**Leila Lotfikatooli**

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## Educations

**Ferdowsi University of Mashhad** — Mashhad,Iran

PhD, Chemical Engineering (Molecular simulation) — 2013-2017

Thesis: "Prediction of Adsorption Isotherms via Molecular Simulation and Global optimization"

**Iran University of Science and Technology** — Tehran, Iran

M.Sc, Chemical Engineering (Design, Simulation and Control of Processes) — 2009-2011

Thesis: "Prediction of Formation Conditions of Calthrate Hydrates via Artificial Neural Networks"

**Amir Kabir University of Technology** — Tehran, Iran

B.Sc, Chemical Engineering (Petrochemical Engineering) — 2003-2007

Thesis: "Pervaporation of dilute alcoholic mixtures using PDMS membrane"

**National Organization for Development of Exceptional Talents High school** — Gorgan, Iran

Diploma in Mathematics and Physics. — 1999-2003

## Publications & Presentations

**L. Lotfikatooli**, K. Momeni, M.T. Sadeghi, Formation of $CO_2$ and CH4 + $CO_2$ Hydrates Phase in Deep Ocean Porous Medium. Environmental Science and Technology Conference (ESTEC2009). Kuala Terengganu Malaysia, December 7-8, 2009.

**L. Lotfikatooli**, K. Momeni, M.T. Sadeghi, Formation of $CO_2$ and CH4 + $CO_2$ Hydrates Phase in Deep Ocean Porous Medium. Environmental Science and Technology Conference (ESTEC2009). Kuala Terengganu Malaysia, December 7-8, 2009.

**L. Lotfikatooli**, M.T Sadeghi. Hydrate: a promising platform for hydrogen storage, Chemistry and Chemical engineering, 2011.

**L. Lotfikatooli**, M.T. Sadeghi, Prediction of Formation Conditions of Hydrogen + Tetrahydrofouran + Water System Using Artifitial Neural Network. 7th International Conference on Gas Hydrates (ICGH7). Edinburgh, Scotland, United Kingdom, July 17-21, 2011.

**L. Lotfikatooli**, A. Shahsavand. A Reliable Approach for Terminating the Genetic Algorithm Optimization Method. Iranian journal of numerical analysis and optimization, 2017, DOI: 10.22067/ijnao.v7i1.48652.

**L. Lotfikatooli**, A. Shahsavand. Reliable prediction of adsorption isotherms via genetic algorithm molecular simulation, Journal of molecular modeling, 2017, DOI: 10.1007/s00894-017-3206-2.

**L. Lotfikatooli**, A. Shahsavand, F. Nazari. A Novel Method For Recruiting Global Optimization Techniques For Strategically Oriented Molecular Simulation. 11th Triennial Congress of the World Association of Theoretical and Computational Chemists (WATOC).Munich, Germany, August 27 to September 1, 2017.

**L. Lotfikatooli**, A. Shahsavand. An Innovative Approach for Molecular Simulation of Nano-Structured Adsorption Isotherms via Ant Colony Method. Physical Chemistry C, 2018.

S. Mirzaei, A. Ahmadpour, A. Shahsavand, A. Nakhaei Pour, **L. LotfiKatooli**, A. Garmroodi Asil, B. Pouladie, A. Arami-Niya. Experimental and simulation study of the effect of surface functional groups decoration on $CH_4$ and $H_2$ storage capacity of microporous carbons. Applied Surface Science, 2020.

**L. LotfiKatooli**. An Optimized Sampling Approach for Intelligent Searching Molecular Simulation Space, Division of Computers in Chemistry, ACS Spring 2020 National Meeting & Exposition.

## Honors

- Selected as "Exceptional Talent" by "National Organization for Exceptional Talents Educational Testing", 1999.
- Scholarship from Ministry of Science, Research and Technology of Iran, to study PhD at Ferdowsi University of Mashhad.

## Research and Teaching Experiences

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|---|---|
| **Assistant Professor** | Golestan University, AliAbad-Katool Sep 2021 to Now. |
| **Research Assistant & Teaching Assistant** | Ferdowsi University of Mashhad, Sep 2013- jun 2017. |

**Instructor** Golestan University, Gorgan

-Basic principles and calculations in chemical engineering Sep 2013-Sep 2021.

-Computer programing

-Applied mathematics for chemical engineers

-Heat transfer

-Matlab

-Unit operation

**Technical Assistant**

Iran University of Science and Technology, Simulation and Control Lab, 2010.

**Apprenticeship**

Pars refinery, Research and Development summer 2006.

## Selected Academic Projects

- Computational Fluid Dynamic Simulation
- Design and Modeling Chemical Processes
- Molecular Simulation and Molecular Dynamic
- GCMC Simulation of Gas Adsorption
- Code writing for computing different Theories in Adsorption Systems
- Global Optimization Algorithms
- Artificial Neural Networks

## Industrial Project

- Feasibility study of using polyethylene glycol (PEG) powder in activated alumina for the dehumidification unit to remove water from the gas, South Pars Gas Refining Complex.
- Investigating the operational problems in air conditioner (1600) of Shahid Hasheminejad refinery and presenting practical solutions to solve them.
- Optimization of formulating Antibacterial Detergent solution, Hirka Rayane Shomal.
- Design of High Level Disinfectants for critical and semi-critical medical equipment (hemodialysis machines and endoscope instruments) Maah Banoye Zibaye Pars.

## Computational Software knowledge

- GAMS: Genetic Algorithm Molecular Simulation
- ACMS: Ant colony Algorithm Molecular Simulation
- Design Expert, Matlab, Molecular Dynamic, Molecular Simulation Softwares, Hysis, Aspen, Fluent, Comsol.

## Technological Activity

- Director of Ceric Technological Center, Incubator Center of Golestan University.

## Other Experiences and abilities

- Second BSc in Mechanical Engineering and Member of Golestan Engineering Organization.
- Technical Assistant of Vice Presidency of Food and Drug in Golestan University of Medical Sciences.