Mike John Edwards
(Majid Farzin)

Birth date: Feb. 14, 1982
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Education

- Marie-Curie fellowship in soft matter Physics, IPFDD, Germany 2013 – 2016
- MS in soft matter Physics, University of Zanjan, Iran 2006 – 2008
- BS in solid state Physics, Bu Ali Sina University, Iran 2000 – 2006

Experiences

- Independent research Physicist, Karaj, Iran 2017 – Present
- Marie-Curie fellow, IPFDD, Dresden, Germany, 2013 – 2016

Publications

1. *Polyelectrolyte brush at thermal equilibrium: A density functional theory approach,* ChemRxiv
2. *A review of recent theoretical advances in polymer brushes,* ChemRxiv
3. *Polymer brush bilayer under stationary shear: A joint DFT, scaling theory and MD study,* BioRxiv
4. *Polymer brush bilayer under non-equilibrium shear inversion: An MD simulation approach,* ChemRxiv
5. *Polyelectrolytebrush bilayers at thermal equilibrium: Density functional theory and molecular dynamic simulations,* BioRxiv
6. *Polymer brush bilayer under shear at linear and nonlinear response regimes: A combination of the density functional theory framework and the scaling theory,* BioRxiv
7. *Polyelectrolyte chain at thermal equilibrium: A comparison between the density functional theory framework (DFT) and the molecular dynamic simulations (MD),* BioRxiv
8. *Polymer brush bilayer under stationary shear motion at non-linear response regime: An impressive theoretical approach,* Priprints
9. *Polymer brush bilayer under stationary shear motion at linear response regime: A theoretical approach,* BioRxiv
10. *Interpenetration between a polymer brush and a polymer star at thermal equilibrium: A theoretical approach,* BioRxiv

11. *Polymer brushes immersed in solvent molecules at thermal equilibrium: A theoretical approach,* BioRxiv
12. *Polymer brush bilayer at thermal equilibrium: A density functional theory approach,* BioRxiv
13. *General aspects of hydrodynamic interactions between three-sphere low-Reynolds-number swimmers,* Phys. Rev. E
14. *Hydrodynamic interactions between two micro-swimmers,* JAMT

Advanced courses passed

1. Fundamentals of macroscopic and microscopic thermodynamics, UC-Boulder, U.S. (2023) Verify
2. Quantum Mechanics, UC-Boulder, U.S. (2023) Verify
3. Electric potential and DC circuits, Rice University, U.S. (2023) Verify
4. Electric charges and fields, Rice University, U.S. (2023) Verify
5. Introduction to Quantum Computing, IBM, U.S. (2023) Verify
6. An Introduction to High Performance and Parallel Computing, UC-Boulder, U.S. (2023) Verifty
7. Dense Gases, Liquids and Solids, UC-Boulder, U.S. (2023) Verify
8. An Introduction to Artificial Intelligence (AI), IBM, U.S. (2023) Verify
9. Density Functional Theory, École Polytechnique, France (2023) Verify
10. Theoretical polymer Physics, TU-Dresden, Germany (2014)
11. Scaling theory in polymer Physics, TU-Dresden, Germany (2013)
12. Theoretical Biophysics, MPI-PKS, Germany (2015)

Conferences and trainings

1. JAK-STAT pathways in health & disease meeting, CSHL, U.S. 2020
2. SOMATAI conference, Crete island, Greece 2016
3. DPG, Regensburg University 2015
4. SOMATAI training, TU/e, Eindhoven, The Netherlands 2015
5. SOMATAI training, Utrecht university, The Netherlands 2015
6. SOMATAI training, DSM company, Urmond, The Netherlands 2015
7. SOMATAI summer school, Berlin, Germany 2014
8. DPG, TU-Berlin 2014
9. DPG, TU-Dresden 2013
10. SOMATAI training, FZ-Jülich, Germany 2013
11. International congress on nanoscience and nanotechnology (ICNN), 2008
12. New materials national conference, MERC, 2007

Honors and awards

1. Coursera scholarship, sponsored by MCAA, 2023
2. Conference scholarship at CSHL, sponsored by Regeneron Inc., 2020
3. Marie-Curie fellowship, sponsored by European Commission 2013 – 2016

Skills

English
German
Hebrew
Density functional theory (DFT)
Perturbation theory (PET)
Scaling theory
Molecular dynamic simulations (MD)
Monte Carlo simulations (MC)
Brownian dynamic simulations (BD)
Artificial Neural Network (ANN)
Wolfram Mathematica language
Fortran language
Bash script language
XMGrace
VMD
Tecplot
LaTeX
GNUPlot
Linux
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