

Yumin Suh

[Google Scholar Profile](#) github.com/yuminsuh yuminsuh.github.io [✉ dttlqqns@gmail.com](mailto:dttlqqns@gmail.com)

I am a senior researcher at NEC Laboratories America. My current research focuses on large vision-language model and visual representation that interacts with language.

Work Experience

NEC Laboratories America | [Media Analytics department](#) **June 2024 – Present**
San Jose, CA
Senior Researcher

NEC Laboratories America | [Media Analytics department](#) **December 2019 – June 2024**
San Jose, CA
Researcher

- Developed a domain-specific Large Vision-Language Model for human analysis
- Developed a unified model that performs multiple tasks for rich human analysis

Microsoft Research Asia **September 2016 – June 2017**
Research Intern *Mentors: [Jingdong Wang](#), [Tao Mei](#)*

- Proposed a visual representation for person re-identification ([Publication](#) cited 600+ times)

Inria | *WILLOW team* **December 2014 – May 2015**
Research Intern *Mentors: [Minsu Cho](#), [Jean Ponce](#)*

Education

Seoul National University **Apr. 2019 – Nov. 2019**
Postdoc *Advisors: [Bohyung Han](#), [Kyoung Mu Lee](#)*

Seoul National University **Mar. 2014 – Feb 2019**
Ph.D., Electrical and Computer Engineering *Advisor: [Kyoung Mu Lee](#)*

Seoul National University **Mar. 2011 – Feb. 2013**
M.S., Electrical Engineering and Computer Science *Advisor: [Kyoung Mu Lee](#)*

Seoul National University **Mar. 2007 – Feb. 2011**
B.S., Electrical Engineering

Workshop Organization

1st OmniLabel workshop at CVPR 2023 [[Workshop](#)][[Benchmark](#)][[Challenge](#)]

Organizers: Samuel Schuler, Vijay Kumar B G, [Yumin Suh](#), Golnaz Ghiasi, Long Zhao, Qi Yu, Dimitris N. Metaxas

- Workshop to promote research on **language-based vision perception** system beyond simple category names
- New [benchmark](#) for language-based object detection

Papers

Improving the Efficiency-Accuracy Tradeoff of DETR-Style Models in Practice
[Yumin Suh](#), Dongwan Kim, Abhishek Aich, Samuel Schuler, Jong-Chyi Su, Bohyung Han, Manmohan Chandraker **ECV Workshop at CVPR 2024**

Generating Enhanced Negatives for Training Language-Based Object Detectors
Shiyu Zhao, Long Zhao, Vijay Kumar BG, [Yumin Suh](#), Dimitris N. Metaxas, Manmohan Chandraker, Samuel Schuler **CVPR 2024**

Taming Self-Training for Open-Vocabulary Object Detection
Shiyu Zhao, Samuel Schuler, Long Zhao, Zhixing Zhang, Vijay Kumar BG, [Yumin Suh](#), Manmohan Chandraker, Dimitris N. Metaxas **CVPR 2024**

Efficient Controllable Multi-Task Architectures
Abhishek Aich, Samuel Schuler, Amit K. Roy-Chowdhury, Manmohan Chandraker, [Yumin Suh](#) **ICCV 2023**

OmniLabel: A Challenging Benchmark for Language-Based Object Detection
Samuel Schuler, Vijay Kumar B G, [Yumin Suh](#), Konstantinos M. Dafnis*, Zhixing Zhang*, Shiyu Zhao*, Dimitris Metaxas (* equal technical contribution, alphabetic order) **ICCV 2023 (Oral)**

- New [dataset and benchmark](#) for [language-based detection](#). Hosted the Omnilabel workshop in CVPR 2023

