award *2020*

IEEE Brain Neurotech Entrepreneurs workshop *2019*
One of 30 selected trainees

Travel Award, Society for Neuroscience conference *2018*

Boston Scientific Connected Patient Challenge Finalist *2018*
One of 5 entrepreneurial projects to advance

Roche/ARCS Foundation Scholar Award in the Life Sciences *2014-2017*
One of 10 graduate students at Pitt and CMU

George M. Bevier Award *2014*
One of 12 incoming Bioengineering PhD students

Albert Giandomenico Award *2012*
Awarded to the highest achieving group selected from the undergraduate laboratory courses

Dean's List *2011-2012*

TEACHING

Teaching Assistant, Dynamic Systems: Physiological Perspective *Spring 2015, 2016*
Conducted weekly labs, graded assignments, tutored students

Teaching Assistant, Brain Computer Interfaces *Spring 2014*

MENTORSHIP

Undergraduate Students

Clara Ferreira (University of Pittsburgh, Dept. of Mechanical Engineering) *2019*

Andoni Arias (Carnegie Mellon University, Dept. of Mechanical Engineering) *2017*

TECHNICAL PROFICIENCY

Computer Languages	Python, C, C++, Java, HTML, CSS, Bash, LaTeX
Mathematical and Modeling Tools	MATLAB, NEURON, Ansys Maxwell, SolidWorks
Application Software	Adobe Illustrator, Arduino IDE, Microsoft Office
Languages	English (native), Marathi (native), Hindi (native)