

Alireza Poorhassan Astane

(+98)9369735657 | apoorhass@gmail.com | alireza.poorhassanastane@physics.sharif.edu | github.com/alireza-astane |
[Linkedin Personal Webpage](#)

EDUCATION

Sharif University of Technology, Tehran, Iran <i>Bachelor of Physics</i>	Fall 2020 – Present (Expected January 2025) <i>GPA: 18.05/20.00</i>
Mirza Kuchak Khan Highschool, Rasht, Iran <i>Mathematics and Physics</i>	2014 – 2020 <i>GPA: 19.32/20 (final exams only)</i>

RESEARCH INTERESTS

Complex systems & Computational Physics

Stochastic Process, Neuroscience, Biophysics, Statistical Physics, Critical Phenomena

ACHIEVEMENTS

Ranked in the **top 0.3% (481th out of 155250)** in the mathematics and physics Konkour Summer 2020
(Iranian universities entrance exam)

PROJECTS

High-Efficiency Signal Transformation Using Advanced Vector Extensions • Supervisor: Dr. Reza Rezai • Astrology & Signal Analysis	Summer 2024
Sand-pile mapping of Burrridge-Knopoff Earthquake Faults • Supervisor: Dr. Saman Moghimi • Numerical Simulation & Seismological Analysis	Spring 2024
Red Blood Cell Optical Freezes Interferometrical Analysis • Supervisor: Dr. S. Nader S. Reihani • Image processing & Data analysis	Spring 2024
3D Star-Swimmer model in Low-Reynolds-Number Fluids • Supervisor: Dr. Mohammad Reza Ejtehad • Numerical Simulation & Geological Analysis	Fall 2023

COURSE PROJECTS

Polymer generation toy models analysis and comparison • Supervisor: Dr. S. Nader S. Reihani • Biophysics Project	Spring 2024
Stochastic random graphs model • Supervisor: Dr. Saman Moghimi • Network Science Project	Fall 2023
Songbird-social data analysis GitHub • Supervisor: Prof. Shahin Rohani • Complex Systems Project	Spring 2023
Java App containing a messenger & edu.sharif.edu & and cw.sharif.edu GitHub • Supervisor: Dr. Tefagh • Advanced Programming project	Spring 2022
N-body simulation with logarithmic potential GitHub • Supervisor: Prof. Sohrab Rahvar • Analytical Mechanics II course project	Spring 2022

SELECTED COURSES

ELECTROMAGNETICS 2	Grade: 20.0/20.0
NETWORK SCIENCE	Grade: 20.0/20.0
COMPUTATIONAL PHYSICS & LAB	Grade: 20.0/20.0
INTRO PROGRAMMING	Grade: 20.0/20.0
THERMODYN & STAT MECH1	Grade: 20.0/20.0
MATHMATIC PHY 1	Grade: 20.0/20.0
QUANTUM MECH 1	Grade: 20.0/20.0
BIOPHYSICS	Grade: 19.7/20.0
ADV PROGRAMMING	Grade: 19.6/20.0
COMPLEX SYSTEMS	Grade: 19.5/20.0
ANALYTICAL MECH 1	Grade: 19.1/20.0
STAT & APPL	Grade: 18.5/20.0

TECHNICAL SKILLS

Programming Languages	Python, C/C++, Java, Julia, MATLAB, Mathematica, SQL
Tools & Frameworks	Office, Git, CUDA, Parallel Computing(AVX ,Joblib ,Numba), Machine Learning (scikit-learn, pytorch), L ^A T _E X, OpenCV, LAMMPS, VMD
Visualization	Matplotlib, Plotly

LANGUAGE

English	Advanced
Persian	Native

TEACHING EXPERIENCE

Teaching Assistant, Computational Physics & Lab	Spring 2024
Dr. Seyyed Mir Abolhassan Vaezi	Sharif University of Technology
Teaching Assistant, Mathematics for Physics I	Fall 2023
Prof. Shahin Rohani	Sharif University of Technology

ATTENDED SCHOOLS

IPM School on Evolutionary Dynamic	Fall 2023
Neuromatch academy Deep learning workshop Certificate	Summer 2023

VOLUNTEER WORKS

Sharif University of Technology, Member of Student Council 2022-2024
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REFERENCES

Dr. Mohammad Reza Ejtehadi (Sharif University of Technology) reza.ejtehadi@gmail.com
Dr. Saman Moghimi (Sharif University of Technology) samanimi@gmail.com