

Seungjae Han

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EDUCATION

- 2020 – Current **KAIST**
Ph.D. Candidate in School of Electrical Engineering
 Advisor: Young-Gyu Yoon
- 2017 ~ 2020 **Yonsei University**
Bachelor of Science in School of Integrated Technology
 Advisor: Jiwon Seo

PREPRINTS

(*co-first authors, **co-corresponding authors)

- [1] M. Eom*, **S. Han***, G. Kim, E.-S. Cho, J. Sim, P. Park, K.-H. Lee, S. Kim, M. Rozsa, K. Svoboda, M. Choi, C.-H. Kim, A. Cohen, J.-B. Chang, Y.-G. Yoon, “Statistically unbiased prediction enables accurate denoising of voltage imaging data”, *bioRxiv*, 2022.
- [2] J. Sim*, C. E. Park*, I. Cho*, K. Min, M. Eom, S. Han, H. Jeon, H.-J. Cho, E.-S. Cho, A. Kumar, Y. Chong, J. S. Kang, K. D. Piatkevich, E. E. Jung, D.-S. Kang, S.-K. Kwon, J. Kim, K.-J. Yoon, J.-S. Lee, E. S. Boyden, Y.-G. Yoon**, J.-B. Chang**, “Nanoscale resolution imaging of the whole mouse embryos and larval zebrafish using expansion microscopy”, *bioRxiv*, 2022.

JOURNALS

(*co-first authors)

- [1] C. Shin*, H. Ryu*, E.-S. Cho, **S. Han**, K.-H. Lee, C.-H. Kim, Y.-G. Yoon, “Three-dimensional fluorescence microscopy through virtual refocusing using a recursive light propagation network”, *Medical Image Analysis*, 2022.
- [2] E.-S. Cho*, **S. Han***, K.-H. Lee, C.-H. Kim, Y.-G. Yoon, “3DM: Deep decomposition and deconvolution microscopy for rapid neural activity imaging”, *Optics Express*, 2021. (Editors' Pick, Image of the Week)

INTERNATIONAL CONFERENCES

(*co-first authors)

- [1] J. Cho, **S. Han***, E.-S. Cho, K. Shin, Y.-G. Yoon, “Robust and Efficient Alignment of Calcium Imaging Data through Simultaneous Low Rank and Sparse Decomposition”, *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023. (accepted)
- [2] **S. Han**, E.-S. Cho, I. Park, K. Shin, Y.-G. Yoon, “Efficient Neural Network Approximation of Robust PCA for Automated Analysis of Calcium Imaging Data”, *24th International Conference on Medical Image Computing & Computer Assisted Intervention (MICCAI)*, 2021.
- [3] **S. Han**, T. Kang, J. Seo, “Smartphone Application to Estimate Distances from LTE Base Stations Based on Received Signal Strength Measurements”, *34th International Technical Conference on Circuits/Systems, Computers and Communications (ITC-CSCC)*, 2019. (Oral)
- [4] H.-S. Moon, W. Kim, **S. Han**, J. Seo, “Observation of Human Trajectory in Response to Haptic Feedback from Mobile Robot”, *18th International Conference on Control, Automation and Systems (ICCAS)*, 2018.

DOMESTIC CONFERENCES

- [1] **S. Han**, S. Kim, J. Seo, “Machine Learning Based Sound Source Localization in the Indoor Environment”, *2019 Korean Navigation Institute (KONI) Conference*, 2019.
- [2] S. Kim, **S. Han**, J. Seo, “Sound Source Localization in the Indoor Environment Based on Time Difference of Arrival Measurements”, *2019 Korean Navigation Institute (KONI) Conference*, 2019.
- [3] **S. Han**, H. -S. Moon, J. Seo, “Development of Human Following Mobile Robot Utilizing Haptic Signals”, *2018 Korean Navigation Institute (KONI) Conference*, 2018.

AWARDS & HONORS

Undergraduate Research Program (Research fund) & Best Project Award
2019, Korea Foundation for the Advancement of Science & Creativity

Short-term visiting researcher to Boğaziçi University, Turkey (Travel and lodging cost)
2019, Yonsei University

IT Consilience Creative Program (Tuition waiver & Stipend)
2017 ~ 2019, Ministry of Science, ICT and Future Planning

ACADEMIC SERVICES

MICCAI Reviewer 2022

TALKS

“Efficient methods to analyze big data from the brain”, Songlim High school, South Korea 2022. 08.

TEACHING EXPERIENCES

Teaching Assistant, KAIST

Electronics Design Lab. (EE305)	Fall, 2022
Special Topics in Electrical Engineering <AI Capston Design> (EE488)	Spring, 2022
Electronics Design Lab. (EE405A)	Fall, 2021
Basics of Artificial Intelligence (CoE202A)	Spring, 2021 & Fall, 2020

REFERENCE

Available upon request