Cheol Jun Cho

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Education

University of California, Berkeley — Aug 2021 – Dec 2026 (expected)
Ph.D. in Computer Science
- Advisors: Gopala K. Anumanchipalli and Jack L. Gallant

Seoul National University — Mar 2014 – Aug 2020
B.S. in Computer Science and Engineering
- Summa Cum Laude & Ranked 1st in College of Engineering

Research Experience

Berkeley Speech Group at UC Berkeley — *Berkeley, CA, USA*
Graduate Student Researcher — Aug 2021 – Present

Gallant Lab at UC Berkeley — *Berkeley, CA, USA*
Graduate Student Researcher — Aug 2021 – Present

Chang Lab at UCSF — *San Francisco, CA, USA*
Graduate Student Researcher — Aug 2023 – Dec 2023

Computational Clinical Science Lab at SNU — *Seoul, Korea*
Research Assistant — Sep 2020 – Jul 2021

Center for Neuroscience, Brain Science Institute at KIST — *Seoul, Korea*
Research Assistant — Jul 2020 – Dec 2020

KAIST Interaction Lab — *Daejeon, Korea*
Undergraduate Research Assistant — Jun 2019 – Aug 2020

Computing and Memory Architecture Lab at SNU — *Seoul, Korea*
Undergraduate Research Assistant — Dec 2018 – Jun 2019

Journal Publications

Artificial intelligence-based speech error detection to differentiate primary progressive aphasia variants — 2026, Brain Communications
Vonk, J. M. J.*, Lian, J.*, Kurteff, G. L.*, **Cho, C. J.**, Antonicelli, G., Ezzes, Z., Wauters, L. D., Keegan-Rodewald, W., Rodriguez, D. A., Dronkers, N., Henry, M. L., Miller, Z. A., Mandelli, M. L., Anumanchipalli, G. K.$^{+}$, Gorno-Tempini, M. L.$^{+}$ (*, $^{+}$: equal contribution)

A Streaming Brain-to-Voice Neuroprosthesis to Restore Naturalistic Communication — 2025, Nature Neuroscience
Cho, C. J.*, Littlejohn, K. T.*, Liu, J. R., Silva, A. B., Yu, B., Anderson, V. R., Kurtz-Miott, C. M., Brosler, S., Kashyap, A. P., Hallinan, I. P., Shah, A., Tu-Chan, A., Ganguly, K., Moses, D. A., Chang, E. F.$^{+}$, Anumanchipalli, G. K.$^{+}$ (*, $^{+}$: equal contribution)

Coding Speech through Vocal Tract Kinematics — 2024, IEEE JSTSP
Cho, C. J., Wu, P., Prabhune, T. S., Agarwal, D., Anumanchipalli, G. K.

A Bird's Eye View of Brain Activity in Socially Interacting Mice through Mobile Edge Computing (MEC) — 2020, Science Advances
Kim, J.*, Kim, C., Han, H., **Cho, C. J.**, Yeom, W., Lee, S. Q.*, Choi, J. H.*

Conference Publications

HuPER: A Human-Inspired Framework for Phonetic Perception — 2026, NeurIPS
Guo, C., Lian, J., Liu, Y., Huang, B., Narayanan, S., Wu, B., Ezzes, Z., Vonk, J., Miller, Z., **Cho, C. J.**, Gorno-Tempini, M., Anumanchipalli, G.

KIRA: A Full-Stack Reading Screening System with Dual-Pathway Analysis for Children — 2026, SLT
Dong, M.*, Mekkoth, R.*, Wang, Z.*, **Cho, C. J.**$^{+}$, Lian, J.$^{+}$, Anumanchipalli, G. K. (*: equal contribution, $^{+}$: co-project leads)

HASS: Hierarchical Simulation of Logopenic Aphasic Speech for Scalable PPA Detection — 2026, Interspeech
Li, H., Wang, K., **Cho, C. J.**, Lian, J., Rangwala, R., Guo, C., Yang, E., Kurteff, L., Ezzes, Z., Keegan-Rodewald, W., Vonk, J., Ramkrishnan, S., Antonicelli, G., Miller, Z., Gorno-Tempini, M. L., Anumanchipalli, G. K.

