

# PARHAM MORADI

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Parham Moradi

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## EDUCATION

M.Sc. in Complex Systems & Non-linear Dynamics

**Shahid Beheshti University (SBU), Tehran, Iran**

2017 – 2020

Overall GPA: 15.15/20

Thesis title: **Station & Detection of Bots in Social Media**

Supervisor: Prof. Gholamreza Jafari

B.Sc. in Physics

**Sharif University of Technology (SUT), Tehran, Iran**

2012 – 2017

Overall GPA: 14.84/20

Thesis title: **Electronic Structure of Carbon Materials**

Supervisor: Prof. Seyed Akbar Jafari

## RESEARCH INTERESTS

- Complex Network & Network Science
- Data Science, Data Visualization & Analysing Data
- Statistical Mechanics & Stochastic Processes
- Computational Physics & Agent Model
- Social Data & Demography

## EXPERIENCE

### CTO

**Zamineh Art Platform**

Oct 2020 – Ongoing

Tehran, Iran

- Tech Director
- Product Lead
- Curating The Art Genome Project (TAGP)

### Data Science Fellow

**Center for Complex Networks & Social Data (CCNSD)**

Nov 2019 – Ongoing

SBU, Tehran, Iran

- Research Assistant
- Data Moderator

## OUTREACH & VOLUNTEER ACTIVITIES

- **Organizer & Lecturer of Complex Networks: First Step To Social Media Analysis (2022)**  
The Twitter Workshop at CCNSD
- **Organizer & Lecturer of First Twitter Data Mining Workshop (2019)**  
The Twitter Project at CCNSD
- **Photojournalist at First Gathering National Student & Alumni of Handicraft & Folk Art (2016)**  
Alzahra University

## PUBLICATIONS

### Journal Articles

- Farzam, Amirhossein et al. (2022). "Opinion Manipulation on Farsi Twitter". In: *Scientific Report (in press)*. DOI: 10.48550/ARXIV.2205.09296.
- Mohammadi, Saeedeh et al. (July 2022). "The footprint of campaign strategies in Farsi Twitter: A case for 2021 Iranian presidential election". In: *PLOS ONE* 17.7, pp. 1–15. URL: <https://doi.org/10.1371/journal.pone.0270822>.

### Conference Proceedings

- Farzam, A., P. Moradi, S. Mohammadi, et al. (n.d.). "Farsi Twitter as a public sphere: An event-based analysis." In: Oral Presentation at PCNET20 Conference in Rome Italy.
- Farzam, A., P. Moradi, Z. Padar, et al. (n.d.). "Content VS Structure in Farsi Twitter." In: Oral Presentation at Networks 2021 Conference at Indiana University Network Science Institute.

## PRESENTATIONS

- **Urgent Path to Data Gathering**  
*Shahid Beheshti University, 2022.*  
The lecture on Twitter Workshop, First Step to Social Media Analysis.
- **Introduction to Twitter Application Programming Interface**  
*Shahid Beheshti University, 2020.*  
Center for Complex Networks & Social Data.
- **Fake News in Social Media**  
*Shahid Beheshti University, 2019.*  
The Lecture at First Twitter Data Mining Workshop.

## WORKSHOPS & CONFERENCES

- **Sixth IPM Advanced School on Computing & AI**  
Held by School of computer science, Institute for Research in Fundamental Sciences, Summer 2022.
- **Computational Social Science Workshop**  
Held by Students' Union of Mathematical Sciences Sharif University, Winter 2020.
- **8TH IPM-HPC Workshop on Multi-Core Systems & Parallel Platforms**  
Held by High-Performance-Computing, Institute for Research in Fundamental Sciences, Winter 2019.
- **School on Theory & Applications of Complex Networks**  
Held by Physics Department, Shahid Beheshti University, Summer 2018.
- **IPM Data Science Day**  
Held by School of Computer Science, Institute for Research in Fundamental Sciences, Fall 2017.
- **21TH School of Advance Physics Education**  
Held by Institute for Advanced Studies in Basic Sciences, Winter 2016.

## RESEARCH

### Research Assistant in CCNSD

📅 2022 – Ongoing      📍 SUB, Tehran, Iran

**Project Title:** Information Flow & Propagation Modeling.

**Project leaders:** Prof. Gholamreza Jafari

**Project Description:** Study information spread based on network structure within the political context.

### Research Assistant in CCNSD

📅 2021 – 2022      📍 SUB, Tehran, Iran

**Project Title:** Monitoring Twitter Activity on twelve Iran presidential election.

**Project leaders:** Prof. Gholamreza Jafari

**Project Description:** Capture social media activity during the presidential election in Iran & prepare Academic Data to initiate research.

