

# Hyeongmin Lee

Integrated M.S/Ph.D. Course, [iMage and Video Pattern recognition lab \(MVP\)](#)

[Yonsei University](#), Seoul, Korea

## CONTACT

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Youtube	<a href="https://www.youtube.com/channel/UCz14hRj69FfGsl7ftF0D3ig">https://www.youtube.com/channel/UCz14hRj69FfGsl7ftF0D3ig</a>
Google Scholar	<a href="https://scholar.google.co.kr/citations?user=eEB3K6gAAAAJ">https://scholar.google.co.kr/citations?user=eEB3K6gAAAAJ</a>

## INTERESTS

Area	Computer Vision Computational Photography Video Processing / Editing Motion Estimation
Task	Video Frame Interpolation Video Stabilization Super-Resolution

## EDUCATION

Mar.2018 – Present

### INTEGRATED M.S./PH.D. Course in **Electrical and Electronic Engineering**

- **YONSEI UNIVERSITY**, Seoul, Korea
- Supervised by [Prof. Sangyoun Lee](#)
- GPA: 4.24/4.3

Mar.2014 – Feb.2018

### **B.S.** in **Electrical and Electronic Engineering**

- **YONSEI UNIVERSITY**, Seoul, Korea
- Graduated **Cum Laude**
- GPA: 3.96/4.3

## EXPERIENCE

May.2021 – Present

### **RESEARCH INTERN** at **Adobe Research**

- Working with [Dr. Simon Niklaus](#) and [Dr. Oliver Wang](#)

## PUBLICATION

International  
Journal

### **AHD: Thermal-Image Based Adaptive Hand Detection for Enhanced Tracking System**

Eungyeol Song, **Hyeongmin Lee**, Jaesung Choi, Sangyoun Lee  
*IEEE Access*, Mar. 2018

International  
Conference

### **Regularization Strategy for Point Cloud via Rigidly Mixed Sample**

Dogyoon Lee, Jaeha Lee, Junhyeop Lee, **Hyeongmin Lee**, Minhyeok Lee, Sungmin Woo, Sangyoun Lee  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2021)*, Jun. 2021

### **Learning Temporally Invariant and Localizable Features via Data Augmentation for Video Recognition**

Taeoh Kim\*, **Hyeongmin Lee\***, MyeongAh Cho\*, Hoseong Lee, Dong heon Cho, Sangyoun Lee (\* Equal Contribution)  
*European Conference on Computer Vision Workshops (ECCVW 2020)*, Aug. 2020 (Oral)

### **Extrapolative-Interpolative Cycle-Consistency Learning for Video Frame Extrapolation**

Sangjin Lee, **Hyeongmin Lee**, Taeoh Kim, Sangyoun Lee  
*IEEE International Conference on Image Processing (ICIP 2020)*, Oct. 2020

### **AdaCoF: Adaptive Collaboration of Flows for Video Frame Interpolation**

**Hyeongmin Lee**, Taeoh Kim, Tae-young Chung, Daehyun Pak, Yuseok Ban, Sangyoun Lee  
*IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2020)*, Jun. 2020

### **SF-CNN : A Fast Compression Artifacts Removal via Spatial-to-Frequency Convolutional Neural Networks**

Taeoh Kim, **Hyeongmin Lee**, Hanbin Son, Sangyoun Lee  
*IEEE International Conference on Image Processing (ICIP 2019)*, Sep. 2019

### **N-RPN : Hard Example Learning for Region Proposal Networks**

MyeongAh Cho, Tae-young Chung, **Hyeongmin Lee**, Sangyoun Lee  
*IEEE International Conference on Image Processing (ICIP 2019)*, Sep. 2019

### **CollaboNet: Collaboration of Generative Models by Unsupervised Classification**

**Hyeongmin Lee**, Taeoh Kim, Eungyeol Song, Sangyoun Lee  
*IEEE International Conference on Image Processing (ICIP 2018)*, Oct. 2018

