

Majid Farzin

Gender: Male

Birth date: Feb. 14, 1982

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Education

- PhD in soft matter Physics, Technical University of Dresden, Germany 2013 – 2016
- MS in solid state Physics, University of Zanjan, Iran 2006 – 2008
- BS in solid state Physics, Bu-Ali Sina university, Iran 2000 – 2006
- Pre-University diploma in Mathematics and Physics, Shariati high school, Qorveh, Iran 1999 – 2000
- High school diploma in Mathematics and Physics, Abu-Reihan Birooni high school, Qorveh, Iran 1996 – 1999

Experiences

- Independent research Physicist, 2017 – Present
- Marie-Curie fellow, Leibniz institute of polymer research, Germany, 2013 – 2016
- Lecturer in Physics, Sama college, Tehran, Iran 2010 – 2013
- Calibration expert, Mehr Kanaz Industry Co., Tehran, Iran 2012 – 2013
- Lecturer in Physics, Islamic free university, Qorveh, Iran 2008

Publications

- *Polymer brush bilayer under steady state shear motion: Density functional theory, scaling theory and molecular dynamic simulation* [Link](#)
- *Polyelectrolyte brush bilayers at thermal equilibrium: Density functional theory and molecular dynamic simulations* [Link](#)
- *Polyelectrolyte brush bilayers: Theory and simulation* [Link](#)
- *Polyelectrolyte brush bi-layer under shear at linear and nonlinear response regimes: A combination of the density functional theory framework and the scaling theory* [Link](#)

- *Polyelectrolyte chain at thermal equilibrium: A comparison between the density functional theory framework (DFT) and the molecular dynamic simulations (MD)* [Link](#)
- *Polymer brush bilayers under stationary shear motion at nonlinear response regime: An impressive theoretical approach* [Link](#)
- *Polymer brush bilayers under stationary shear motion at linear response regime: A theoretical approach* [Link](#)
- *Interpenetration between a polymer brush and a polymer star at thermal equilibrium: A theoretical approach* [Link](#)
- *Polymer brushes immersed in solvent molecules at thermal equilibrium: A theoretical approach* [Link](#)
- *Polymer brush bilayers at thermal equilibrium: A theoretical approach* [Link](#)
- *General aspects of hydrodynamic interactions between three-sphere low-Reynolds-number swimmers* [Link](#)
- *Hydrodynamic interactions between two microswimmers* [Link](#)

Advanced courses passed

- An introduction to high performance and parallel computing, University of Colorado Boulder (2023) [Verify](#)
- Dense gases, liquids and solids, University of Colorado Boulder, (2023) [Verify](#)
- An introduction to Artificial Intelligence (AI), IBM, (2023) [Verify](#)
- Density functional theory, École Polytechnique, (2023) [Verify](#)
- Theoretical polymer Physics, Technical University of Dresden, (2014)
- Scaling theory in polymer Physics, Technical University of Dresden, (2013)
- Theoretical Biophysics, MPI-PKS, (2015)
- Fluid dynamics, University of Zanjan, (2007)
- Advanced quantum Physics, University of Zanjan, (2006)
- Classical electrodynamics, University of Zanjan, (2006)
- Advanced statistical Physics, University of Zanjan, (2006)
- Advanced condensed matter Physics, University of Zanjan, (2007)

Conference and training

- JAK-STAT pathways in health & disease meeting, CSHL, US Nov. 2020
- SOMATAI final conference, Fodele beach hotel, Crete island, Greece 2016
- SOMATAI summer school, Hotel academy of catholic, Berlin, Germany 2014
- SOMATAI training event, TU/e, Eindhoven, The Netherlands 2015
- SOMATAI training event, Utrecht university, The Netherlands 2015

- SOMATAI training event, DSM company, Urmond, The Netherlands 2015
- SOMATAI training event, FZ-Jülich, Germany 2013
- International congress on nanoscience and nanotechnology (ICNN), Tabriz university, Iran 2008
- New materials national conference, MERC, Karaj, Iran 2007

Honors and awards

- Coursera scholarship, sponsored by Marie-Curie Alumni Association (MCAA), (2023)
- Conference scholarship at CSHL, sponsored by Regeneron pharmaceuticals Inc., (2020)
- Marie Skłodowska-Curie fellowship, (2013 -- 2016)
- Ranked 564th in the national master entrance exam, (2006)
- Ranked 939th in the national undergraduate entrance exam, (2000)
- Ranked 2nd in the Islamic free university master entrance exam, (2006)

Skills

English, German, Hebrew, Density functional theory (DFT), Perturbation expansion theory (PET), Scaling theory, Molecular dynamic simulation (MD), Monte Carlo simulation (MC), Brownian dynamic simulation (BD), Wolfram Mathematica, Fortran programming, BashScript programming, Maple, XMGrace, VMD, Tecplot, LaTeX, MSOffice, LibreOffice, GNUPlot, Linux, Windows, Adobe Photoshop, CorelDraw, Artificial Intelligence (AI), Quantum Physics, Statistical Physics, High performance computing (HPC), High throughput computing (HTC)

Hobbies and entertainments

- Jogging, Basketball, Billiard, Bowling, Mountain climbing, Listening music, Watching movie, Watching theater, Playing video games, Social media, Gym