Alireza Hashemi

Academic & Professional CV

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Education

- **Sharif University of Technology**, M.Sc., Physics (2019-present)
  Thesis: Chaotic dynamics of topological defects
  - GPA: 2.87 (Iran grading system: 14.51/20) (72.55%)
- **University of Zanjan**, B.Sc., Physics (2015-2019)
  Thesis: Computational heat transfer in nano-structures
  - GPA: 3.70 - Top rank - (Iran grading system: 17.43/20) (87.15%)

Work Experience

- **Data Scientist**, blubank (May 2020-Present)
  Fraud detection, customer behaviour analysis, image processing, social network analysis
- **Machine Learning Course Mentor**, Rahnema College (2021)
- **Machine Learning Intern**, Rahnema College (2019)

Publications

- Social distancing in pedestrian dynamics
  Physical Review E - **A. Hashemi**, S. Sajjadi (equal contrib.), F. Ghanbarnejad - 2021
- Chaotic dynamics of active topological defects
  Soft Materials - **A. Hashemi**, M. R. Ejtehadi - 2021
- Analysis of the ground-state energy eigenvalues of fractal quantum potentials
  Physica Scripta - **A. Hashemi**, A. H. Darooneh - 2019
- Many-body effects on the radiative heat transfer in fractal nanostructures
  IJAA - M. Nikbakht, S. Ahmadian, **A. Hashemi** - 2017

Conferences

- DBS 2020 - Social distancing in pedestrian dynamics (Talk)
- NetSci 2020 - COVID-19 in Iran (Poster)
- CCS 2020 - Effectiveness of social distancing through the lens of ABM (Talk)

Skills & Experience

- C++, Python, R, Matlab   • Social media data mining, NetworkX, graph-tool, gephi
- Keras, PyTorch, SciPy, Sklearn, Pandas, Parallel computing (OpenMP)
- SQL/NoSQL, Neo4j, Data visualization tools, LaTeX

Other

- TA for Physics 1, Analytical Mechanics 1&2 (Sep 2017), Electromagnetism (Sep 2018), Nonlinear Dynamics & Chaos (Sep 2020)
- Translation of the book "Dark Matter & Dark Energy" by Brian Clegg to Farsi
- NTD Hackathon runner up team (Covered in NPR.org here)
- 23rd & 24th School on Physics, IASBS
- Tehran School on Complex Networks (TACN2018), Shahid Beheshti University

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References

Prof. Amir Hossein Darooneh, Dept. of Applied Math., University of Waterloo
Prof. Mohammad Reza Ejtehadi, Dept. of Physics, Sharif University of Technology
Prof. Moladad Nikbakht, Dept. of Physics, University of Zanjan

Links

Google Scholar, ℞ **Researchgate**, 🔗 **LinkedIn**, 🔗 **Homepage**