

Narayan Sankaran

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Education

- 2012 – 2018 **Ph.D., Neuroscience**, University of Sydney, Australia
Thesis: The structure of cortical representations of music and speech
Supervisors: Simon Carlile and William Forde Thompson
- 2006 – 2010 **B.A., Physics (Music minor)**, University of California, Berkeley, USA.

Appointments

- 2024 – pres. **Assistant Professor (tenure-track)**, University of San Francisco, USA
Department of Neuroscience, College of Arts & Sciences
- 2023 – 2024 **Postdoctoral Fellow**, University of California, Berkeley, USA
Kavli Center for Ethics, Science, and the Public
- 2018 – 2022 **Postdoctoral Fellow**, University of California, San Francisco, USA
Department of Neurological Surgery / Center for Integrative Neuroscience
Advisor: Edward Chang
- 2016 **Research Intern**, Starkey Hearing Research Center, Berkeley, USA.
- 2016 **Research Intern**, Oculus Virtual Reality, Redmond, USA.
- 2010 – 2011 **Research Assistant**, Lawrence Berkeley National Labs, Berkeley CA.
Berkeley Center for Cosmological Physics,

Selected Publications

- [1] **Narayan Sankaran** & Winston Chiong (In press). Speech restoration & mental surveillance as conflicting ethical concerns in neural speech-decoding research. *Hastings Center Report*. DOI: 10.1002/hast.70090
- [2] **Narayan Sankaran**, Matthew Leonard, Frederic Theunissen, & Edward Chang (2024). Encoding of melody in the human auditory cortex. *Science Advances*. 10. DOI: 10.1126/sciadv.adk0010
- [3] **Narayan Sankaran**, David Moses, Winston Chiong, and Edward Chang (2023). Recommendations for promoting user agency in the design of speech

- neuroprostheses. *Frontiers in Human Neuroscience* 17: 1298129. DOI: <https://doi.org/10.3389/fnhum.2023.1298129>
- [4] Perry, Gemma, Vince Polito, **Narayan Sankaran**, & William Forde Thompson (2022). How Chanting Relates to Cognitive Function, Altered States and Quality of Life. *Brain Sciences* 12, no. 11: 1456.
 - [5] Ashlyn Schmitgen, Jeremy Saal, **Narayan Sankaran**, Maansi Desai, et al. (2021). Musical Hallucinations in Chronic pain: the anterior cingulate cortex regulates internally generated percepts. *Frontiers in Neurology*. DOI: [10.3389/fneur.2021.669172](https://doi.org/10.3389/fneur.2021.669172)
 - [6] **Narayan Sankaran**, Thomas Carlson, & William Forde Thompson (2020). The rapid emergence of musical pitch structure in human cortex. *Journal of Neuroscience*. DOI: [10.1523/JNEUROSCI.1399-19.2020](https://doi.org/10.1523/JNEUROSCI.1399-19.2020)
 - [7] **Narayan Sankaran**, William Forde Thompson, Simon Carlile, & Thomas Carlson (2018). Decoding the dynamic representation of musical pitch from human brain activity. *Scientific Reports*. DOI: [10.1038/s41598-018-19222-3](https://doi.org/10.1038/s41598-018-19222-3)
 - [8] **Narayan Sankaran**, Jayaganesh Swaminathan, Christophe Micheyl, Sridhar Kalluri, & Simon Carlile (2018). Tracking the dynamic representation of consonants from auditory periphery to cortex. *The Journal of the Acoustical Society of America*. DOI: [10.1121/1.5065492](https://doi.org/10.1121/1.5065492)
 - [9] Heather Kelly, Gaven Lin, **Narayan Sankaran**, Jing Xia, Sridhar Kalluri, & Simon Carlile (2017). Development and evaluation of a mixed gender, multi-talker matrix sentence test in Australian English. *International journal of audiology*. DOI: [10.1080/14992027.2016.1236415](https://doi.org/10.1080/14992027.2016.1236415)
 - [10] **Narayan Sankaran**, Johahn Leung, & Simon Carlile (2014). Effects of virtual speaker density and room reverberation on spatiotemporal thresholds of audio-visual motion coherence. *PloS one*. DOI: [10.1371/journal.pone.0108437](https://doi.org/10.1371/journal.pone.0108437)

