

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: 3.19/4

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: 2.90/4

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

Supervisor: Prof. Seyed Akbar Jafari

RESEARCH INTERESTS

- Network Science & Applying Mathematics
- Complex Systems, Many Body Systems
- Statistical Mechanics & Stochastic Processes
- Computational Physics & Agent Model
- Data Science, Data Visualization & Analysing Data

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	4/4
Non-equilibrium Statistical Physics	4/4
Condensed Matter	4/4
Physics of Complex Systems	4/4

COMPUTER SKILLS

- Python
- \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

Prof. Gholamreza Jafari

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

✉ g_jafari@sbu.ac.ir

Dr. Ali Hosseiny Esfidvajani

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

✉ al_hosseiny@sbu.ac.ir

Mr. Mohammad Mehmanchi

@ Co-Founder and CEO at Zamineh Art Platform, Tehran, Iran

✉ m.mehmanchi@zamineh.net

HONORS & AWARDS

- 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)