



## East Bay Chapter Newsletter

**February 2026**

Chapter E-mail: [Info@HearingLossEB.org](mailto:Info@HearingLossEB.org)

Chapter Address: PO Box 2266,  
Alameda, CA 94501

*Happy Valentine's Month and President's Day Month!  
May there be love in your life!*

### February 14, 2026, Meeting: Nancy Rubin

Nancy Rubin combines photography with personal narratives to explore important social issues. Her presentation will focus on how Sound Advice, her project on hearing loss, came to life and the insights she gained from meeting each person. Sound Advice features a diverse group of people, each with a unique hearing challenge, ages 6 - 95 years old. Linda Gee, one of the project's participants, will also share her personal experience of being part of Sound Advice.

Email link to exhibit: <https://www.nancyjrubin.com/sound-advice>

- 9:30 a.m.: Social and Refreshments
- 10:00 a.m.: Presentation (Zoomers can join at 10 am)
- 11:30 a.m.: Complimentary Pizza

Location: Kaiser Permanente, Fabiola Building,  
3801 Howe St, Basement Room G-26, Oakland, CA.

**FREE PARKING** is available across the street at the Kaiser parking structure.

Please come to the in-person meeting to meet the speaker, meet others who have hearing loss and enjoy complementary refreshments.

The meeting is available both In-Person and Virtual (Zoom).

Please register at: [www.HearingLossEB.org](http://www.HearingLossEB.org) by 5 PM, Friday, Feb. 13, 2026.

Questions? [Info@HearingLossEB.org](mailto:Info@HearingLossEB.org)

HLAA-EB posts our newsletters to the California State Association webpage and a link on our website. **VOLUNTEER! Contact us to let us know you are available!** Check out our website at: <http://www.HearingLossEB.org/> Contact us at: [Info@HearingLossEB.org](mailto:Info@HearingLossEB.org)

## Coming Soon:

- **March, 2026: "Research Looking at Preoperative Cognition & Music Enjoyment in New CI Users", Lourdes Kaufman, UCSF Head/Neck Surgery 4th year Medical Student & Current Children's Communication Center Research Fellow: [https://ohns.ucsf.edu/ccr/research\\_fellow](https://ohns.ucsf.edu/ccr/research_fellow)**
- **April, 2026: About Assistive Listening Systems Including Auracast, Ann Thomas, HLAA N. CA Chapter Coordinator**
- **May, 2026: Walk4Hearing at Robert W. Crown Memorial Beach in Alameda, CA**
- **June, 2026: East Bay Chapter of Canine Companions. Presenting about hearing dogs for the Deaf and Heard of Hearing.**
- **July/August: No general meetings**

**NOTE:** If you have old hearing aids you no longer use, you may donate them. Drop them off at a meeting and we will make sure your hearing aids get new life for someone else. Also, bring any hearing assistive technology items you no longer use that you may have (such as a Roger Pen or??) to a meeting to see if anyone at the meeting can use them.

## **MEETING NOTES: *"Music Perception in Cochlear Implant Users: A New Approach to an Innovative Technology"***

At our Jan. 10, 2026 HLAA-East Bay Chapter meeting, our guest speaker was Brooke Barry,

B.S., B.A., who gave a fascinating presentation on her current research on music perception and cochlear implants. Initially, Brooke noted that she does not have hearing loss, but nevertheless was quite excited to talk with us about the research of which she is so passionate. In her presentation, Brooke covered several topics such as pitch, timbre, rhythm, harmonics, and melody, as perceived by cochlear implant users. She concluded her presentation with a discussion of on-going research and technical aspects of cochlear implants, including electrode thresholds and spectral blurring, along with recommendations for following future research developments.



