Cheol Jun Cho

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google scholar

EDUCATION

University of California, Berkeley — **Berkeley, CA, USA**
Ph.D. student in Computer Science — *Aug 2021 - Present*
Co-advised by **Prof. Gopala K. Anumanchipalli** and **Prof. Jack L. Gallant**

Seoul National University (SNU) — **Seoul, Korea**
B.S. in Computer Science and Engineering — *Mar 2014 - Aug 2020*
Summa Cum Laude & Valedictorian of the College of Engineering

AFFILIATION

Berkeley Speech Group; **Gallant Lab**; **Berkeley Artificial Intelligence Research (BAIR)**;
Closely collaborate with **Chang Lab at UCSF**

RESEARCH FOCUS

My research goal is to reveal **the representational bases of intelligence** through multidisciplinary approaches that span ML/AI, computational neuroscience, and linguistics, with specific focus on:

- Articulatory speech processing for speech AI and science
- Grounded, interpretable, and efficient representational learning for spoken language
- Data-driven approaches for neuroscientific research
- AI-powered high-performance brain-computer interfaces

SELECTED PUBLICATIONS

Cho, C.J., Lee N., Gupta A., Agarwal D., Chen E., Black A. W., Anumanchipalli G. K. (2025). Sylber: Syllabic Embedding Representation of Speech from Raw Audio. Under review in ICLR 2025 (scores: 8 8 6 5 (top 10%))

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., Gangluy K., Moses D. A., Chang E. F.*, Anumanchipalli G. K*. (2025). A streaming silent-speech neuroprosthesis for naturalistic voice restoration. *Nature Neuroscience* (In press) *(* equal contribution)*.

Cho, C.J., Wu, P., Parbhune, T. S., Agarwal, D., and Anumanchipalli, G. K. (2025). Coding Speech through Vocal Tract Kinematics. *IEEE Journal of Selected Topics in Signal Processing* (In press).

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

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

Cho, C.J., Chang, E.F., and Anumanchipalli, G.K. (2023). Neural Latent Aligner: Cross-trial Alignment for Learning Representations of Complex, Naturalistic Neural Data. *International Conference on Machine Learning (ICML 2023)*.

Cho, C.J., Zhang, T., and Gallant, J. L. (2023). A variational autoencoder provides novel, data-driven features that explain functional brain representations in a naturalistic navigation task. Journal of Vision, 2023.

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

Cho, C.J., Chang, E., Mohamed, A. and Anumanchipalli, G.K., (2023). Cross-trial alignment reveals a low-dimensional cortical manifold of naturalistic speech production. *COSYNE 2023*.

AWARDS

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
SNU's Tomorrow's Engineers Membership (honor society of college of engineering)	May 2016
Korea National Scholarship (fully funded)	2016 Spring, 2018 Fall-2019 Fall
Army Commendation Medal (ARCOM)	Jun 2018
Certificate of Appreciation (CA) from US 8th Army	Jun 2018
SNU Merit Scholarship (fully funded)	2015 Spring,Fall
SNU Merit Scholarship (half funded)	2014 Fall

PAST RESEARCH EXPERIENCE

Computational Clinical Science Laboratory — **SNU, Seoul, Korea**
Computational Psychiatry; Cognitive Science; Computational Neuroscience — *Sep 2020 - Jul 2021*
Research Assistant, Advisor: **Dr. Woo-Young Ahn**

JeeLab, Center for Neuroscience, Brain Science Institute — **KIST, Seoul, Korea**
Computational Neuroscience; Cognitive Neuroscience; System Neuroscience — *Jul 2020 - Dec 2020*
Research Intern, Advisor: **Dr. Jee Hyun Choi**

KAIST Interaction Laboratory (KIXLab) — **KAIST, Daejeon, Korea**
Human Computer Interaction; Natural Language Processing — *Jun 2019 – Aug 2019*
Summer Research Intern, Advisor: **Dr. Juho Kim**

Computing and Memory Architecture Laboratory (CMALab) — **SNU, Seoul, Korea**
Computer Vision — *Dec 2018 – Jun 2019*
Research Intern, Advisor: **Dr. Sungjoo Yoo**

OTHER SERVICES AND ACTIVITIES

STEM Mini Vision Mentoring — **2016, 2019**
- Visited middle and high schools as a mentor.
- Introduced Engineering School, especially about Computer Science
- Shared my own learning strategies and experiences.

Korean Augmentation to the United States Army (KATUSA) — **Sep 2016 - Jun 2018**
- Served in 8th Army HHB IS G4 Information Management Office.
- Supported electrical automation and equipment maintenance for operations.

S20 project contest by Shinhan Bank — **Mar 2016 - Jun 2016**
- Won 1st place as SNU's Tomorrow's Engineers Membership team.
- Presented idea for smart banking with AI technologies.