### Curating TAGP in Zamineh Art Platform

📅 2020 – 2022      📍 Tehran, Iran

**Project Title:** Accordance The Art Genome Project in Iran Visial Art

**Project Description:** Supported by Zamineh Content Provider Department, besides art student interns, matching the primary Iran art scene with the terms of The Art Genome Project.

### Data Moderator in CCNSD

📅 2019 – 2020      📍 SUB, Tehran, Iran

**Project Title:** Implement project at Social Media user classification.

**Project leaders:** Prof. Gholamreza Jafari

**Project Description:** Used the Botometer to estimate the distribution of CAP in the Farsi Twitter by crowdsourcing.

## SELECTED COURSES

Application of Computer in Physics, Lab	18.5/20
Non-equilibrium Statistical Physics	17/20
Condensed Matter	17/20
Physics of Complex Systems	16/20

## COMPUTER SKILLS

- Python
- $\text{\LaTeX}$
- Git & Collaborative Development
- Linux & Cloud Computing
- C & C++
- SQL
- MATLAB
- Fortran
- Data Analysis, & Visualization Libraries:  
NumPy, Pandas, SQLAlchemy, python-twitter, nltk, SciPy, TensorFlow, NetworkX, scikit-learn, Matplotlib, Seaborn

## TEACHING EXPERIENCES

- Taught Introduction to Fundamental Physics (2016)
- Taught Introduction to Math Calculation (2015)

## ACADEMIC PROJECTS

### Final Project in Critical Phenomena Course

📅 Winter 2019      📍 SUB, Tehran, Iran

**Project Title:** Transformations of Ising Models.

**Supervisor:** Dr. Seyed Sadegh Movahed

**Project Description:** Review & report the transition point with Partition function & Thermodynamic calculations based on the 1959 Michael E. Fisher Article to obtain Magnetic susceptibility.

### Final Project in Electrodynamics Course

📅 Winter 2018      📍 SUB, Tehran, Iran

**Project Title:** Jacobi & Gauss-Siedel to solving Poisson Equation.

**Supervisor:** Dr. Ali Sadeghi

**Project Description:** Used the Jacobi & Gauss-Seidel iteration method in MATLAB to solve numerically Poisson Equation in the square lattice by flat density charge.

### Final Project in Condensed Matter Course

📅 Spring 2016      📍 SUT, Tehran, Iran

**Project Title:** Spin-Orbit Coupling in Tetragonal Bismuth Bilayer.

**Supervisor:** Dr. Seyed Akbar Jafari

**Project Description:** Calculated the band structure of tetragonal bismuth bilayer (TB-Bi), which can be the candidate for Topological Insulators. Finally, Spin-Orbit Coupling produces a nontrivial topological phase using the tight-Binding model approach & the Slater-Koster method.

### Project in the Application of Computer in Physics Course

📅 Spring 2015      📍 SUT, Tehran, Iran

**Project Title:** Monte Carlo Simulation of The Habard & Ising Model on Honeycomb Lattice.

**Supervisor:** Dr. Seyed Akbar Jafari

**Project Description:** Used Fortran to do the mentioned simulations & briefly study the phenomena.

### Collaborate in a Project

📅 Winter 2015      📍 SUT, Tehran, Iran

**Project Title:** Apply the Flat Histogram approach to improve the Ising model solution.

**Supervisor:** Dr. M. R. Ejtehadi

**Project Description:** Studied the Flat Histogram method to decrease computational cost in solving the Ising model base on the Monte Carlo method. The final result as C++ program ran with cluster calculation.

## REFEREES

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### Prof. Gholamreza Jafari

@ Affiliations: Professor, Department of Physics, Shahid Beheshti University, Tehran, Iran.

✉ g\_jafari@sbu.ac.ir

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### Dr. Ali Hosseiny Esfidvajani

@ Affiliations: Assistant Professor, Department of Physics, Shahid Beheshti University, Tehran, Iran.

✉ alihd22@gmail.com

## HONORS & AWARDS

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- Ranked in the top 1% of Master National Entrance Gratis Tuition for Higher Education Examination (2017)
- Third Place in Photography at The First Sharif University Art Festival (2017)
- Selected Artist at The Second International Photography Tehran Milad Tower Festival (2016)
- Ranked in the top 1% of Bachelor National Entrance Gratis Tuition for Higher Education Examination (2012)
- Third-Ranked Student Funded Scholarship at the Allame Tabatabaei Complex of Culture & Education. (2010)
- Second-Ranked Student Funded Scholarship at the Allame Tabatabaei Complex of Culture & Education (2009)
- Distinction Eighth Grade Student at Pascal Competition in Waterloo University (2007)