

Elyas Heidari

Curriculum Vitae

Sharif University of Technology (SUT)
Department of Computer Engineering,
Department of Mathematical Sciences
CE 504, Azadi Ave., Tehran, Iran

+98 915 697 1096

elyas.heidari@embl.de

<https://www.linkedin.com/in/elyas-heidari-71024a42/>

EliHei

almasmadani@gmail.com

Imagination is more important than knowledge. Einstein

Educational Background

2015

BSc Mathematics and Applications, Department of Mathematical Sciences
- Sharif University of Technology.

2014

BSc Computer Engineering, Department of Computer Engineering - Sharif
University of Technology.

2010

2014

Diploma Mathematics and Physics, Hashemi-Nezhad High school of Ex-
ceptional Talents.

Research Interests

- Biostatistics
- Machine Learning
- Data Science
- Computational Biology
- Mathematical Biology

Research Experiences

European Molecular Biology Laboratory (EMBL)

07/18- Multi-omics Statistical Analysis of Chronic Leukemia Lymphoma
ADVISORS Dr. Junyan Lu, Dr. Wolfgang Huber

European Molecular Biology Laboratory (EMBL)

08/18- Network-Based Metric on Single-cell Transcriptomics
ADVISORS Dr. Laleh Haghverdi, Dr. Wolfgang Huber

Carnegie Mellon University Sharif University of Technology

03/18- Prediction of Non-ribosomal Peptide Synthetase Substrates with Deep Learning
ADVISORS Dr. Ali Sharifi-Zarchi, Dr. Hossein Mohimani

Royan Institute of Stem Cell Biology and Technology Sharif University of Technology

06/17-02/18 Investigating Role of PIN1 in Alzheimer's Disease Progression
ADVISORS Dr. Ali Sharifi-Zarchi, Dr. Koorosh Shahpasand

Yazd Cardiovascular Research Center Sharif University of Technology

04/17-07/18 Statistical Tools for Analysis of Health Surveys
ADVISORS Dr. Ali Sharifi-Zarchi, Prof. Mahmood Sadr

Sharif University of Technology

05/16-05/17 Extracting and Analysis of Functional Brain Connectome from fMRI Data
ADVISOR Dr. Abolfazl Motahhari

Sharif University of Technology

10/15-05/16 Genome-wide Association Study on Iranian Data
ADVISOR Dr. Abolfazl Motahhari

Teaching Experiences

Teaching Assistant

CE@SUT Fundamentals of Programming, Advanced Programming, Engineering Probability and Statistics, Bioinformatics, Advanced Bioinformatics, Discrete Structures, Stochastic Processes, Optimization for Artificial Intelligence, Introduction to Linear Algebra

Math@SUT Probability and Applications, Statistics and Applications, Stochastic Processes
EE@SUT Computational Genomics

Lecturer

IC@SUT Java Programming

Related Courses

Computer Engineering

Advanced Programming: 19/20

Engineering Probability and Statistics: 19.7/20

Bioinformatics (Grad Course): 20/20

Large-scale Biological Data Analysis (Grad Course): 20/20

Analysis and Design of Information Systems: 19.2/20

Discrete Structures: 18/20

Database Design: 17.2/20

Mathematics

Differential Equations: 19.4/20

Stochastic Processes: 18.9/20

Statistics and Applications: 19/20

Linear Algebra: 17.2/20

Topics in Statistics (Grad Course): 18/20

Game Theory: 19.9/20

Mathematical Biology: 18/20

Non-linear Optimization (Grad Course): 18/20

Data Analysis: 20/20

Publications

- Finished** **Pin1 Regulatory miRNAs as Novel Candidates for Alzheimer's Disease Treatment**
E. Heidari, E. Salehi Siavashani, M. Rasooli, A. Sharifi-Zarchi, K. Shahpasand
Submitted to Journal of Alzheimer's and Dementia
- Multivariate Analysis and Visualization with R Package muvis**
E. Heidari, V. Balazadeh-Meresht, A. Sharifi-Zarchi
Submitted to Journal of Statistical Software
- In Progress** **Comprehensive Analysis of YaHS Health Survey**
E. Heidari, N. Ahmadi, A. Sharifi-Zarchi, M. Sadr
- Precise Prediction of NRPS Substrates with Multitask Learning**
E. Heidari, A. Sharifi-Zarchi, H. Mohimani
- A New Network-Based Metric for Single Cell Transcriptomics**
E. Heidari*, L. Haghverdi*, W. Huber
- A Definition for TP53ness: Hypoxia**
E. Heidari, J. Lu, W. Huber, T. Zenz
- SeqLearner: A Python Module for Semi-Supervised Learning of Biological Sequences**
E. Heidari, A. Sharifi-Zarchi

Software Development

- muvis** Multivariate Analysis and Visualization in **R** (muvis documentation)
- SeqLearner** Multitask Learning for Biological Sequences (GitHub repository)

Skills

- Programming** Extensively experienced in **Python** (machine/deep learning and algorithmic programming), **R** (data analysis and visualization), **Java** (software development), and **Bash** (system programming).
- Languages** Persian (Native), English (Working Proficiency)

Other Activities

- CE@SUT** Member of Board in **Students' Scientific Chapter**

References

- Wolfgang Huber** Group Leader and Senior Scientist, EMBL, Heidelberg
- Ali Sharifi-Zarchi** Assistant Professor, Sharif University of Technology
- Abolfazl Motahhari** Assistant Professor, Sharif University of Technology
- Laleh Haghverdi** Postdoctoral Fellow, EMBL, Heidelberg
- Junyan Lu** Postdoctoral Fellow, EMBL, Heidelberg