- ***Our Speaker's Background:*** Brooke received her B.S. in Physiological Science and her B.A. in Music Performance from UCLA in 2023. She also expressed how much she enjoyed playing

the oboe at UCLA and helped her discover her passion for music theory and the workings of the human body,

- **Our Speaker's Current Research Position:** Brooke is currently a cochlear implant researcher in the Jiam Barrett Lab at UCSF. Brooke was fortunate enough to gain her mentors at college, Dr. Nicole Jiam, M.D. and Dr. Karen Barrett, Ph.D., who got Brooke involved in their research projects at the Jiam Barrett Lab at UCSF where they were conducting research on music perception in cochlear implant users.
  - ✓ **Brooke's Mentors: Co-Principal Investigators at UCSF's Jiam Barrett Lab:** Brooke introduced her 2 mentors.
    - Dr. Nicole Jiam, M.D. is a otological surgeon and scientist. She implants cochlear implants in the operating room and studies their outcomes, both immediately after implantation and long term.
    - Dr. Karen Barrett, Ph.D. has a master's degree in music performance and a Ph.D. in the neuroscience of creativity, bringing unique expertise on why music is important and her knowledge of music theory.
    - Together, they study the intersection of medicine and music, examining important questions like what can cochlear implant users hear and not hear, and how can cochlear implant users better enjoy music.
- **A Day in her Life as a Researcher:** Before discussing her research, Brook briefly described a typical day at the Lab:
  - ✓ **Goal:** Problem-solving, learning. & collaborating to make a positive impact.
  - ✓ **Procedures:** Lab communications, testing, advocacy, and research.
- **Mechanics of Sound Perception:** Brooke wanted to first review the mechanics of how sound is heard and interpreted acoustically in order to help us understand the cochlear implant and its version of sound perception.
  - ✓ **Auricle:** Sound is initially "caught" using the auricle or the external ear that we see.
  - ✓ **External Auditory Canal:** The sound then travels through the ear canal, or the external auditory canal.
  - ✓ **Tympanic Membrane:** The sound hits the ear drum, or tympanic membrane.
  - ✓ **Malleus, Incus, Stapes:** The vibration it produces shakes the 3 small bones called the malleus, incus, & stapes.
  - ✓ **Cochlea:** The footplate of the stapes sends sound waves through the round window & fluid in the cochlea.
  - ✓ **Spiral Ganglion Cells:** The sound waves are sent through the fluid, bending & stimulating spiral ganglion cells.
  - ✓ **Auditory Nerve:** The stimulated spiral ganglion cells wrapped by the cochlea send information to the auditory nerve.
- **Cochlea Implants (CI's) Candidacy:** Brooke reminded us that sound processing is quite a complex procedure, even when the brain works with normal hearing (NH). It is even more challenging for those individuals with hearing loss (HL) since the brain does not process sound in the same way. For individuals who have been diagnosed with hearing loss but have not

experienced sufficient benefit from hearing aids (HA's), cochlear implants may be a viable treatment option. However, to be an eligible candidate for CI's, the individual typically needs to be diagnosed with severe to profound Sensorineural Hearing Loss (SHL) or deafness, often caused by malfunction in the cochlea.

- **How Cochlear Implants Work:** Brooke then provided a short video recording and demonstration of how cochlear implants (CI's) work for users. Technology is now available to enhance speech understanding and reduce noise (S/N ratio) when sound is sent to one's brain that does not process sound in the same way as in people with normal hearing. It has taken many years and hundreds of millions of dollars for researchers/manufacturers to conduct the kind of research necessary in replicating the complicated workings of the brain and binaural (2 ears) processing. Researchers/manufacturers have had to work hard to come up with the technology in hearing devices such as hearing aids (HA's) and particularly hard in developing cochlear implants (CI's) that will help enhance speech clarity and music perception in the manner our brain is designed to do.
- **Components of Music:** Brooke defined each of the 5 components/elements of music and then compared how each element applies to persons with normal hearing (NH) vs. cochlear implant (CI) users.
  - ✓ **Pitch:** Defined as the frequency of sound, or the number of times per second a sound wave hits its maximum.
    - NH: 20-20,000 Hz range vs. CI: 150-30,000 Hz range.
    - NH: 1 half step apart vs. CI: 3 half steps apart.
    - Pitch Mismatch: Some CI users may also experience pitch mismatch, where the pitch intended to be stimulated by the CI electrode array is actually perceived as a different pitch.
    - FPCT Facilitated Pitch Relocation: In this recent study at the Jiam Lab, the pitch mismatch issue was combatted, improving on 3 different aspects of pitch perception in CI's.
    - Science of Pitch Perception: Another study has been comparing pitch perception in CI's under the Pitch Place Theory/Piano Key Method vs. the Temporal Theory/Vibration Method, or some combination of the 2 methods, in order to determine the best way to improve pitch perception in CI users.
  - ✓ **Timbre:** Defined as the difference in sound quality which helps us distinguish different voices or instruments from each other. As an example, Brooke played a recording of a clarinet and a violin, where the only difference in the music was the instrument playing.
    - Clarinet.
    - Violin.
    - CI users hear differences in timbre significantly less than normal hearing listeners (NHL). One study found that a group of CI users identified instruments correctly only 45% of the time as compared to normal hearing listeners (NHL) identifying correctness 94% of the time.
    - The preliminary data in another study at the Jiam Lab suggests that deactivating high threshold electrodes may improve timbre perception for CI users.
  - ✓ **Rhythm:** Defined as beat and loudness per unit of time, that is, the repetitive beat at which a song is played. As an example from one of her favorite cochlear implant