[b]=[d]-[t]+[p]: Self-supervised Speech Models Discover Phonological Vector Arithmetic — 2026, ACL
Choi, K., Yeo, E., **Cho, C. J.**, Harwath, D., Mortensen, D. R.

Scaling Spoken Language Models with Syllabic Speech Tokenization — 2026, ICASSP
Lee, N., **Cho, C. J.**, Black, A. W., Anumanchipalli, G. K.

K-Function: Joint Pronunciation Transcription and Feedback for Evaluating Kids Language Function — 2026, ICASSP
Li, S., Guo, C., Lian, J., **Cho, C. J.**, Zhao, W., Xu, X., Jin, R., Shi, X., Zhou, X., Zhou, D., Wang, S., Wang, G., Yang, J., Xu, J., Bao, R., Chen, X., Brenner, E., In, B., Pei, F., Gorno-Tempini, M. L., Anumanchipalli, G. K.

LCS-CTC: Leveraging Soft Alignments to Enhance Phonetic Transcription Robustness — 2025, ASRU
Ye, Z., Lian, J., Gupta, A., Zhou, X., Patel, K., Li, H., Park, H. J., Guo, C., Li, S., Wang, S., **Cho, C. J.**, Ezzes, Z., Vonk, J. M. J., Morin, B. T., Bogley, R., Wauters, L., Miller, Z. A., Gorno-Tempini, M. L., Anumanchipalli, G. K.

Towards accurate phonetic error detection through phoneme similarity modeling — 2025, Interspeech
Zhou, X., Lian, J., **Cho, C. J.**, Prabhune, T., Li, S., Li, W., Ortiz, R., Ezzes, Z., Vonk, J., Morin, B., Bogley, R., Wauters, L., Miller, Z., Gorno-Tempini, M. L., Anumanchipalli, G. K.

Sylber: Syllabic Embedding Representation of Speech from Raw Audio — 2025, ICLR
Cho, C. J., Lee, N., Gupta, A., Agarwal, D., Chen, E., Black, A. W., Anumanchipalli, G. K.

Stutter-Solver: End-to-end Multi-lingual Dysfluency Detection — 2024, SLT
Zhou, X., **Cho, C. J.**, Sharma, A., Morin, B., Baquirin, D., Vonk, J., Ezzes, Z., Miller, Z., Tee, B. L., Gorno-Tempini, M. L., Lian, J., Anumanchipalli, G. K.

Fast, High-Quality and Parameter-Efficient Articulatory Synthesis using Differentiable DSP — 2024, SLT
Liu, Y., Yu, B., Lin, D., Wu, P., **Cho, C. J.**, Anumanchipalli, G. K.

SD-HuBERT: Sentence-Level Self-Distillation Induces Syllabic Organization in HuBERT — 2024, ICASSP
Cho, C. J., Mohamed, A., Li, S. W., Black, A. W., Anumanchipalli, G. K.

Self-Supervised Models of Speech Infer Universal Articulatory Kinematics — 2024, ICASSP
Cho, C. J., Mohamed, A., Black, A. W., Anumanchipalli, G. K.

Unconstrained Dysfluency Modeling for Dysfluent Speech Transcription and Detection — 2023, ASRU
Lian, J., Feng, C., Farooqi, N., Li, S., Kashyap, A., **Cho, C. J.**, Wu, P., Netzorg, R., Li, T., Anumanchipalli, G. K.

Neural Latent Aligner: Cross-trial Alignment for Learning Representations of Complex, Naturalistic Neural Data — 2023, ICML
Cho, C. J., Chang, E. F., Anumanchipalli, G. K.

A variational autoencoder provides novel, data-driven features that explain functional brain representations in a naturalistic navigation task — 2023, VSS
Cho, C. J., Zhang, T., Gallant, J. L.