Selected Conferences & Talks

- 2025 *Panel Speaker*, “Brain Days”, 80th United Nations General Assembly. NYC, NY.
- 2024 “*Encoding mechanisms underlying perception of melody*”, talk presented at USC Hearing & Communication Neuroscience Seminar. Los Angeles, CA.
- 2024 “*Encoding of melody in the human auditory cortex*”, talk presented at 10th Annual NIH BRAIN Initiative Conference. Bethesda, MD.
- 2024 “*Music perception recruits domain-general and music-specific encoding mechanisms*”, Talk presented virtually at Trinity College Dublin, Ireland.

- 2024 *"Mechanisms of auditory encoding for music"*, Talk presented at University of Texas Medical Center, Houston, TX.
- 2022 *"Encoding of Melody in the Human Superior Temporal Gyrus"*, talk presented virtually at Society for Music Perception & Cognition meeting, Portland, OR.
- 2022 *Keynote Speaker. "Mechanisms of auditory encoding for music"*, Cognition and Sensory Processing Workshop (CNSP). Virtual meeting.
- 2022 *"Music specializations of the human auditory cortex"*, Electronic Auditory Research Seminar Series (EARS). Virtual meeting.
- 2021 *"Intracranial recordings reveal music-specific encoding mechanisms in auditory cortex"*, Poster presented virtually at Neurosciences & Music VII, Aarhus, Denmark
- 2021 *Selected Early Career Spotlight. "Intracranial recordings reveal the encoding of melody in the human superior temporal gyrus"* Talk presented virtually at Advances and Perspectives in Auditory Neuroscience (APAN). Virtual meeting.
- 2019 *"Decoding MEG responses to musical pitch reveals the dynamic emergence of tonal structure in human cortex"*, Talk presented at The Acoustical Society of America meeting, Louisville, KY.
- 2019 *"Structure of cortical representations of speech & music"*. Talk presented at CCRMA Hearing Seminar Series. Stanford University. Stanford, CA.
- 2016 *"Decoding the tonal hierarchy"*. Talk presented at International Conference on Music Perception & Cognition. San Francisco, CA.

Grants and Awards

- 2026 – pres. *NIH UG3/UH3, Multisite closed loop DBS for chronic pain. Role: Key personnel*
- 2024 – pres. *University of San Francisco Faculty Development Fund, \$16,000*
- 2024 – 2025 *Civic Science Fellowship, Rita Allen Foundation, \$112,000*
- 2024 *Poster Prize, International Neuroethics Society*
- 2021 *Early Career Researcher Award, Advances and Perspectives in Auditory Neuroscience (APAN).*
- 2021 *Selected Early Career Panelist, Symposium for Cognitive Auditory Neuroscience.*
- 2020 *Berkelhammer Postdoctoral Award, University of California San Francisco, \$2000*
- 2014 *Australian Postgraduate Research Award, University of Sydney, \$25,000*

Teaching

2026, NEUR 303: Sensation and Perception, *University of San Francisco*

2026, NEUR 202: Research Methods and data analysis for cognitive neuroscience, *University of San Francisco*

2023, MCB 290: Neuroscience, ethics, and society, *University of California, Berkeley*

Service

Volunteer teaching

Mount Tamalpais University at San Quentin State Prison
Oasis for Girls (San Francisco)

Scientific Advisory Boards

NeuroArts Blueprint Initiative
Implanted Brain-Computer Interface Collaborative Community

Ad-hoc Peer Reviewing

Proceedings of the National Academy of Sciences, PLOS Computational Biology, Journal of Cognitive Neuroscience, Ear and Hearing, European Journal of Neuroscience, Frontiers in Neural Systems, PLOS One, Frontiers in Neuroscience, Music Perception

Memberships

Society for Neuroscience, Society for Music Perception and Cognition, International Neuroethics Society, Berkeley Ethics and Regulation Group for Innovative Technologies