

Speech AI for All

Promoting Accessibility, Fairness, Inclusivity, and Equity



Welcome



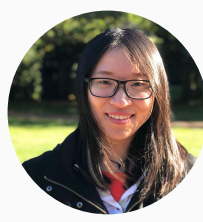
Shaomei Wu
AImpower.org



Kimi Wenzel
CMU



Jingjin Li
AImpower.org



Qisheng Li
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Alisha Pradhan
New Jersey Institute of
Technology



Raja Kushalnagar
Gallaudet University



Colin Lea
Apple Inc.



Allison Koenecke
Cornell University



Christian Vogler
Gallaudet University



Mark
Hasegawa-Johnson
UIUC



Norman Makoto Su
UC Santa Cruz



Nan Bernstein Ratner
University of Maryland,
College Park

Housekeeping

Schedule

| | |
|---------------|-------------------------------|
| 9:00-9:15 | Opening |
| 9:15-10:30 | Micro-keynotes |
| 10:30-11:10 | Break |
| 11:10-12:40 | Poster presentation |
| 12:40-14:10 | Lunch |
| 14:10-15:40 | Community panel |
| 15:40 - 16:20 | Break |
| 16:20 - 17:50 | Small group themed discussion |
| 17:40 - 17:50 | Closing remarks |
| 19:00 - 22:00 | Social |

Slack

- Join the workspace: speechai4all.slack.com
- Introduce yourself at **#introductions**
- Ask questions at **#keynote**, **#panel**, **#group-discussion**, ...

Workshop website

- speechai4all.org

Vision

Co-create Fair and Accessible Speech AI

- AI
- UX and HCI
- Policy
- Design
- Speech language pathology
- Linguistics
- Anthropology
- Impacted communities
- ...

Ice breaking

Now:

Get to know at least three new people in the next 5 mins.

Throughout the day:

Find at least three people you want to collaborate with.

Goals and expectations

Goals

- Learn from each other
- Build a community
- Co-create a roadmap for fair and accessible speech AI

“I don’t just want us to get a seat at someone else’s table, I want us to be able to build something more magnificent than a table, together with our accomplices.”

Expectations

- Be curious
- Be mindful
- Practice active listening

- Mia Mingus

Expert Micro-keynote Provocations



Karen Nakamura



Ly Xīnzhèn Zhǎngsūn Brown



Nicole Holliday

Scan to ask a question for the Q&A
after all Micro-keynotes!



<https://tinyurl.com/Speech4All>

Poster Presentation

(3-min pitch)

1. How People Living With Amyotrophic Lateral Sclerosis Use Personalized Automatic Speech Recognition Technology to Support Communication, Richard Cave (University College London)
 2. Listening to Bias: Tracing Lineage, Impacts, and Paths Forward, Johann Diedrick (New York University / Social Science Research Council, Just Tech Fellow)
 3. Bridging the Speech AI Accessibility Gap for Deaf and Hard of Hearing People, Abraham Glasser (Gallaudet University)
 4. Towards Temporally Explainable Dysarthric Speech Clarity Assessment, Chitralekha Gupta (National University of Singapore)
 5. Inclusivity of AI Speech in Healthcare: A Decade Look Back, Retno Larasati (The Open University, United Kingdom)
-

Poster Presentation

(3-min pitch)

6. Automatic Speech Recognition Model Adaptation for Individuals with Autism Spectrum Disorder, Bowon Lee (Inha University)

7. Addressing Non-Pathological Speech Disfluency in AI, Ralph Rose, Ayaka Sugawara, Aina Tanaka (Waseda University)

8. On the Lack of Queer Voices in Diverse Speech Datasets, Brooklyn Sheppard (University of Calgary)

9. Enhancing Mental Health through DSR: Psychological Behavioral Evidence and Future Application Prospects, Su-Jing Wang (CAS Key Laboratory of Behavioral Science, Institute of Psychology)



Community Panel

(panelist introduction - perhaps put the photos and text intro of each panelist on the screen while they introducing themselves?)

(pre-solicited questions)

(live questions)



Community Panel



Robin Netzorg



Ken-ichiro Yabu



Abraham Glasser



Yukinori Tamaki



Yang Yang

Community Panel



SCAN ME



Robin Netzorg

Robin Netzorg (she/her) is a 6th year PhD student at the University of California at Berkeley, advised by Professors Gopala Anumanchipalli and Bin Yu. Her research focuses on interpretable models of speaker identity that quantifies expert perception of voice quality, with an aim to apply these methods to gender-affirming voice training and speech therapy as assistive tools. She believes strongly in the potential for machine learning to support, not replace, human expertise, and has tried to accomplish this via community-driven design and collaboration.



Community Panel



SCAN ME



Kenichiro Yabu

Ken-ichiro YABU is a project researcher with RCAST (Research Center for Advanced Science and Technology) and IOG (Institute of Gerontology) in the University of Tokyo. He has muscle weakness in his whole body and uses an electric wheelchair. And he has moderate speech articulation disorder.