Evidence of Vocal Tract Articulation in Self-Supervised Learning of Speech — 2023
Cho, C. J., Wu, P., Mohamed, A., Anumanchipalli, G. K. — ICASSP

Speaker-Independent Acoustic-to-Articulatory Speech Inversion — 2023
Wu, P., Chen, L., **Cho, C. J.**, Watanabe, S., Goldstein, L., Black, A. W., Anumanchipalli, G. K. — ICASSP

Preprints

Preferred visual experiences provide intuitive descriptions of the functional properties of the cortical navigation network — 2026
Zhang, T.*, **Cho, C. J.***, Gallant, J. L. (*: equal contribution)

Self-Supervised Speech Models Encode Phonetic Context via Position-dependent Orthogonal Subspaces — 2026
Choi, K., Yeo, E., **Cho, C. J.**, Mortensen, D. R., Harwath, D.

Sylber 2.0: A Universal Syllable Embedding — 2026
Cho, C. J., Lee, N., Black, A. W., Anumanchipalli, G. K.

Awards

Korean Honor Scholarship	Aug 2026
Eli Jury Award by UC Berkeley EECS	May 2025
Nominated for 2024 BCI Award by BCI Award Foundation	Oct 2024
Meta-BAIR Commons Program (Year 5)	Sep 2023
Meta-BAIR Commons Program (Year 4)	Sep 2022
Kwanjeong Study Abroad Scholarship (funding for PhD program up to 5 years)	Jul 2021
President's Award for 1st ranked graduation at SNU College of Engineering	Aug 2020
Best research award from 2019 Brain-Mind-Behavior Research Presentation at SNU	Dec 2019
1st place of International Capstone Design Fair 2019 (Korea, China)	Nov 2019
2nd place of SNU Creative Design Fair of SNU College of Engineering	Sep 2019
Korea National Scholarship (fully funded)	Spring 2016; Fall 2018 – Fall 2019
Army Commendation Medal (ARCOM)	Jun 2018
Certificate of Appreciation (CA) from US 8th Army	Jun 2018
SNU's Tomorrow's Engineers Membership (honor society of college of engineering)	May 2016
SNU Merit Scholarship (fully funded)	Spring & Fall 2015
SNU Merit Scholarship (half funded)	Fall 2014

Invited Talks

From Thought to Speech: Organization of Cortical Representations in Speech Production — Apr 24, 2026
Lightning talk at BayLI (Bay Area Language processing Interest group)

Speech neuroprostheses for restoring naturalistic communication and future prospects — Jun 19, 2025
Research seminar at the 2025 CogHear Workshop, University of Maryland

Articulation and Syllables: Natural Coding Principles of Speech Representation Arising from Self-Supervised Learning — Jan 28, 2025
Research seminar at ChangeLing Lab at Carnegie Mellon University

Emergent Phonological Structures in Self-Supervised Learning of Speech — Nov 8, 2024
Lightning talk at BayLI (Bay Area Language processing Interest group)

Coding Speech through Vocal Tract Kinematics — Sep 29, 2024
Research seminar at CoML team in Paris, France

A streaming silent-speech neuroprosthesis for restoring naturalistic communication — Sep 9, 2024
BCI Award 2024

Teaching Experience

CS 188. Introduction to Artificial Intelligence *UC Berkeley EECS*
Graduate Student Instructor Jun 2025 – Aug 2025

- Held discussion sections and office hours
- Gave regular lectures and guest research lectures
- Designed exam questions and graded exams

EE 225D. Audio Signal Processing in Humans and Machines *UC Berkeley EECS*
Graduate Student Instructor Aug 2024 – Dec 2024

- Helped redesign the graduate course with the instructor
- Designed and graded assignments
- Mentored students for final research projects
- Hosted and gave guest lectures

Research Mentoring

- Mentored 12 undergraduate researchers at UC Berkeley who became co-authors on publications; 5 have published first-authored work (NeurIPS, SLT, Interspeech)

Other Service

Academic Reviewer

- Journal of Neural Engineering
- IEEE/ACM Transactions on Audio, Speech, and Language Processing
- Speech Communication
- IEEE Open Journal of Signal Processing
- IEEE Signal Processing Letters
- JASA Express Letters
- Machine Learning Conferences (ICLR, ICML, NeurIPS)
- Speech Conferences (ICASSP, Interspeech, SLT)

Military Service Sep 2016 – Jun 2018

- Korean Augmentation to the United States Army (KATUSA)
- Received CA from US 8th Army and ARCOM
- Completed service as sergeant