Dr. Chenggang Chen

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Educations

Ph.D. in Biomedical Engineering	Tsinghua University, Beijing, China	2011.08-2018.07
B.S. in Biomedical Engineering	Jilin University, Changchun, China	2007.08-2011.07

Professional Experience

Assistant Professor	Tsinghua University, Beijing, China	2026.07
Research associate	Johns Hopkins University, Baltimore, MD	2024.10-2026.06
Postdoctoral fellow	Johns Hopkins University, Baltimore, MD	2018.09-2024.09

Publications-Neuroscience (**8** first author, co-first author*, corresponding author#)

1. **Chenggang Chen**, Mingxiu Cheng, Tetsufumi Ito# and Sen Song#. Neuronal organization in inferior colliculus revisited with cell-type-dependent monosynaptic tracing. *The Journal of Neuroscience* 38(13):3318-3332 (2018)
2. **Chenggang Chen** and Sen Song#. Differential cell-type dependent modulations of sensory representations in mouse inferior colliculus. *Communications Biology* 2(1):356 (2019)
3. Xindong Song, Yueqi Guo, **Chenggang Chen** and Xiaoqin Wang#. A silent two-photon imaging system for studying in vivo auditory neuronal functions. *Light: Science & Applications* 11(1):96 (2022)
4. Xindong Song, Yueqi Guo, Hongbo Li, **Chenggang Chen**, Zachary Schmidt and Xiaoqin Wang#. Mesoscopic landscape of cortical functions revealed by through-skull wide-field imaging in marmosets. *Nature Communications* 13:2238 (2022)
5. **Chenggang Chen***, Evan Remington* and Xiaoqin Wang#. Sound localization acuity in the common marmoset. *Hearing Research* 430:108722 (2023) cover paper
6. Xindong Song*, Yueqi Guo*, **Chenggang Chen***, Jong Hoon Lee and Xiaoqin Wang#. Tonotopic organization of auditory cortex in marmosets revealed by widefield optical imaging. *Current Research in Neurobiology* 6:100132 (2024)
7. **Chenggang Chen**# and Sen Song. Distinct neuron types contribute to hybrid auditory spatial coding. *The Journal of Neuroscience* 44(43): e0159242024 (2024)
8. **Chenggang Chen***, Sheng Xu*, Yunyan Wang and Xiaoqin Wang#. Location-specific neural facilitation in marmoset auditory cortex. *Nature Communications* 16:2773 (2025)
9. Yang Zhang#, **Chenggang Chen** and Xiaoqin Wang#. Voice patches in the marmoset auditory cortex revealed by wide-field calcium imaging. *PNAS* (Major Revision)
10. **Chenggang Chen***, Evan Remington* and Xiaoqin Wang#. Dynamic representation of sound locations during task engagement in marmoset auditory cortex. *PLoS Biology* 24(3): e3003707 (2026)
11. **Chenggang Chen**#, Evan Remington* and Xiaoqin Wang#. Narrow-spike and burst-firing neurons are excitatory and exhibit distinct spatial and non-spatial response properties in the marmoset auditory cortex. *bioRxiv; Journal of Neuroscience* (Under Review)

Publications-Artificial Intelligence (**6** first author & corresponding author)

1. **Chenggang Chen**#, Zhiyu Yang and Xiaoqin Wang. Neural Embeddings Rank: Aligning 3D latent dynamics with movements. ***NeurIPS*** 38:141461-141489 (2024) [Note: top 2%]

2. **Chenggang Chen#** and Zhiyu Yang. No free lunch from audio pretraining in bioacoustics: a benchmark study of embeddings. *IJCNN* Poster track #5A (2025)
3. **Chenggang Chen#**, Zhiyu Yang and Xiaoqin Wang. Deep neural network model of sound localization replicates "what" and "where" representations. *NeurIPS* 39: Workshop *NeurReps* (2025)
4. **Chenggang Chen#**, Zhiyu Yang and Xiaoqin Wang. NMR: Aligning 2D latent dynamics with movements for long-term and across individuals decoding. *Neuron* (Major Revision)
5. **Chenggang Chen#**, Zhiyu Yang and Xiaoqin Wang. The no free lunch of unsupervised brain models: behavior prediction, learning objective, and data distribution. *NeurIPS* 40 (Under Review)
6. **Chenggang Chen#**, Zhiyu Yang and Xiaoqin Wang. Real-world unsupervised models generalize to predict brain responses to out-of-distribution stimuli. ***ICML Spotlight*** (2026) [Note: top 2%]

Oral Presentations (15")

2020	Marmoset Bioscience Symposium by Drs. Cory Miller and Kuo-Fen Lee, online
2021	Adv. & Persp. in Aud. Neurosci. (APAN) by Drs. Xiaoqin Wang, Yale Cohen, and Liz Romanski, online
2022	International Conference on Mathematical Neuroscience by ESMTB, online
2022	45th Association for Research in Otolaryngology (ARO) Annual Meeting, San Jose, CA
2022	9th Midwest Auditory Research Conference (MARC) by Univ. of Michigan, Ann Arbor, MI
2023	46th Association for Research in Otolaryngology (ARO) Annual Meeting, Orlando, FL
2023	Binaural and Spatial Hearing (BASH) by Drs. Chris Stecker and Gin Best, Omaha, NE
2023	9th BRAIN Initiative Annual Meeting by NIH, Bethesda, MD
2023	Electronic Auditory Research Seminars by Drs. Maria Geffen, Yale Cohen, Online
2024	47th Association for Research in Otolaryngology (ARO) Annual Meeting, Anaheim, CA
2024	Neural Information Processing Systems (NeurIPS) SSL Workshop, Vancouver, Canada
2024	Gordon Research Conference (GRC) by Drs. Allison Coffin, Michael Roberts, Smithfield, RI
2024	Marmoset Principal Investigator (PI) Meeting by Dr. Cory Miller, Boulder, CO
2025	10th Midwest Auditory Research Conference (MARC) by NEOMED, Rootstown, OH
2026	Marmoset Bioscience Symposium by Drs. Lingyun Zhao and David Schaeffer, Pittsburgh, PA

Grants, Honors, and Awards

2009	Samsung Scholarship
2008	National Scholarship
2009	China Undergraduate Mathematical Contest in Modeling (CUMCM) National Second Prize
2009	China Undergraduate Mathematical Contest in Modeling (CUMCM) Jilin Province First Prize
2010	Suzhou Industrial Park Scholarship
2010	National Scholarship
2010	Top Ten Students (Jilin University School of Electronics)
2011	Summa cum laude (Jilin University)
2018	Best Presentation Award, IDG/McGovern Institute for Brain Research at Tsinghua University
2022	ARO Member Spotlight
2022	NWB Hackathon Travel Award
2022	Neurodata Re-Analysis Travel Award
2022	Kavli Foundation Seed Grant
2022	MARC Travel Award
2023	BRAIN Initiative Annual Meeting Trainee Highlight Award
2023	ARO Annual Meeting Travel Award
2025	MARC Travel Award