Mahya Mohammadi Kashani

Curriculum Vitae

PERSONAL DETAILS

E-Mail	mahmo@itu.dk
Phone	(0045) 71-687585
GoogleScholar	https://scholar.google.com/citations?user=gegkVugAAAAJ
GitHub	https://github.com/mahyamkashani
LinkedIn	www.linkedin.com/in/mahya-mohammadi-kashani-84023b9b
Website	https://mahyamkashani.github.io
Address	Københavns, København 2300, Danmark

RESEARCH INTEREST

Risk Assessment, Statistical Modeling, Marine Robotics, **Robots Testing**, Robotic Simulation, Robot Planning

EDUCATION

PhD in Computer science 2021-2025

IT-University of Copenhagen, Copenhagen, Denmark

Major: Marie-Curie PhD fellowship within **Reliable AI for Marine Robotics Innovative Training Network (REMARO ITN)**

Thesis Title: **Statistical assessment of plans via probabilistic optimization of reliability**, under supervision of **Prof. Andrzej Wasowski**.

My PhD submission is due in April 2025.

MSc. in Computer Engineering 2016-2019

Shahid Rajaee Teacher Training University, Tehran, Iran

Major: **Artificial Intelligence and Robotics**

Thesis Title: **Search-based automatic image annotation using deep models**,

Class Rank: 3th place among 2016-2019 MSc. Students

GPA:18.12/20 (3.88/4)

BSc. in Computer Engineering 2010-2014

Shahid Rajaee Teacher Training University, Tehran, Iran

Major: **Software Engineering**

Thesis Title: **Development of a Filter Driver for Disk Access Control in Lowest Level of Drivers Hierarchy**.

Class Rank: Top 10% among 2010-2014 BSc. Students

GPA:17.18/20 (3.57/4)- Last two years: 17.89/20 (3.89/4)

PUBLICATIONS

Conference UnderReview

Mahya M. Kashani, Stefan Heinrich, and Andrzej Wasowski, "MarineLLM-PDDL: Generation of Planning Domains for Marine Vessels Using Past Incident Response Plans", Submitted to European Robotics Forum 2025."

Conference Oct. 2024

Mahya M. Kashani, Tobias John, Jeremy P. Coffelt, Einar B. Johnsen and Andrzej Wasowski, "Risk-averse Planning and Plan Assessment for Marine Robots." IEEE/RSJ International Conference on Intelligent Robots and Systems, Abu Dhabi (IROS'24)." Preprint

Workshop Nov. 2023

Tobias John, **Mahya M. Kashani**, Jeremy P. Coffelt, Einar B. Johnsen, and Andrzej Wasowski. "Reliable Plan Selection with Quantified Risk-Sensitivity." In the 34$^{\text{th}}$ Nordic Workshop in Programming Theory (NWPT'23)", Extended Abstract, November 22-23, 2022, Mälardalens högskola, Västerås, Sweden. 2023. Preprint

Workshop Aug. 2022

Jeremy P. Coffelt, **Mahya Mohammadi Kashani**, Andrzej Wasowski, and Peter Kampmann. "Belief-based fault recovery for marine robotics." In The Eighth Joint Ontology Workshops (JOWO'22), August 15-19, 2022, Jönköping University, Sweden. 2022. Paper

Journal Mar. 2022

Roostaiyan, Seyed Mahdi, Mohammad Mehdi Hosseini, **Mahya Mohammadi Kashani**, and S. Hamid Amiri. "Toward real-time image annotation using marginalized coupled dictionary learning." Journal of Real-Time Image Processing 19, no. 3 (2022): 623-638.Paper

The Quarterly Journal Feb. 2022

Mohammadi Kashani, Mahya, and S. Hamid Amiri. "Scalable Image Annotation by Summarizing Training Samples into Labeled Prototypes." Signal and Data Processing 18, no. 4 (2022): 49-68. Abstract

Conference Oct. 2017

Mahya Mohammadi Kashani, and S. Hamid Amiri. "Leveraging deep learning representation for search-based image annotation." Artificial Intelligence and Signal Processing Conference (AISP), 2017. IEEE, 2017,DOI:10.1109/AISP.2017.8324073. Paper

ACADEMIC EXPERIENCE

Visiting Researcher Summer 2024

Rosenxt subsea technology R&D research group

Activity: ROSEN ChallengeCamp: static and dynamic safety monitoring for the Rosenxt case, under supervision of **Dr. Peter Kampmann**

