





Radmehr Karimian

 [siradmehr](#)
 [radmehrkarimian](#)
 [@radmehr.karimian@gmail.com](mailto:radmehr.karimian@gmail.com)
 [@ee.sharif.edu](#)

EDUCATION

Sharif University of Technology (Abbr. SUT)	Sep. 2019 - Present
<i>Bachelor of Science in Electrical Engineering</i>	<i>Current GPA: 3.8/4.0(17.8/20)</i>
Helli 1 High School (Affiliated with NODET)	Aug. 2019
<i>High School Diploma in Mathematics and Physics</i>	<i>GPA: 4.0/4.0(19.90/20)</i>

RESEARCH INTERESTS

- Information Theory
- Machine Learning Theory
- High Dimensional Statistics
- Federated Learning
- Optimization
- IoT
- Trustworthy & Safe AI
- Signal Processing
- Semantic Communication

AWARDS

Best Student Award	Sep. 2020
---------------------------	-----------

PUBLICATIONS







Clinical IoT in Practice submitted to Nature electronics	Aug. 2023
Robust Semi-Supervised Learning via Divergences Under Preparation	Sep. 2023

RESEARCH & WORK EXPERIENCES

Remote Research Sharif University of Technology & The Alan Turing Institute <ul style="list-style-type: none"> • Worked with Dr. Gholamali Aminian and Prof. Mohammad Hossein Yassaee • Novel risk function inspired by different divergences including f-divergence for Semi-supervised Learning • Provide an upper bound for metric distances on ideal performance • Impirical analysis on different datasets and losses based on divergences 	Mar. 2023 – Present
Researcher at IPC Lab Imperial Collage London <ul style="list-style-type: none"> • Worked with Prof. Deniz Gunduz • Worked on Deep Joint Source-Channel Coding for MIMO channels • Worked on Video transmission on channels based on Vision Transformers like Swin and ViViT 	Dec. 2022 – Present
Researcher in R&D Team Biosen Group & North Carolina State University <ul style="list-style-type: none"> • Worked with Prof. Daryoosh Vashae and Mr. Bardia Baraeinejad • Developed an state-of-art Digital stethoscope • Worked on data compression and data transmission and noise canceling of stethoscope 	Dec. 2021 – Present
Researcher at ESC Lab Sharif University of Technology <ul style="list-style-type: none"> • Worked with Prof. Babak Khalaj and Prof. Alireza Farhadi • Worked on smart optimized cyber-physical thermal system for large buildings • Developed optimization algorithm which reduce usage of resources up to 50% 	Dec. 2020 – Present
Independent Researcher at AND Lab Sharif University of Technology <ul style="list-style-type: none"> • Worked on Indoor Positioning System • Positioning system based on signal fingerprinting with GNU Radio • Found and implement some method based on RL 	Jul. 2022 – Sep. 2022

SELECTED COURSES WITH PROJECT

Audited courses marked with ○ and graduate courses marked with ★

- ★**High Dimensional Probability**  | Sharif University of Technology
 - Final project about adversarial attacks[[Report](#)][[Presentation](#)]
- ★**Information Theory, Statistics, and Learning**  | Sharif University of Technology
 - Final project about imbalance and robust semi-supervised learning [[Report](#)][[Presentation](#)]
- ★**Deep Learning**  | Sharif University of Technology
 - Final project about Multi-modal Deep Learning[[Project](#)]
- ★**Data Networks** | Sharif University of Technology
 - Final project about simulating full 4G system on python
- ★○**Information Theory** | Sharif University of Technology
- Convex Optimization**  | Sharif University of Technology
 - Final project about theoretical and practical analysis of GD and SGD
- Statistical Learning**  | Sharif University of Technology
- Machine Learning**  | Sharif University of Technology
- CS 189/289A** | UC Berkeley
- CS 182** | UC Berkeley
- STAT 157** | UC Berkeley
- Federated and Collaborative Learning Workshop** | UC Berkeley-Simons institute
- Math 18.06** | MIT

SKILLS

Languages: C/C++, Python, Java, Matlab, R, Verilog
Libraries: Pandas, NumPy, Matplotlib, PyTorch, Keras, Sklearn, MLflow, Simulink, Cvxpy
Tools: Git/GitHub, VS Code, Linux, NS-3, ModelSim, Spice, GNS3, ADS, Arduino, Proteus, L^AT_EX

LANGUAGES

Persian(Native)
English(Highly Fluent)
German(beginner)

TEACHING

Differential Privacy as Dr.Yassae's Teaching Assistant Sharif University of Technology	Fall 2023
Electronics 1 as Dr.Kavevash's Head Teaching Assistant Sharif University of Technology	Fall 2022
Communication Systems as Dr.Pakravan's Teaching Assistant Sharif University of Technology	Fall 2022
Circuit's Theory × 3 as Dr.Fatemizadeh's Teaching Assistant Sharif University of Technology	Spring & Fall 2021-22
Sensor & Measurement × 3 as Dr.Jahed's Teaching Assistant Sharif University of Technology	Spring & Fall 2021-23
Basic of Programming as Dr.Vousoghi's Teaching Assistant Sharif University of Technology	Fall 2022

REFERENCES

Dr. Gholamali Aminian <ul style="list-style-type: none">• Research Associate, The Alan Turing Institute	✉ gaminian@turing.ac.uk
Prof. Babak Hossein Khalaj <ul style="list-style-type: none">• Distinguished Professor of Electrical Engineering, Sharif University of Technology	✉ khalaj@sharif.edu
Prof. Mohammad Hossein Yassae <ul style="list-style-type: none">• Assistant professor of Electrical Engineering, Sharif University of Technology	✉ yassae@sharif.edu