

Hyun-Bin Oh

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Last updated: Sep 26, 2026

RESEARCH INTERESTS

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

EXPERIENCE

Sony AI

Research Scientist Intern, Cinematic Technology Team

- Hosts: Kazuki Shimada, Takashi Shibuya, and Yuki Mitsufuji

Remote

Apr. 2026 – Oct. 2026

Sony AI

Research Scientist Intern, Deep Generative Modeling Team

- Hosts: Yuhta Takida, Toshimitsu Uesaka, and Yuki Mitsufuji

Tokyo, Japan

Jul. 2025 – Mar. 2026

POSTECH → KAIST

Research Assistant (Advisor: Prof. Tae-Hyun Oh)

Pohang → Daejeon, Korea

Feb. 2022 – Present

EDUCATION

POSTECH

Integrated M.S./Ph.D. in Electrical Engineering (Advisor: Prof. Tae-Hyun Oh)

Pohang, Korea

Mar. 2022 – Feb. 2028 (Expected)

Chung-Ang University

B.S. in Physics & B.E. in Electrical Engineering (Dual Degree); Summa Cum Laude

Seoul, Korea

Mar. 2017 – Aug. 2021

PUBLICATIONS

“*” denotes equal contribution. “†” denotes co-corresponding authors.

[12] **Hear, Localize, and Reason: Spatially Aware Scene Understanding for Audio-visual LLMs.**

K. Sung-Bin, L. Jung-Mok, J. Jung, **Oh Hyun-Bin**, H. Ryu, D. Harwath, and T.-H. Oh

NeurIPS, 2026

[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

EMNLP, 2026 (Main) [\[Project\]](#)

*Work done during an internship at Sony AI

[10] **CineHaptic: Context-Aware Real-Time Audiovisual-to-Haptic Rendering System for In-Vehicle 4D Cinematic Experiences.**

J. Kim, H. Kim, **Oh Hyun-Bin**, J. Kang†, T.-H. Oh†, and S. Choi†

UIST, 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

TMLR, 2026 [\[Project\]](#)

[8] **Physics-Aware Deepfake Detection via Distance–Speech Consistency.**

K. Kyeongrae, K. Sung-Bin, **Oh Hyun-Bin**, and T.-H. Oh

INTERSPEECH, 2026 [\[Project\]](#)

[7] **PAVAS: Physics-Aware Video-to-Audio Synthesis.**

Oh Hyun-Bin, Y. Takida, T. Uesaka, T.-H. Oh, Y. Mitsufuji

CVPR, 2026 (Oral presentation) [\[Project\]](#)

*Work done during an internship at Sony AI

Media coverage: [KBS News](#) (Korean National Broadcaster), [MBC News](#), and other local media.

- [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 (**Highlight**; top 3.7%; all reviewers: Strong Accept, 5/5) [[Project](#)]
- [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 [[Project](#)]
- [4] **Learning-based Axial Video Motion Magnification.**
K. Byung-Ki, **Oh Hyun-Bin**, K. Jun-Seong, H. Ha, and T.-H. Oh
ECCV, 2024 [[Project](#)]
- [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 [[Project](#)]
- [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 [[Project](#)]
- [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**) [[Project](#)]
(**Best Paper Award** from the Asian Federation of Computer Vision (AFCV))

HONORS AND AWARDS

Selected Participant, International Computer Vision Summer School (ICVSS), 2025.

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 SERVICES

Journal Reviewer

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

Conference Reviewer

- CVPR, NeurIPS, SIGGRAPH Asia, ACCV

Teaching Experience

- 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

TECHNICAL SKILLS

Programming: Python, C/C++, MATLAB, JavaScript, HTML/CSS, LaTeX

Frameworks: PyTorch, NumPy, OpenCV, Git

Languages: Korean (native), English (fluent), Japanese (intermediate)

REFERENCES

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