

# Jungin Park

PH.D.

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## Research Interests

Computer vision, video understanding, multimodal learning

## Education

### Yonsei University

PH.D. IN SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING

- Dissertation: Language-guided spatiotemporal representation learning for video understanding
- Advised by Prof. Kwanghoon Sohn

Seoul, S.Korea

Mar. 2018 - Feb. 2024

### Yonsei University

B.E. IN DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

Seoul, S.Korea

Mar. 2012 - Feb. 2018

## Experience

### NAVER AI LAB

RESEARCH INTERN

- ML Research

Seongnam, S.Korea

Mar. 2024 -

## Publication

### SELECTED PUBLICATIONS

#### “Bridging Vision and Language Spaces with Assignment Prediction”

JUNGIN PARK, JIYOUNG LEE, AND KWANGHOON SOHN

- International Conference on Learning Representations (ICLR).

May. 2024

#### “Dual-path Adaptation from Image to Video Transformers”

JUNGIN PARK\*, JIYOUNG LEE\*, AND KWANGHOON SOHN

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

Jun. 2023

#### “Probabilistic Representations for Video Contrastive Learning”

JUNGIN PARK, JIYOUNG LEE, IG-JAE KIM, AND KWANGHOON SOHN

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

Jun. 2022

#### “Bridge to Answer: Structure-aware Graph Interaction Network for Video Question Answering”

JUNGIN PARK, JIYOUNG LEE, AND KWANGHOON SOHN

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

Jun. 2021

#### “SumGraph: Video Summarization via Recursive Graph Modeling”

JUNGIN PARK\*, JIYOUNG LEE\*, IG-JAE KIM, AND KWANGHOON SOHN (\* INDICATES EQUAL CONTRIBUTION.)

- European Conference on Computer Vision (ECCV).

Aug. 2020

### INTERNATIONAL CONFERENCE

#### “Bridging Vision and Language Spaces with Assignment Prediction”

JUNGIN PARK, JIYOUNG LEE, AND KWANGHOON SOHN

- International Conference on Learning Representations (ICLR).

May. 2024

#### “Knowing Where to Focus: Event-aware Transformer for Video Grounding”

JINHYUN JANG, JUNGIN PARK, JIN KIM, HYEONGJUN KWON, AND KWANGHOON SOHN

- IEEE/CVF International Conference on Computer Vision (ICCV).

Oct. 2023

#### “Dual-path Adaptation from Image to Video Transformers”

JUNGIN PARK\*, JIYOUNG LEE\*, AND KWANGHOON SOHN

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

Jun. 2023

## “PartMix: Regularization Strategy to Learn Part Discovery for Visible-Infrared Person Re-identification”

MINSU KIM, SEUNGRYONG KIM, **JUNGIN PARK**, SEONGHEON PARK, AND KWANGHOON SOHN

Jun. 2023

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

## “Language-free Training for Zero-shot Video Grounding”

DAHYE KIM, **JUNGIN PARK**, JIYOUNG LEE, SEONGHEON PARK, AND KWANGHOON SOHN

Jan. 2023

- IEEE/CVF Winter Conference on Applications of Computer Vision (WACV).

## “PointFix: Learning to Fix Domain Bias for Robust Online Stereo Adaptation”

KWONYOUNG KIM, **JUNGIN PARK**, JIYOUNG LEE, DONGBO MIN, AND KWANGHOON SOHN

Oct. 2022

- European Conference on Computer Vision (ECCV).

## “Probabilistic Representations for Video Contrastive Learning”

**JUNGIN PARK**, JIYOUNG LEE, IG-JAE KIM, AND KWANGHOON SOHN

Jun. 2022

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

## “Pin the Memory: Learning to Generalize Semantic Segmentation”

JIN KIM, JIYOUNG LEE, **JUNGIN PARK**, DONGBO MIN, AND KWANGHOON SOHN

Jun. 2022

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

## “Self-Balanced Learning for Domain Generalization”

JIN KIM, JIYOUNG LEE, **JUNGIN PARK**, DONGBO MIN, AND KWANGHOON SOHN

Sep. 2021

- IEEE International Conference on Image Processing (ICIP).

## “Bridge to Answer: Structure-aware Graph Interaction Network for Video Question Answering”

**JUNGIN PARK**, JIYOUNG LEE, AND KWANGHOON SOHN

Jun. 2021

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR).

## “Cross-Domain Grouping and Alignment for Domain Adaptive Semantic Segmentation”

MINSU KIM, SUNGHUN JOUNG, SEUNGRYONG KIM, **JUNGIN PARK**, IG-JAE KIM, AND KWANGHOON SOHN

Dec. 2020

- Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI).

## “SumGraph: Video Summarization via Recursive Graph Modeling”

**JUNGIN PARK\***, JIYOUNG LEE\*, IG-JAE KIM, AND KWANGHOON SOHN (\* INDICATES EQUAL CONTRIBUTION.)

Aug. 2020

- European Conference on Computer Vision (ECCV).

## “Context-Aware Emotion Recognition Networks”

JIYOUNG LEE, SEUNGRYONG KIM, SUNOK KIM, **JUNGIN PARK**, AND KWANGHOON SOHN

Oct. 2019

- IEEE International Conference on Computer Vision (ICCV).

## “Video Summarization by Learning Relationships between Action and Scene”

**JUNGIN PARK**, JIYOUNG LEE, SANGRYUL JEON, SEUNGRYONG KIM, AND KWANGHOON SOHN

Oct. 2019

- IEEE International Conference on Computer Vision Workshop (ICCV Workshop-CoView).