Patent

### **Apparatus and method for interpolating frames based on multiple flows**

Korea Patent no. **10-2201297**, Jan. 2021

Domestic Publication

Journal: 1 paper, Conference: 4 papers (in Korean)

## PROJECTS

Jun.2021 – May.2022	<b>Development of Deep Learning-based Video Frame Interpolation Algorithm for Game and AR Videos</b> SAMSUNG ELECTRONICS MOBILE DIVISION
Jun.2021 – May.2022	<b>Deep Learning-based E2E Video Codec Research</b> SAMSUNG RESEARCH
Apr.2020 – Dec.2020	<b>Development of Data Augmentation-based AI Algorithm for Image Enhancement</b> SAMSUNG RESEARCH
May.2019 – Dec.2019	<b>Locally Controllable Deep Neural Network Algorithm Development</b> SAMSUNG RESEARCH
Apr.2018 – Dec.2018	<b>Development of Compact Deep Networks for Image Processing</b> SAMSUNG RESEARCH
Apr.2017 – Dec.2017	<b>Broadcasting Device Controlling &amp; Editing Technology using Personal Voice / Gesture Recognition</b> INSTITUTE FOR INFORMATION & COMMUNICATIONS TECHNOLOGY PROMOTION (IITP), MINISTRY OF SCIENCE
Jul.2016 – Jun.2017	<b>Facial Expression Recognition Using Deep Neural Network</b> Graduation Research at Electrical and Electronic Engineering, Yonsei University

## AWARDS

Aug.2020	<b>Visual Inductive Priors for Data-Efficient Action Recognition Challenge</b> <ul style="list-style-type: none"><li>- 1st Visual Inductive Priors for Data-Efficient Deep Learning Workshop</li><li>- European Conference on Computer Vision (ECCV) Workshop</li><li>- <b>4<sup>th</sup> Place</b></li></ul>
Feb.2018	<b>Honor Graduation Award</b> <ul style="list-style-type: none"><li>- Yonsei University</li></ul>

## MEMBERSHIP & SERVICES

### Membership

#### IEEE (Institute of Electrical and Electronics Engineers)

- Student Member (2020)

### Services

#### Reviewer

- IEEE Open Journal of Signal Processing (2021)

## ACTIVITIES

Oct.2019 – Present

#### Member of PR12

- Deep Learning paper reading group in [Tensorflow KR](#)
- [Season 3](#) (Oct.2019-Jan.2021)
- [Season 4](#) (Mar.2021-)

Mar.2019-Present

#### SNU AI Study

- Offline AI Study at Seoul National University
- Season 6 (Mar.2019-Jul.2019)
- Season 7 (Feb.2020-May.2020)
- Season 8 (Organizer) (Sep.2020-Dec.2020)
- Season 9 (Organizer) (Jan.2021-)

Mar.2018 – Present

#### Creator & Manager of MVP Website

- [Official Website of MVP Lab](#)

Mar.2018 – Dec.2018

#### Teaching Assistant – Electrical and Electronic Engineering, Yonsei University

- [2018-1] Digital Signal Processing
- [2018-2] Signal and System

Nov.2016 – Dec.2020

#### Young Engineers' Honor Society (YEHS)

- Organization under The National Academy of Engineering of Korea (NAEK)
- Deputy Department Head of Academic Exchange Dpt. (Dec.2017 – Dec.2018)
- Department Head of Academic Exchange Dpt. (Dec.2018 – Dec.2019)
- President (Dec.2019 – Dec.2020)

Sep.2015 – Feb.2018

#### Electrical and Electronic Honor Society (EEHS)

- Organization under Yonsei University
- President (Jul.2016 – Jun.2017)

## S K I L L

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Programming Languages

Python, CUDA, Visual C/C++, Matlab

Deep Learning Libraries

Pytorch, Tensorflow

Available Languages

Korean, English

*Last Updated: Jun. 8, 2021*