perception studies, Brooke played a recording of the song *Suavemente* at a slow tempo and at a fast tempo, asking CI users to listen at a slow tempo and a fast tempo. They were also asked to wear a Nintendo device and move to the beat of both while listening to recording clips of *Suavemente* at 2 different tempos.

- Slow tempo.
- Fast tempo.
- CI users were able to track the beat and move to the beat at the same consistency as a normal hearing listener (NHL) cohort.
- Based on this study, CI users' perception of rhythm seems to be intact. This means that CI users most likely use their rhythm-related perception strength to compensate for potentially missed pitch or timbre cues.

✓ **Harmony:** Defined as multiple pitches/notes played simultaneously.

- Two instruments.
- One instrument.
- CI users have a completely different understanding of harmony than normal hearing listeners (NHL). CI users hear the average of multiple notes when a chord is played, while NHL hear 2 notes simultaneously. Hence, CI users can differentiate between a major chord of 3 notes and 3 steps right next to each other simultaneously, but cannot differentiate between smaller differences in harmony.
- In the context of music, CI users seem to prefer pieces with fewer instruments included, with less complex harmonies, and also prefer music with lyrics over music without lyrics. Therefore, CI users may listen to music in a completely different way than normal hearing listeners.

✓ **Melody:** Defined as multiple pitches strung together and played one after another.

- Pitch perception application: Similar to pitch, CI users can hear melodies where the main notes of the melody are at least 3 half steps apart.
- Melody perception: But melodies are so much more than notes since they hold memories and tell a story.
- CI users typically have a harder time identifying familiar melodies such as *Happy Birthday*.
- CI users who lost their hearing later in life often hear melodies and fill in gaps by identifying familiarity from before deafness.

➤ **How Music Relates to Speech:** Brooke also spoke briefly about how the elements of music relate to speech in cochlear implant users. For example, a recent study conducted by the Jiam Lab found in comparing speech scores to timbre scores, that there was a significant correlation. Thus, improving on music perception may improve speech perception and vice versa.

➤ **Music in Rehabilitation:**

✓ **How to Increase Music Enjoyment:** Increasing music enjoyment is critical in enhancing the motivation to practice music perception. More rhythm genres with simpler harmonies, such as pop and rock music, may be more enjoyable for cochlear implant users. Music with lyrics may also be more enjoyable for CI users.

✓ **Software for Musical Practice:** Software for musical practice includes *Meludia* and *Angel Sound*, which test users on pitch, rhythm, and melody perception.

- **Meludia:** *Meludia* was actually first a software to aid in classical ear training, but was then modified for cochlear implant users interested in practicing music perception.
  - **Angel Sound:**
- ✓ **Personalized Cochlear Implant Rehabilitative Studies:** These studies use music perception that set interactive and personalized goals for each cochlear implant user. However, more research is probably required to advance these programs.