## “Graph Regularization Network with Semantic Affinity for Weakly-supervised Temporal Action Localization”

**JUNGIN PARK**, JIYOUNG LEE, SANGRYUL JEON, SEUNGRYONG KIM, AND KWANGHOON SOHN

Sep. 2019

- IEEE International Conference on Image Processing (ICIP), Oral Presentation

## “Learning to Detect, Associate, and Recognize Human Actions and Surrounding Scenes in Untrimmed Videos”

**JUNGIN PARK**, SANGRYUL JEON, SEUNGRYONG KIM, JIYOUNG LEE, SUNOK KIM, AND KWANGHOON SOHN

Oct. 2018

- ACM Multimedia Workshop - The 1st Workshop and Challenge on Comprehensive Video Understanding in the Wild (ACMMM Workshop).

## PREPRINT

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## “Language-Guided Recursive Spatiotemporal Graph Modeling for Video Summarization”

**JUNGIN PARK**, JIYOUNG LEE, AND KWANGHOON SOHN

Dec. 2022 (Submitted)

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI). (Under Review)

## “SimOn: A Simple Framework for Online Temporal Action Localization”

TUAN N. TANG, **JUNGIN PARK**, KWONYOUNG KIM, AND KWANGHOON SOHN

Nov. 2022

- arXiv preprint arXiv:2211.04905

## Honors & Awards

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2023	<b>Academic Research Fellowship,</b>	<i>Yonsei University</i>
2019	<b>Outstanding 100 National Research Projects,</b> Research Assistant	<i>Ministry of Science and ICT, S. Korea</i>
2019	<b>3rd Award,</b> The 2nd Workshop and Challenge on Comprehensive Video Understanding in the Wild (CoViewW 2019 ICCV Challenge)	<i>ICCVW</i>
2019	<b>2nd Award,</b> Workshop on Frontiers of Electrical Engineering (FREE) 2019	<i>Yonsei University</i>

## Talks

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2023	<b>Spotlight Presentation,</b> Korea AI Summit	<i>Ministry of Science and ICT, S. Korea</i>
2023	<b>Poster Presentation,</b> Korean Conference on Computer Vision (KCCV)	<i>Korea Computer Vision Society</i>
2023	<b>Doctoral Colloquium,</b> Korean Conference on Computer Vision (KCCV)	<i>Korea Computer Vision Society</i>
2022	<b>Poster Presentation,</b> Korean Conference on Computer Vision (KCCV)	<i>Korea Computer Vision Society</i>
2022	<b>AI Tech Talk,</b> Naver CLOVA	<i>Naver Corporation</i>
2021	<b>AI Author Meetup,</b> Naver AI LAB	<i>Naver Corporation</i>
2021	<b>Online Presentation,</b> Korean Conference on Computer Vision (KCCV)	<i>KCVS</i>

## Project Experience

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### Development of Multimodal-based General-purpose Social Artificial Intelligence Technology

*Seoul, S.Korea*

FUNDED BY YONSEI UNIVERSITY-YONSEI SIGNATURE RESEARCH CLUSTER.

*Apr. 2022 - Feb. 2024*

- Developed an algorithm for computer vision with multi-modal data.

### Development of Complex Situational Awareness and Prediction Technology through Multi-modal Data Fusion and Social Artificial Intelligence

*Seoul, S.Korea*

FUNDED BY MINISTRY OF SCIENCE, MID-LEVEL RESEARCH.

*Mar. 2021 - Feb. 2024*

- Developed an algorithm for computer vision with multi-modal data.

### Development of AI Technology for Continuously Improves according to the Changing Situation in the Real World

*Seoul, S.Korea*

FUNDED BY INSTITUTE OF INFORMATION & COMMUNICATION TECHNOLOGY.

*Apr. 2020 - Mar. 2022*

- Developed an algorithm for computer vision with meta-learning.

### Fundamental Research of Vision Algorithms for Comprehensive and Thorough Video Understanding

*Seoul, S.Korea*

FUNDED BY MINISTRY OF SCIENCE, ICT, AND FUTURE PLANNING.

*May. 2018 - Dec. 2020*

- Developed an algorithm for understanding untrimmed videos.

## Patent

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### “Video Question Answering Apparatus and Method based on Graph Interaction”

JUNGIN PARK AND KWANGHOON SOHN

*Jan. 2021*

- Korea Patent, 10-2022-0011919

### “Video Summarization Apparatus and Method through Recursive Graph Modeling”

JUNGIN PARK AND KWANGHOON SOHN

*Dec. 2020*

- Korea Patent, 10-2198480. PCT/KR2020/010755

### “Video Action Recognition and Localization Apparatus and Method”

JUNGIN PARK AND KWANGHOON SOHN

*Oct. 2020*

- Korea Patent, 10-2174658, PCT/KR2019/004798

## Professional Activities

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### Reviewer

IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE (TPAMI)  
IEEE/CVF CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION (CVPR)  
IEEE/CVF INTERNATIONAL CONFERENCE ON COMPUTER VISION (ICCV)  
EUROPEAN CONFERENCE ON COMPUTER VISION (ECCV)  
AAAI CONFERENCE ON ARTIFICIAL INTELLIGENCE (AAAI)  
IEEE/CVF WINTER CONFERENCE ON APPLICATIONS OF COMPUTER VISION (WACV)  
THE BRITISH MACHINE VISION CONFERENCE (BMVC)

## Teaching

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### Yonsei University, Dept. of Electrical and Electronic Engineering

*Seoul, S.Korea*

TEACHING ASSISTANT.

*Sep. 2018 - Jun. 2021*

- Electrical and electronic engineering experiments: fundamentals, Digital signal processing.
- Digital signal processing.
- Deep learning experiments.

## Skills

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**Programming** Python, C/C++, Ruby, MATLAB, OpenCV, LaTeX, Linux

**Deep learning** PyTorch, Tensorflow, Keras

**Languages** Korean, English