Confidence and Dispersity Speak: Characterizing Prediction Matrix for Unsupervised Accuracy Estimation	ICML 2023
Weijian Deng, Yumin Suh , Stephen Gould, Liang Zheng	
Split to Learn: Gradient Split for Multi-Task Human Image Analysis	WACV 2023
Weijian Deng, Yumin Suh , Xiang Yu, Masoud Faraki, Liang Zheng, Manmohan Chandraker	
Learning Semantic Segmentation from Multiple Datasets with Label Shifts	ECCV 2022
Dongwan Kim, Yi-Hsuan Tsai, Yumin Suh , Masoud Faraki, Sparsh Garg, Manmohan Chandraker, Bohyung Han	
Controllable Dynamic Multi-Task Architectures	CVPR 2022 (Oral)
Dripta S. Raychaudhuri, Yumin Suh , Samuel Schuster, Xiang Yu, Masoud Faraki, Amit K. Roy-Chowdhury, Manmohan Chandraker	
On Generalizing Beyond Domains in Cross-Domain Continual Learning	CVPR 2022
Christian Simon, Masoud Faraki, Yi-Hsuan Tsai, Xiang Yu, Samuel Schuster, Yumin Suh , Mehrtash Harandi, Manmohan Chandraker	
Cross-Domain Similarity Learning for Face Recognition in Unseen Domain	CVPR 2021
Masoud Faraki, Xiang Yu, Yi-Hsuan Tsai, Yumin Suh , Manmohan Chandraker	
Learning to Optimize Domain Specific Normalization for Domain Generalization	ECCV 2020
Seonguk Seo, Yumin Suh , Dongwan Kim, Geeho Kim, Jongwoo Han, Bohyung Han	
Stochastic Class-based Hard Example Mining for Deep Metric Learning	CVPR 2019
Yumin Suh , Bohyung Han, Wonsik Kim, Kyoung Mu Lee	
Part-Aligned Bilinear Representations for Person Re-identification	ECCV 2018
Yumin Suh , Jingdong Wang, Siyu Tang, Tao Mei, Kyoung Mu Lee	
Appearance Dependent Inter-Part Relationship for Human Pose Estimation	APSIPA 2016
Yumin Suh and Kyoung Mu Lee	
Discrete Tabu Search for Graph Matching	ICCV 2015
Kamil Adamczewski, Yumin Suh , Kyoung Mu Lee	
Subgraph Matching Using Compactness Prior For Robust Feature Correspondence	CVPR 2015
Yumin Suh , Kamil Adamczewski, Kyoung Mu Lee	
Graph Matching via Sequential Monte Carlo	ECCV 2012
Yumin Suh , Minsu Cho, Kyoung Mu Lee	

Honors and Awards

Business Contribution Award, NEC Laboratories America	2024
<ul style="list-style-type: none"> NEC develops the technology to automatically generate explanatory text from video using video recognition AI x LLM, (December 2023) 	
Business Contribution Award, NEC Laboratories America	2023
<ul style="list-style-type: none"> Aiming to realize human digital twins: Image analysis technology that efficiently senses the real world, (August 2023) NEC develops high-speed, high-precision technology to search for specific persons based on ambiguous appearance attribute information by analyzing camera images (May 2023) 	
Outstanding Reviewer, CVPR 2023	2023
Outstanding Reviewer, ICML 2020	2023
3rd Place Award, VisDA-2019	2019
<ul style="list-style-type: none"> <i>Visual Domain Adaptation Challenge, TASK-CV Workshop in ICCV 2019</i> with Dongwan Kim, Geeho Kim, Seonguk Seo, Bohyung Han, Taeho Lee, Jongwoo Han, Hyejeong Jeon 	
Doctoral Colloquium, KCCV 2019	2019
Doctoral Colloquium, CVPR 2019	2019
3rd Place Award, SFMI Machine Learning Challenge 2017	2017
<ul style="list-style-type: none"> <i>Challenge on the road sign letter recognition from road view images, Samsung Fire & Marine Insurance, Korea</i> with Jihong Kang and Sungyong Baik 	
Graduated with honors (Summa cum laude)	2011

Invited Talks

Elastic AI: Adaptive Solution for Multi-Task AI Challenges

- Korea University

Feb 2024

Elastic AI for multiple tasks

- Company-wide talk
- [Lomin Inc.](#)
- Guest lecture in “Moonshot project”, Korea University

May 2022

February 2022

June 2022

Multi-task learning and domain generalization

- Guest lecture in Australian National University

October 2021

Learning local matching for person re-identification

- Young Research Highlight, Summer Annual Conference of IEIE

June 2019

Academic Services

Area Chair

- CVPR (2024)
- ACCV (2022)

Senior Program Committee

- AAAI (2022)
- IJCAI (2021)

Program Committee

- ECCV, ICLR, ICML (2024)
- CVPR, ICCV, ICLR, ICML (2023)
- CVPR, ECCV, ICLR, ICML, IJCAI, NeurIPS (2022)
- AAAI, CVPR, ICCV, ICLR, ICML, NeurIPS, WACV (2021)
- AAAI, ACCV, CVPR, ECCV, ICPR, ICML (2020)
- CVPR, ICCV (2019)
- MM (2017)

Journal Reviewer

- TPAMI, TIP, TMM, TCSVT, CVIU, MMSJ, AOAS

Student volunteer

- ACCV 2012, MM 2018

Mentoring

[Youngmin Oh](#) (Yonsei University)

2023

[Dongwan Kim](#) (Seoul National University)

2023

[Abhishek Aich](#) (University of California, Riverside)

2022

[Dripta Raychaudhuri](#) (University of California, Riverside)

2021

[Weijian Deng](#) (Australian National University)

2020