

Curriculum Vitae

CONTACT INFORMATION

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Name: Omid Farzadian
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PERSONAL INFORMATION

Date of Birth: (20, 2, 1979)
Place of Birth: Zanjan, Iran
Nationality: Iranian
Sex: Male
Marital Status: Married

EDUCATION

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| PhD. Physics/ Soft condensed matter physics
<i>Thesis: Propagation of the waves in correlated disorder chain</i>
Supervisors: Dr. Mohammad Dehghan Nirya and Dr. Seyyed Nader Seyyed Reihani
Institute for Advanced Studies in Basic Sciences (IASBS) , Zanjan, Iran. | 2011-2016 |
| MSc. Physics/ condensed matter physics
<i>Thesis: Phase transition in internet traffic</i>
Supervisor: Dr. Mohammad Reza Kolahchi
Institute for Advanced Studies in Basic Sciences (IASBS) , Zanjan, Iran. | 2001-2003 |
| BSc. Physics/ solid state physics
University of Zanjan, Zanjan, Iran. | 1998-2001 |

RESEARCHS

Propagation of waves in disorder media

- Propagating of vibrations in DNA chain with short and long-range correlation (Transfer Matrix Method and Molecular Dynamics simulations)
- Effect of repeated zones of DNA sequence in wave transmission (Transfer Matrix Method Molecular Dynamics simulations)
- Energy transfer in nonlinear 1D lattices (Molecular Dynamics simulations)

Biophysics

- Entropy of disorder chains such as DNA.
- Studying about pseudo knots in RNAs (Monte-Carlo simulation)
- Simulation of Internet traffic (Monte-Carlo simulation)

PUBLICATIONS AND PREPRINTS

- O. Farzadian and M. D. Niry " *Delocalization of mechanical waves in the ladder chain of DNA with correlated disorder*", Physica A, **450** 95-103 (2016).
- O. Farzadian and M. D. Niry " *Role of short-range correlation in facilitation of wave propagation in long-range ladder chain*" Physica A, **505** 49-60 (2018).
- O. Farzadian " *Localization-dilocalization transition in chain with correlated disorder in terms of entropy* " Phys. Rev. E (**submitted**).
- O. Farzadian " *Liquid crystal phases in solution of rod like molecules containing electric dipole moment*" (**in preparation**).
- O. Farzadian " *short range correlation in the sequence of DNA chain and entropy of special sequences*" Physical Concepts of Nucleic-Acid Structure and Behavior, Yerevan, Armenia, 2013 (**Poster**).
- O. Farzadian " *Physics and sport*" (**Book in Persian language**).

CONFERENCES

- Workshop on Physical, Biological and Chemical Foundations of Bioelectronics, Biophotonics and Biosensors, ICTP-ECAR, Izmir, Turkey, 2017.
- School on Applications of Nanomaterials in Medicine, Tehran, Iran 2016.
- IASBS-ICTP school on Active Matter and Chemotaxis, Zanjan Iran, 2016.
- Workshop on Physics of Polymers and Biopolymers, Tehran, Iran 2014.
- Conference on Soft Matter, Biological and Statistical Physics, Tehran, Iran 2013. Physical Concepts of Nucleic-Acid Structure and Behavior, Yerevan, Armenia, 2013. (**Poster presentation**)
- 19th Annual IASBS Meeting on Condensed Matter Physics, IASBS, Zanjan, Iran, 2013.
- 20th Annual IASBS Meeting on Condensed Matter Physics, IASBS, Zanjan, Iran, 2014.
- 1th Summer School on Numerical Modeling and Computer Simulation at Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran, 2001
- The Annual Conference of the Physical Society of Iran (PSI), Zanjan, Iran, 2002.
- Physical Concepts of Nucleic-Acid Structure and Behavior, Yerevan, Armenia, 2013.

AWARDS AND HONORS

- Top student (First Rank) at **High School** (1994-1998)
- Top student in **BSc** (2001)
- Rank **75th** among (nearly 10'000) B.Sc. Physics students in the National Graduate Entrance Exam, 2001.

PERSONAL SKILLS AND COMPETENCES

Computer skills

- Programming in C++, Fortran and Matlab
- MC & MD simulations
- Familiar with Mathematica

Language skills

- Azerbaijani (Mother tongue)
- Turkish (fluent)
- Persian (fluent)
- English (good)

INTERESTS

- Simulation in soft condensed matter
- Disordered systems
- Nonlinear wave
- Biophysics
- Soft Matter

References

- **Mohammad Dehghan Nirya**, Assistant Professor of Physics, IASBS, Zanjan, Iran
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- **Farshid Mohammad Rafiee**, Associate Professor of Physics, IASBS, Zanjan, Iran
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- **Ali Mohammadi-Gheidari**, Associate Professor of Physics, Delft University of Technology Delft, Netherlands.
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- **Ebrahim Karimi**, Associate Professor of Physics, University of Ottawa, Ottawa, Canada
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