

# Opportunities to Support Communal Experiences of Deaf and Hard-of-hearing People in Live Popular Music Concerts

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## Problem

Communal experience is one of the reasons people attend live music concerts.

### Musical experience



Listening



### Accessible stimuli



Synchronized visual artifacts



Synchronized vibrotactile vest

### Communal experiences



Group dancing



Fan chanting



No tools to support communal experiences

## Interview Study

Recruited five Deaf and Hard-of-hearing (D/HH) concertgoers from USA and Korea

**RQ1:** What are their **current practices & challenges** in communal experiences in live music concerts?

**RQ2:** What **technological support** they want for better communal experiences in live music concerts?

## Results & Implications

### (RQ1) Current practice:

Visually Recognizable Communal Activities

"When people **shake their light sticks** or do an **audience wave**, I can **visually tell** what's going on. Then I join the movements." [P2]



### (RQ1) Challenges:

Recognizing Auditory Group Activities

"It's frustrating that I cannot take part in those communal experiences since I **cannot sense auditory context**." [P1]



### (RQ2) Providing Contextual Information

"Since I had **no idea which part of the songs that audiences were singing together**, I had no choice but to be waving my light stick." [P2]



Google AR Glasses

- Real-time subtitles
- Sign language translation



### (RQ2) Delivering Artists' Emotions in Music

"I once tried on a vibrating vest. It felt great to feel the rhythm. But I wish it could **convey the artists' emotions infused within songs**." [P4]



- Colors of visual stimuli
- Temperatures of the vibrotactile vest