Mohsen Yavartanoo

Personal Data

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Research Interests

Computer Vision
Deep Learning
3D Vision
Self-Supervised Learning

Education

- 2019 - present Ph.D. in Electrical and Computer Engineering, Seoul National University, Seoul, South Korea.
- 2017 - 2019 M.Sc in Electrical and Computer Engineering, Seoul National University, Seoul, South Korea.
- 2011 - 2016 B.Sc in Mathematical Science, Sharif University of Technology, Tehran, Iran.
- 2007 - 2010 Diploma in Mathematics and Physics, Shahid Babaie (National Organization for Development of Exceptional Talents (NODET)), Qazvin, Iran.

Publications

2023 | ACL-SPC: Adaptive Closed-Loop system for Self-Supervised Point Cloud Completion (CVPR2023)
Sangmin Hong, Mohsen Yavartanoo*, Reyhaneh Neshatavar, Kyoung Mu Lee*
Link: ACL-SPC

2022 | CVF-SID: Cyclic multi-Variate Function for Self-Supervised Image Denoising by Disentangling Noise from Image (CVPR2022)
Reyhaneh Neshatavar, Mohsen Yavartanoo*, Sanghyun Son, Kyoung Mu Lee*
Link: CVF-SID

2021 | PolyNet: Polynomial Neural Network for 3D Shape Recognition with PolyShape Representation. (3DV2021)
Mohsen Yavartanoo, Shih-Hsuan Hung, Reyhaneh Neshatavar, Yue Zhang, Kyoung Mu Lee
Link: PolyNet

2021 | 3DIAS: 3D Shape Reconstruction with Implicit Algebraic Surfaces. (ICCV2021)
Mohsen Yavartanoo, JaeYoung Chung*, Reyhaneh Neshatavar, Kyoung Mu Lee*
Link: 3DIAS

2018 | SPNet: Deep 3D Object Classification and Retrieval using Stereographic Projection. (ACCV2018)
Mohsen Yavartanoo, Euyoung Kim, Kyoung Mu Lee
Link: SPNet

Projects

- Self-supervised image super-resolution. (Submitted to ICCV2023)
- CAD learning for manufacturing processes i.g., cutting, drilling, etc., and cost prediction for CNC machines. (Current)
- Unsupervised anomaly detection. (Current)
- Point cloud registration and template matching for volume calculation from multi-view captured RGBD data by iPhone depth camera. (Current)
- Vehicle, pedestrian, and traffic sign detection and recognition from point clouds for autonomous driving cars. (2019)

Teaching Experience

- Fall 2020 Seoul National University, Teaching Assistant, Department of Electrical and Computer Engineering, **Introduction to Computer Vision**.
- Fall 2015 Sharif University of Technology, Teaching Assistant, Department of Mathematics and Computer Science, **Image Processing**.
- Fall 2014 Sharif University of Technology, Teaching Assistant Department of Mathematics and Computer Science **Introduction to Linear Algebra**.
- Teaching Mathematical and Computer Science Olympiad for high-school students.

Awards and Scholarships

- Graduate Scholarship for Excellent Foreign Students (GSFS) at SNU Fall 2019 (for two years)
- SNU Global Scholarship for Spring 2017 (for one year)
- Accepted in the first round of Iranian Mathematical Olympiad (IMO) 2009

Other Academic Experiences

- *2022* Invited to serve as a reviewer for CVPR2023 and ICCV2023.
- *2022* Invited to serve as a reviewer for CVPR2022.
- *2021* Invited to serve as a reviewer for ICCV2021.
- *2012-2016* Sharif University of Technology, Algorithms and Problem Solving Lab:
- *2011-2013* Member of Math Scientific and Extracurricular Group, Department of Mathematics and Computer Science, Sharif university of technology
- *2014* Editor of Sharif Mathematical Journal, Department of Mathematics and Computer Science, Sharif University of Technology

Languages

Persian:	Native
English:	Fluent
Korean:	Basic
Arabic:	Basic

Computer Skills

Python, Matlab, PyTorch, TensorFlow, Houdini, Blender, LaTeX

Other Interests and Activities

Tar & SeTar (Traditional music instruments)
Climbing & Tennis
Watching Movies & Playing Video Games