

# Sunghwan, Hong — M.S./Ph.D. integrated

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## RESEARCH INTEREST

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Computer Vision and its applications, including

- 3D reconstruction
- Visual correspondence
- Representation learning

## EDUCATION

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**Korea University**  
M.S/Ph.D. in Computer Science, Computer Vision Lab  
*Advisor:* Seungryong Kim

**Seoul, South Korea**  
*Mar. 2021 - Present*

**Korea University**  
B.S. in Computer Science

**Seoul, South Korea**  
*Feb. 2021*

## PROFESSIONAL EXPERIENCE

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**Research Intern, Microsoft Research Asia**  
*Mentor: Dr. Chong Luo*

10/22–04/22

## HONOR & AWARD

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Nov, 2023. **Google PhD fellowship**, *Google Research, Maching Perception.*

## PUBLICATION (INTERNATIONAL)

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(Equal contribution or correspondence are denoted by “\*”).

### Abbreviations

TPAMI	<i>IEEE Trans. on Pattern Analysis and Machine Intelligence</i>
NeurIPS	<i>Neural Information Processing Systems</i>
CVPR	<i>IEEE Conf. on Computer Vision and Pattern Recognition</i>
ICCV	<i>IEEE Int. Conf. on Computer Vision</i>
ECCV	<i>IEEE European. Conf. on Computer Vision</i>

### International Journal

\* Journal impact factors; *TPAMI*: **24.314**,

[J1] Seokju Cho\*, **Sunghwan Hong\***, Seungryong Kim, “CATs++: Boosting Cost Aggregation with Convolutions and Transformers,” *TPAMI*, 2022 \*: Equal Contribution.

### Selected International Conference

The top conferences (CVPR, ICCV, ECCV, NIPS, ICML, ICLR, AAAI) are highly competitive with acceptance rates between 20-30%, and their oral and spotlight papers have acceptance rates of <2% and <9%, respectively.

[C1] **Sunghwan Hong**, Jaewoo Jung, Heeseong Shin, Jiaolong Yang, Seungryong Kim, Chong Luo, “Unifying Correspondence, Pose and NeRF for Pose-Free Novel View Synthesis from Stereo Pairs,” *arXiv*.

[C2] Seokju Cho\*, Heeseong Shin\*, **Sunghwan Hong**, Seungjun An, Seungjun Lee, Anurag Arnab, Paul Hongsuck Seo, Seungryong Kim “CAT-Seg: Cost Aggregation for Open-Vocabulary Semantic Segmentation,” *arXiv*.

[C3] **Sunghwan Hong\***, Seokju Cho\*, Seungryong Kim†, Stephen Lin, “Unifying Feature and Cost Aggregation with Transformers for Dense Correspondence” \*: Equal Contribution. ICLR, 2024.

[C4] **Sunghwan Hong**, Jisu Nam, Seokju Cho, Sangryul Jeon, Dongbo Min, Seungryong Kim “Neural Matching Fields: Implicit Representation of Matching Fields for Visual Correspondence,” *NeurIPS*, 2022.

[C5] **Sunghwan Hong\***, Seokju Cho\*, Jisu Nam, Stephen Lin, Seungryong Kim “Cost Aggregation with 4D Convolutional Swin Transformer for Few-Shot Segmentation” *ECCV*, 2022. \*: Equal Contribution.

[C6] Seokju Cho\*, **Sunghwan Hong\***, Sangryul Jeon, Yunsung Lee, Kwanghoon Sohn, Seungryong Kim “CATs: Cost Aggregation Transformers for Visual Correspondence,” *NeurIPS*, 2021. \*: Equal Contribution.

[C7] **Sunghwan Hong**, Seungryong Kim “Deep Matching Prior: Test-Time Optimization for Dense Correspondence,” *ICCV*, 2021.

## TEACHING

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Teaching Assistant, LG ELECTRONICS

Spring 2022

*AI Computer Vision Advanced course*

Teaching Assistant, SAMSUNG ELECTRONICS

Fall 2021

*AI Computer Vision Advanced course*

## REFERENCE

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**Prof. Seungryong Kim**, Assistance Professor, Korea University

Relationship: MS & Ph.D. advisor

E-mail: [seungryong\\_kim@korea.ac.kr](mailto:seungryong_kim@korea.ac.kr)

**Dr. Chong Luo**, Principal Researcher, Microsoft Research Asia

Relationship: Internship mentor

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