Hyun-Bin Oh

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Last updated: June 16, 2026

RESEARCH INTEREST

Time-varying signals (*e.g.,* video and audio), Physically grounded AI, Generative models, Multimodal LLMs

EXPERIENCE

Sony AI — Remote
Research Scientist Intern, Cinematic Technology Team — *Apr. 2026 – Oct. 2026*
- Hosts: Kazuki Shimada, Takashi Shibuya, and Yuki Mitsufuji

Sony AI — Tokyo, Japan
Research Scientist Intern, Deep Generative Modeling Team — *Jul. 2025 – Mar. 2026*
- Hosts: Yuhta Takida, Toshimitsu Uesaka, and Yuki Mitsufuji

POSTECH → KAIST — Pohang → Daejeon, Korea
Research Assistant (Advisor: Prof. Tae-Hyun Oh) — *Feb. 2022 – Present*

Seoul National University — Seoul, Korea
Research Student Intern (Advisor: Prof. Wonyong Sung & Prof. Chanwoo Kim) — *Aug. 2021 – Dec. 2021*

Seoul National University — Seoul, Korea
Research Student Intern (Advisor: Prof. DongSuk Jeon) — *Dec. 2020 – Feb. 2021*

EDUCATION

POSTECH — Pohang, Korea
Integrated M.S./Ph.D. in Electrical Engineering (Advisor: Prof. Tae-Hyun Oh) — *Mar. 2022 – Present*

Chung-Ang University — Seoul, Korea
B.S. in Physics & B.E. in Electrical Engineering (Dual Degree); Summa Cum Laude — *Mar. 2017 – Aug. 2021*

PUBLICATION (INTERNATIONAL)

*" * " denotes equal contribution.*

[11] Spatio-Temporal Audio Language Modeling for Dynamic Sound Sources.
Oh Hyun-Bin, K. Shimada, Y. Takida, K. Sung-Bin, T. Uesaka, T. Shibuya, K. Lee, T.-H. Oh, and Y. Mitsufuji
arXiv, 2026

[10] Hear, Localize, and Reason: Spatially Aware Scene Understanding for Audio-visual LLMs.
K. Sung-Bin, L. JungMok, J. Jung, **Oh Hyun-Bin**, H. Ryu, D. Harwath, and T.-H. Oh
arXiv, 2026

[9] Revisiting Learning-based Video Motion Magnification for Real-time Processing.
H. Ha*, **Oh Hyun-Bin***, K. Jun-Seong, K. Byung-Ki, K. Sung-Bin, L.-T. Tran, J.-Y. Kim, S.-H. Bae, T.-H. Oh
Transactions on Machine Learning Research (TMLR), 2026

[8] Physics-Aware Deepfake Detection via Distance–Speech Consistency.
K. Kyeongrae, K. Sung-Bin, **Oh Hyun-Bin**, and T.-H. Oh
INTERSPEECH, 2026

[7] PAVAS: Physics-Aware Video-to-Audio Synthesis.
Oh Hyun-Bin, T. Yuhta, U. Toshimitsu, T.-H. Oh, Y. Mitsufuji
CVPR, 2026 (Oral presentation)
***Work done during an internship at Sony AI**

[6] Perceptually Accurate 3D Talking Head Generation: New Definitions, Speech-Mesh Representation, and Evaluation Metrics.

C.-Y. Lee*, **Oh Hyun-Bin***, H. EunGi, K. Sung-Bin, S. Nam, T.-H. Oh
CVPR, 2025 (Selected as a highlight paper (< 3.7% acceptance rate) with all strong accept 5,5,5 scores)

[5] AVHBench: A Cross-Modal Hallucination Evaluation for Audio-Visual Large Language Models.
K. Sung-Bin*, **Oh Hyun-Bin***, J. Lee, A. Senocak, J. Chung and T.-H. Oh
ICLR, 2025

[4] Learning-based Axial Video Motion Magnification.
K. Byung-Ki, **Oh Hyun-Bin**, K. Jun-Seong, H. Ha, and T.-H. Oh
ECCV, 2024

[3] Enhancing Speech-Driven 3D Facial Animation with Audio-Visual Guidance from Lip Reading Expert.
H. EunGi*, **Oh Hyun-Bin***, K. Sung-Bin, C. Etcheberry, S. Nam, J. Ju, and T.-H. Oh
INTERSPEECH, 2024

[2] MultiTalk: Enhancing 3D Talking Head Generation Across Languages with Multilingual Video Dataset.
K. Sung-Bin*, C.-Y. Lee*, G. Son*, **Oh Hyun-Bin**, J. Ju, S. Nam, and T.-H. Oh
INTERSPEECH, 2024

[1] Uni-DVPS: Unified Model for Depth-Aware Video Panoptic Segmentation.
K. Ji-Yeon, **Oh Hyun-Bin**, K. Byung-Ki, D. Kim, Y. Kwon, and T.-H. Oh
IEEE Robotics and Automation Letters (RA-L), Jul. 2024 (Oral presentation in IROS 2024)
(Best Paper Award on Asian Federation of Computer Vision (AFCV))

AWARD & HONOR

Best Paper Award, Silver Prize, IPIU, 2025.

Best Paper Award, KRoC, 2024.

Best Paper Award, Encouragement, IPIU, 2023.

Summa Cum Laude, Chung-Ang University, 2021.

Department Honors Scholarship (ranked 1st in the department), Chung-Ang University, 2021.

Science Scholarship, Suwon Municipal Scholarship Foundation, 2018.

Department Honors Scholarship (ranked 1st in the department), Chung-Ang University, 2017.

PATENT

Method and Apparatus for Magnifying Axial Motion of Video 2024
- United States, P2024258-02-US (Application)
- Republic of Korea, 10-2024-0140333 (Application)

ACADEMIC SERVICE

Journal Reviewer
- International Journal of Computer Vision (IJCV), Pattern Recognition (PR)

Conference Reviewer
- ACCV, CVPR, NeurIPS, SIGGRAPH Asia

Teaching Experiences
- NAVER Boostcamp AI Tech Computer Vision Track (5th, 6th)
- [EECE454] Introduction to Machine Learning, POSTECH

Deep Learning Seminar
- KAIST AMILab seminar [YouTube]
- POSTECH EE-group deep learning seminar

REFERENCE

Dr. Tae-Hyun Oh, Professor, KAIST
- Relationship: Ph.D. advisor

Dr. Yuki Mitsufuji, VP of AI Research, Sony AI / Visiting Research Professor, New York University
- Relationship: Host and collaborator at Sony AI