➤ **Studies for Which the Jiam Lab Is Currently Recruiting Participants:**

○ **Music Listening Preferences Study:**

- **Question:** During rehabilitation from CI surgery, what music listening preferences are shown by CI users?
- **Who:** Age 18+ years old scheduled for CI surgery.
- **Task:** Listen to Spotify for 4 hours per week in the period directly after CI activation to 6 months post activation. Complete a 30-minute online survey. Recruits will be given a free Spotify Premium Account.
- **Contact:** [brooke.barry@ucsf.edu](mailto:brooke.barry@ucsf.edu)

○ **Personalized Cochlear Implant Maps Study:**

- **Question:** Can personalized cochlear implant programming maps improve speech and music perception in cochlear implant users?
- **Who:** Age 7+ years old Advanced Bionics cochlear implant users.
- **Task:** Listen to some sounds and music using a personalized map and provide feedback. The study involves 3-4 visits of 3-5 hours. Recruits are paid \$75 per visit.
- **Contact:** [brooke.barry@ucsf.edu](mailto:brooke.barry@ucsf.edu)

➤ **Wrap-Up;** In wrapping up her very interesting presentation, our speaker Brooke Barry suggested that audience members consider following her lab's website, newsletter, and social media for updates on music perception and cochlear implant research.

Finally, Brooke Barry said that she did not intend to endorse any hearing loss treatment or product in her presentation. The HLAA-EB Chapter leadership also reminded everyone that the policy of the Chapter is to not endorse any service, product or person that may have been mentioned or discussed during the current presentation, discussion or follow-up Q & A session.

**For More Information/Questions:** Email: [brooke.barry@ucsf.edu](mailto:brooke.barry@ucsf.edu) Call: 562-489-6222

~ Kathy Fairbanks

**Time to renew your membership to our chapter! Only \$25.**  
**Bring a check to the next meeting or go to**  
[hearinglosseb.org/join](http://hearinglosseb.org/join)

**We need your help! Can you volunteer? Contact us at:**  
[info@hearinglosseb.org](mailto:info@hearinglosseb.org)

Here is a list of volunteer positions we are seeking to fill:

- **Volunteer Recruiter**: Contact people who said they could volunteer and tell them about volunteer needs. Recruit for those positions.
- **YouTube Channel Creator**: Establish a chapter YouTube channel for meeting recordings.
- **Webmaster**: Maintain and improve the chapter website. Currently developed using the Wix platform.
- **Just want to help?** All of our committees need helpers! All volunteers are welcome! Contact us and we'll help you figure out what would be a good fit for you.

### ***HLAA SF/East Bay Leaders***

#### **The Board of Directors:**

Contact us at: [info@hearinglosseb.org](mailto:info@hearinglosseb.org)

President: Len Bridges

Vice President: Peter Townsend

Secretary: Linda Gee

Treasurer: Len Bridges

Co-Director of Technology: George Chin, Sr.

Co-Director of Technology: Jay Mumford

Director of Membership: Connie Gee

Program Advisor: Robin Miller

Co-Director of Programs: Verna Dow

Director of Outreach: Katie Laws

Co-Director of Newsletters: Nancy Asmundson

Co-Director of Newsletters: Kathy Fairbanks

Director of Publicity: Marlene Muir

Legal Advisor: Gerald Niesar

Captioner, Communication Access Realtime Translation (CART) services: Audrey Spinka

#### ***JOIN HEARING LOSS ASSOCIATION OF AMERICA (HLAA) – THEY ADVOCATE FOR YOU!***

[hearingloss.org](http://hearingloss.org) Membership is now open to all of our valued supporters who help fuel our mission and change the lives of people with hearing loss. **Everyone who gives is now an HLAA member, helping to amplify our HLAA voice, and fulfill our important mission— together!**

**COST OF MEMBERSHIP:** The HLAA national office had consolidated the donation and membership processes. Presently, anyone who donates as little as \$1 would become a member of the national HLAA. Additionally, with a donation of \$45 annually, individuals have the option to receive a hard copy of the Hearing Life magazine from the national office.