He is engaged in research on assistive technology for people with disabilities and the elderly.



Community Panel



SCAN ME



Abraham Glasser

Abraham Glasser is a born-Deaf, native American Sign Language (ASL) signer who occasionally uses his voice that has a Deaf accent. He is an Assistant Professor in the Accessible Human Centered Computing program at Gallaudet University. In Human-Computer Interaction (HCI), his research investigates technologies, AI, and accessibility for people who are Deaf or Hard of Hearing, including speech, sign language, and immersive technologies.



Community Panel



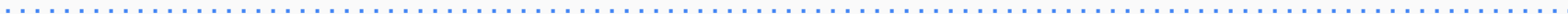
SCAN ME



Yukinori Tamaki

Yukinori Tamaki is a social worker and the representative director of Hyogo Prefecture Consultation Support Network, General Incorporated Association.

Yukinori Tamaki was left with cerebral palsy after being in a state of asphyxia during birth. He attended local schools for elementary and junior high school, but attended a boarding school for disabled people for high school. After graduating from the second division of the Faculty of Social Welfare at Nihon Fukushi University, Yukinori Tamaki became immersed in the independent living movement at the Mainstream Association of Independent Living Centers. He currently serves as the Representative Director of Hyogo Prefecture Consultation Support Network, General Incorporated Association, and as an advisor for the rights protection and dissemination promotion and consultation support of the Nishinomiya City Social Welfare Council, a social welfare corporation. Yukinori Tamaki appeared on NHK Educational TV's Baribara, which ended in March this year, after 16 years.



Community Panel



SCAN ME



Yang Yang

Yang Yang is a Speech Therapist based in Tokyo, Japan. She was born and raised in Shanghai, China mainland. After getting her bachelor's degree in China, she obtained the master's degree and passed the national certification of Japan last year.

She has had a developmental stutter (or stammer) since she was 6 years old. This experience led her to the field of speech and language pathology.

She's also one of the founding members of "Slow Order Cafe", a project that runs a series of pop-up events staffed entirely by young people who stutter. She believes more voices from the stuttering community should be heard.



Scan to ask a question for the panel!



SCAN ME

Or navigate to:

<https://tinyurl.com/speechQ>

Themed Discussion

- Chance to share your interests and experiences, reflect on the day, look forward
- Discussions will form the basis of a white paper
 - Summarize our collective knowledge on this domain
 - Proposes a research agenda and design guidelines for fair and accessible speech AI



Themed Discussion

- Form small groups around interested topics (15 mins)
 - In-depth, structured discussions (1 hour)
 - Start with individual thinking/jotting thoughts, adding additional questions
 - Group sharing and wrap-up (20 minutes)
 - [Notetaking folder](https://tinyurl.com/SpeechDiscussions) (tinyurl.com/SpeechDiscussions)
 - Roles:
 - Scribe: workshop organizer?
 - Moderator: ?
-

Themed Discussion: Some Starter Themes

Inclusion and Representation (Scribe: ?)

- How can we centralize involvement of those who are most impacted by Speech AI?
- How can we meaningfully involve and include folks?

A Roadmap for Fair Speech AI (Scribe: ?)

- What are guiding principles to building long-term solutions regarding Speech AI?
 - For example, what design principles or metrics and measurements can we develop?
-

Themed Discussion: Some Starter Themes

Policy (Scribe: ?)

- How can HCI collectively partner and influence policy around Speech AI?
- How can policy allow us to scale inclusive solutions to be adopted widely and to eventually have influence social norms around diverse speech?

Tensions in the “All” of Speech AI for All (Scribe: Norman Su)

- What are the tensions (e.g., debates about synthesized speech, the role of transcripts for stuttered speech) within the “all” - communities impacted with Speech AI?
 - How do we navigate that plurality?
 - How can we productively and positively move forward?
-

Themed Discussion: Some Starter Themes

New, better themes may arise throughout the day

Please create your own theme + questions!





Type

People

Modified

Source

Name



Your Theme Here (Copy me)



Tensions in the "All" of Speech AI for All



Policy



A Roadmap for Fair Speech AI



Inclusion & Representation



Tensions in the “All” of Speech AI for All

Scribe

Norman Su

Participants

Drawing from your own experiences and interests, spend a few moments thinking individually about your responses to the following questions. Feel free to write your answers also or add more questions below! Afterwards, discuss as a group.

What are the tensions (e.g., debates about synthesized speech, the role of transcripts for stuttered speech) within the “all” - communities impacted with Speech AI?

How do we navigate that plurality?

Closing Remarks

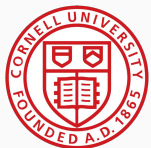


Thank you

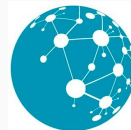
Speakers

Organizing team

Sponsors



Cornell University®



Patrick J McGovern
FOUNDATION

Post-workshop social

Location: WATAMI Yokohamaekimae (ミライザカ JR横浜西口駅前店)

Time: 7:00pm



3rd floor,
Comfort 178
Yokohama
Building