Curriculum Vitae

Personal Information

Surname: Jamali
Name: Yousef

Official email: Y.Jamali@ipm.ir
Personal email: Y.Jamali@Gmail.com

Gender: Male
Date of Birth: March. 26, 1978
Marital Status: Married

Work Address:

Department of Mathematics
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P.O.Box: 14115-111, Tehran, Iran

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School of Nano Science
Institute for research in fundamental science (IPM),
Tehran, Iran

Academic Qualifications:

- B.Sc. in Physics (September 1996 - September 2001)
  Department of Physics Sharif University of Technology, Iran
  Project Title: Design of Hologram setup

- M.Sc. in Condense Matter Physics (September 2001 - January 2004)
  Department of Physics Sharif University of technology, Iran
  Dissertation Title: Multi-scale computational modelling of solidification phenomena
  Supervisor: Prof. H. Rafii-Tabar.

- Ph.D. in Computational Physics (January 2004 – January 2009)

School of Nano Science, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran
Dissertation Title: Computational modelling of the stochastic dynamics of kinesin biomolecular motors.
Supervisor: Prof. H. Rafii-Tabar.

- Postdoctoral researcher in computational biophysics. Molecular Cell Biomechanics Lab, Department of bioengineering, UC Berkeley, USA **(April 2009 - 2011)**
  Research titles:
  - Mechanotransduction
  - Modeling of Nucleocytoplasmic Transport
  - Modeling of Focal Adhesion formation
- Postdoctoral researcher in computational Nano Science. School of Nano Science, Institute for Studies in Theoretical Physics and Mathematics (IPM), Tehran, Iran **(20011 - 2012)**
  Research titles:
  - Multiscale modelling of action potential and voltage gated ion channels.
  - Effect of electromagnetic field on voltage gated calcium channels

Research Interests:

Systems/Computational Biology, Computational cell signaling , Computer Simulation in Physics (Molecular Dynamics, Monte Carlo) , Physical Modeling of Nano-Bio Systems

Selected scientific publication:

Click link bellow for complete list

https://scholar.google.com/citations?hl=en&user=AqOdi_wAAAAJ&view_op=list_works&sortby=pubdate

- Y. Jamali, A. Lohrasebi, H. Rafii-Tabar, Computational modelling of the stochastic dynamics of kinesin biomolecular motors, Physica A (2007) 381 239-254.
- Y. Jamali, M. Azizmi, M.R.K Mofrad: "A Sub-Cellular Viscoelastic Model for Cell Population Mechanics" PLoS One (2010) 5(8) e12097 doi: 10-1371
- T. Jamali, Y. Jamali, M. Mehrbod , M.R.K Mofrad: "On the Nuclear Pore Complex: Biochemistry and biophysics of Nucleocytoplasmic Transport in Health and Disease" Intl Rev Cell Molec Biol (2011) 287
- R. Moussavi Baygi, Y. Jamali, R. Karimi, M.R.K. Mofrad: "Biophysical Coarse-Grained Modeling Provides Insights into Transport through the Nuclear Pore Complex" Biophysical Journal (2011) 100, 1410-1419

- R. Moussavi Baygi, Y. Jamali, R. Karimi, M.R.K. Mofrad: "Brownian Dynamics Simulation of Nucleocytoplasmic Transport: a Coarse-Grained Model for the Functional State of the Nuclear Pore Complex." PLoS Computational Biology (2011) 7(6) e1002049
- Y. Jamali, T. Jamali, M.R.K Mofrd : An agent based model of integrin clustering:Exploring the role of ligand clustering, integrin homo-oligomerization, integrin–ligand affinity, membrane crowdedness and ligand mobility. Journal of Computational Physics (2013), 244 , 264–278
- O Bavi, M Vossoughi, R Naghdabadi, Y Jamali : The combined effect of hydrophobic mismatch and bilayer local bending on the regulation of mechanosensitive ion channels. PloS one (2016) , e0150578

Innovations & inventions

National patent on Antibacterial Nano-composite Granule (Certificate is attached)
National patent on Antimicrobial Zinc-Oxide Nano-composite Film (Certificate is attached)
National patent on Antimicrobial Silver Nano-composite Film (Certificate is attached)

Teaching experiences:

- Stochastic Modeling in Biology
- Dynamics on complex networks
- Mathematical Biology
- Bioelectricity
- Computational Nano Science (2014)
- Computational plasma physics
- Computational physics

Advising experiences:

Mentor of six PhD students in the Computational Biology
Mentor of fifteens MSc students in the BioMath, Bioinformatics and Computational Biology.

Skills on computational methods:

- Cellular Automata method
- Agent based modeling

- MC (Monte Carlo)
- MD (Molecular Dynamics)
- LD (Langevin Dynamics)
- Coarse Grain Modeling
- Heuristic optimization techniques

Programming skills:

- **Languages**
  - C/C++
  - JAVA
  - Fortran
  - TCL
  - MATLAB

Graphical Software's skills

Adobe Photoshop
Adobe Illustration
Maxon Cinema 4D Studio