

Reyhaneh NESHATAVAR

PERSONAL DATA

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RESEARCH INTERESTS

Computer Vision
Deep Learning
3D Vision
Self-supervised Learning
Graph Theory

EDUCATION

- 2020 - present Ph.D in Electrical and Computer Engineering, Seoul National University, Seoul, South Korea.
- 2015 - 2017 M.Sc in Mathematics and Computer Science-Graph Applications, Amirkabir University of Technology, Tehran, Iran.
- 2010 - 2014 B.Sc in Mathematics and it's Application in Industrial Engineering, Amirkabir University of Technology, Tehran, Iran.
- 2006 - 2009 Diploma in Mathematics and Physics, Zahraye Athar High School, Tehran, Iran.

PUBLICATIONS

- | | |
|------|---|
| 2023 | ACL-SPC: Adaptive Closed-Loop system for Self-Supervised Point Cloud Completion
<i>Sangmin Hong, Mohsen Yavartanoo, Reyhaneh Neshatavar, Kyoung Mu Lee</i>
This paper is accepted in CVPR2023.
Link |
| 2022 | CVF-SID: Cyclic multi-Variate Function for Self-Supervised Image Denoising by Disentangling Noise from Image
<i>Reyhaneh Neshatavar, Mohsen Yavartanoo, Sanghyun Son, Kyoung Mu Lee</i>
This paper is accepted in CVPR2022.
Link |

- 2021 | PolyNet: Polynomial Neural Network for 3D Shape Recognition with PolyShapeRepresentation
Mohsen Yavartanoo, Shih-Hsuan Hung, Reyhaneh Neshatavar, Yue Zhang, Kyoung Mu Lee
 This paper is accepted in 3DV2021.
[Link](#)
- 2021 | 3DIAS: 3D Shape Reconstruction with Implicit Algebraic Surfaces
Mohsen Yavartanoo, JaeYoung Chung, Reyhaneh Neshatavar, Kyoung Mu Lee
 This paper was accepted in ICCV2021.
[Link](#)
- 2021 | 3D Shape Reconstruction Using Multivariate Quartic Polynomial Surface Set (다변수 사차 다항 곡면 집합을 이용한 삼차원 형상 재구성)
Mohsen Yavartanoo, Jaeyoung Chung, Reyhaneh Neshatavar, Kyoung Mu Lee
 This paper is accepted in IPIU2021.

RESEARCH EXPERIENCE

- 2023 |
- CAD learning for manufacturing processes i.g., cutting, drilling, etc., and cost prediction for CNC machines.
 - Unsupervised anomaly detection.
- 2023 | Self-supervised Image Super-resolution
Adviser: Prof. Kyoung Mu Lee
 This paper has been submitted to ICCV2023
- 2018 | Applications of Graph Coloring in Schedule Problem(Train Timetabling)
Adviser: Prof. Dariush Kiani
 The goal of this research is to present a Graph algorithm to solve Train Timetabling problem. This algorithm uses the Maximum Flow to increase the number of trains in the urban scheduling with a minimum delay. Our algorithm provides the maximum number of trains (in spite of time interference) by creating a Time Maximum Flow. Then, eliminate the interactions of these trains by finding the Maximum Independent Set (MIS).
 Graduate Thesis
- 2014 | Speed-up Benders Decomposition using new Cut
Adviser: Associate Prof. Mehdi Qatee
 Undergraduate thesis

TEACHING EXPERIENCE

- Spring 2021 Seoul National University, Teaching Assistant, Department of Electrical and Computer Engineering, **Introduction to Computer Vision**
- Fall 2015-Winter 2017 Amirkabir University of Technology, Teaching Assistant, Department of Mathematics and Computer Science, **General Mathematics 1 and 2**.
- Winter 2013 Amirkabir University of Technology, Teaching Assistant, Department of Mathematics and Computer Science, **Optimization Research**.
- Teaching Painting as Student Working at Amirkabir University of Technology.

AWARDS AND SCHOLARSHIPS

- **Gold Prize** for the "3D Shape Reconstruction Using Multivariate Quartic Polynomial Functions" paper in the 33rd Workshop on Image Processing and Understanding (IPIU 2021). This award is given because it was selected as an excellent paper.
- Merit-based scholarship (Spring 2021) due to academic excellence and good grades.
- SNU Global Scholarship for one year (2020)

OTHER ACADEMIC EXPERIENCES

- 2023 Invited to serve as a reviewer for the International Conference on Computer Vision (ICCV 2023)
- 2023 Invited to serve as a reviewer for the Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- 2023 Invited to serve as a reviewer for the 2023 IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR 2023)
- 2022 Invited to serve as a reviewer for International Journal of Image and Graphics.
- 2022 Invited to serve as a reviewer for IEEE Transactions on Neural Networks and Learning Systems.

WORKING EXPERINENCE

- Jun.2019-Jan.2020 Seoul National University, [CVLab](#), **Research Intern**.
- 2014-2017 Jahan Pardaz Teb Company, Part Time Job, **Web Designer, Graphic Designer, Film Editor**.

LANGUAGES

PERSIAN: Native
ENGLISH: Fluent
KOREAN: Basic
ARABIC: Basic

COMPUTER SKILLS

Python, Pytorch, Tensorflow, Matlab, C Programming, AIMMS, HTML, Wordpress CMS, Joomla CMS, Blender, Adobe Photoshop CS8, Illusterator, Corel Draw, Video Edition Edius 7, \LaTeX

ART SKILLS

Painting with Oil Color, Creta Color, Water Color
Playing Piano and Guitar

BEHAVIORAL STRENGHTS

Flexibility
Perseverance
Responsibility
Commitment and Service Motive
Problem Solving and Decision Making

Creativity and Innovation
Team Work

REFERENCES

- Professor Lee, Kyoung Mu, Professor of Computer Vision, Machine Learning, Artificial Intelligence, kyoungmu@snu.ac.kr, Department of Electrical and Computer Engineering, College of Engineering, Seoul National University, Seoul, South Korea.
- Professor D. Kiani, Professor of Mathematics-Algebra, dkiani@aut.ac.ir, Department of Computer science and Mathematics, Amirkabir University of Technology, Tehran, Iran.