Teaching Assistant Fall 2021-23

Computer Science Department at IT-University of Copenhagen

Course Title: Advanced Functional Programming(Scala), graduate course

Visiting Scholar Spring 2023

Institute for Artificial Intelligence (IAI) at University of Bremen

Activity: Providing Abstract Planning Prototype for Bayesian Prospection task, under supervision of **Prof. Michael Beetz**

Research Assistant 2017-2019

Shahid Rajaee University, Tehran, Iran

Activities: Full-time Research Assistant at Computer Vision and Pattern Recognition Lab, work on various projects:

Title project: Toward real-time image annotation using marginalized coupled dictionary learning and Scalable Image Annotation via Semantic Prototypes Learning

Providing Research Proposal accepted from Ministry of Education, 2018, Tehran, Iran. Helping Bachelor project of 2 undergraduate students.
Title project: Development and implementation of automatic image annotation systems

Teaching Assistant Fall 2019
Computer Engineering Department at Shahid Rajaee University
Course Title: Stochastic Processes (Grad Course)
Activities: Designing assignments and Solving problems of probability, random variables, and stochastic processes book written by A. Papulis .

Teaching Assistant Spring 2018
Computer Engineering Department in Shahid Rajaee University
Course Title: Digital Signal Processing (Grad Course)
Activities: Solving problems of Digital Signal Processing book by Vinay K. Ingle, John G. Proakis, helping students solve assignments.

Teaching Assistant Fall 2018
Computer Engineering Department in Shahid Rajaee University
Course Title: Signals and Systems (UnderGrad Course)
Activities: Solving problems of Signal Processing and Linear Systems book written by B. P. Lathi, helping students in their final project.

Teaching Assistant Fall 2017
Computer Engineering Department in Shahid Rajaee University
Course Title: Stochastic Processes (Grad Course)
Activities: Designing assignments and Solving problems of probability, random variables, and stochastic processes book written by A. Papulis.

WORK EXPERIENCE

Computer Vision Engineer 2020-2021
Robotics Lab in Shahid Rajaee University
Projects: Waste segregation robot (Funded by Municipality of 21st district of Tehran)
Skills: Computer Vision, Image Processing, Deep Learning, Industrial Camera Calibration, In Collaboration with Mechanical and Electrical Engineers

Python Developer 2018-2021
SoftRemedy Inc. (Asan Darman Arya), Project-based
Projects: Pill Reminder APP, Health Online Shop and some other Panels
Skills: Back-end Developer, pre-processing data, re-Design ORM

PROJECTS

Mission Assistant of Marine Robots by Encyclopaedic Roadmap, 2023-present
Scalable Image Annotation via Semantic Prototypes Learning, 2018-2019
Pill Reminder App, 2019-2021
Health Online Shopping App, 2020- 2021
Waste segregation Robot *Computer Vision Section, Camera Calibration*, 2020-2021

NOTABLE COURSES

Challenges in Oceanography and Marine Biology (UPorto, OCEANSCAN, Portugal)
Control, System, and Software Architecture for Autonomous Underwater Robots (TUDelft)
Introduction Challenges in Modeling of Underwater Robotics (DFKI, Germany)

Probabilistic Programming, Introductory on Semantic Logics (ITU, Denmark)
Machine Learning and Neural Networks (SRU)
Stochastic Processes, Numerical Optimization, Numerical Analysis (SRU)
Engineering Statistics and Probabilities, Digital Signal Processing (SRU)
Digital Image Processing, Statistical Pattern Recognition, Computer Vision (SRU)

GENERAL SKILLS

Languages	English Level: B2 (CEFR 117.5/150) in 2021 Persian (native) Danish (A1)
Programming	Python, Matlab, C++, ROS1 Noetic, ROS2 Humble
Frameworks	Tensorflow, Keras, Pytorch, Gazebo
Web Designing	OOP, RestFul API, Flask, DesigningPatterns, HTML/CSS/JS
DataBases	SQLServer, MYSQL REDIS,MONGO
Editing	LaTeX, MSOffice, Prezi
OS	Linux (LPIC-1), Windows

REFERENCES

Prof. Andrzej Wasowski, Full Professor at Department of Computer Science and Coordinator at REMARO ITN project , IT-University of Copenhagen, Københavns, København, Danmark `wasowski@itu.dk`

Prof. Einar B. Johnsen, Full Professor at Department of Informatics, University of Oslo (UiO), Oslo, Norway `Einarj@ifi.uio.no`

Dr. Stefan Heinrich, Associate Professor at Department of Computer Science, IT University of Copenhagen (ITU), Copenhagen, Denmark `stehe@itu.dk`

ADDITIONAL INFO

You can check out my presentation in my personal website