# Curriculum Vitae

## Personal Information

First name: Sanaz Last name**:** Behnam
Gender: Female
Marital status: Married with one child
Date of birth: 6 September 1983
Place of Birth: Jahrom, Fars, IRAN
E-mail: behnam_sanaz@yahoo.com;
Phone: +989133265679; +983134333430

## Research Fields

- Biotechnology
- Biosorption
- Thermodynamics
- Modeling and simulation
- Industrial water and wastewater treatment
- Environmental Protection
- HSE

## Educational Background

**Ph. D. (Chemical Engineering)**
[2009-2014] Isfahan University of Technology, Isfahan, Iran; GPA: 17.62 /20

Dissertation Title: "Treatment of copper solutions using adsorbents produced from the fungus *Mucor indicus*" (Grade: Excellent)

Supervisors: Arjomand Mehrabani-Zeinabad, Keikhosro Karimi, Akram Zamani

**M. Sc. (Chemical Engineering)**
[2005-2008] Isfahan University of Technology, Isfahan, Iran
GPA: 17.19/20 (Average GPA of department: 15.54/20)
Dissertation Title: "Modeling and calculations of phase separation boundary in polymer-solvent systems based on continuous thermodynamics" (Grade: 20/20)
Supervisors: Shapoor Roodpeyma, Saeid Nouri Khorasani, Gholam Reza Vakili-Nezhad

**B. Sc. (Chemical Engineering, Polymer Industry)**
[2001-2005] Isfahan University of Technology, Isfahan, Iran

GPA: 15.5/20 (Average GPA of department: 13.47/20)
Title of B.Sc thesis: Modeling and Simulation of Catalytic Reforming of Magnaformer Unit of Bandar-Imam Petrochemical Complex (Grade: 19.5/20)
Supervisors: Arjomand Mehrabani-Zeinabad

**High School Diploma (Mathematics)**
[2001] Pre-University Diploma, Educational complex of Isfahan University of Technology, Isfahan, Iran (GPA: 19.7/20)

## Accomplished Projects

- [2017] Removal of Mn from aqueous solutions using electrocoagulation; optimization of the process (Azad University, Shahreza Branch, Iran)
- [2015-2017] Removal of dyes (methylene blue, Malachite Green) from aqueous solutions using algal biomasses (Azad University, Shahreza Branch, Iran)
- [2016] Production of practical biosorbents for dye removal (Azad University, Shahreza Branch, Iran)
- [2015] Enzyme production (cellulase, xylanase, glucoamylase) and optimization of operating conditions (Isfahan University of Technology, Isfahan, Iran).
- [2009-2014] Removal of heavy metals (chromium, copper, lead) from aqueous solutions using fungal and algal biomasses (Isfahan University of Technology, Isfahan, Iran).
- [2007-2008] Modeling phase behaviors of polymer solutions using continuous thermodynamics
- [2006] Modeling reactors, flash and distillation towers of Catalytic Reforming of Magnaformer Unit of Bandar-Imam Petrochemical Complex by MATLAB (Isfahan University of Technology, Isfahan, Iran).
- [2006] Modeling of radial reactors of styrene unit of Tabriz petrochemical company by MATLAB (Isfahan University of Technology, Isfahan, Iran).
- [2006] Modeling of furnace reactors and heat exchangers for production of ethylene by MATLAB (Isfahan University of Technology, Isfahan, Iran).

## Published papers

1. S. Omranpour Shahreza, N. Mokhtarian, **S. Behnam**, Optimization of Mn removal from aqueous solutions through electrocoagulation, *Environmental Technology* 2020, 41(7), 890-900. www.doi.org/10.1080/09593330.2018.1514071.
2. S. Khorvash, **S. Behnam**, Removal of methylene blue dye by immobilized mixture of brown alga *Dictyota cervicornis* and activated carbon, *Desalination and Water Treatment* 2019, 162, 383-390. www.doi.org/10.5004/dwt.2019.24334

3. **S. Behnam**, K. Karimi, M. Khanahmadi, Cellulase production under solid-state fermentation by ethanolic Zygomycetes fungi: Application of response surface methodology, *Nutrition and Food Sciences Research* 2019, 6(1), 27-34.
4. M. Roozegar, **S. Behnam**, An eco-friendly approach for copper biosorption on alga *Cystoseira indica* and its characterization *Environmental progress and sustainable Energy* 2019, 38(S1), 323-330. www.doi.org/10.1002/ep.13044.
5. M. Salehi Robati, **S. Behnam**, Copper removal by alga *Sargassum glaucescens* immobilized on calcium alginate and its characterization *Research journal of Chemistry and Environment* 2018, 22(9), 27-34.
6. **S. Behnam**, K. Karimi, A. Zamani, A. Mehrabani-Zeinabad, Copper removal by filamentous and yeast-like morphologies of *Mucor indicus*: Surface characterization and biosorption mechanism *Desalination and Water Treatment* 2018, 114, 221-231. www.doi.org/10.5004/dwt.2018.22357.
7. M. Panahi, **S. Behnam**, Biosorption of Malachite Green dye by the brown alga *Dictyota cervicornis*: Kinetics and isotherm study, *Coloration Technology* 2018, 134 (4), 292-298. www.doi.org/10.1111/cote.12341.
8. S. Samadi, K. Karimi, **S. Behnam**, S. Mirmohamadsadeghi, Ethanol Yield and Morphology Change of Mucor indicus in the Presence of Nickel Ions, *Journal of Biobased Materials and Bioenergy* 2018, 12(1), 1-5. www.doi.org/10.1166/jbmb.2018.1751.
9. M. R. Pouya, **S. Behnam** Adsorption behavior of copper ions on alga *Jania adhaerens* through SEM and FTIR analyses, *Separation Science and Technology* 2017, 52(13), 2062-2068. www.doi.org/10.1080/01496395.2017.1324492.
10. S. Samadi, K. Karimi, **S. Behnam**, Simultaneous biosorption and bioethanol production from lead-contaminated media by *Mucor indicus*, *Biofuel Research Journal* 2017, 13: 545-550. www.doi.org/10.18331/BRJ2017.4.1.4.
11. **S. Behnam**, K. Karimi, M. Khanahmadi, Z. Salimian, Optimization of glucoamylase production by *Mucor indicus*, *Mucor hiemalis*, and *Rhizopus oryzae* through solid state fermentation, *Turkish Journal of Biochemistry* 2016, 41(4):250-256. www.doi.org/10.1515/tjb-2016-0036.
12. **S. Behnam**, K. Karimi, M. Khanahmadi, Z. Salimian, Optimization of xylanase production by *Mucor indicus*, *Mucor hiemalis,* and *Rhizopus oryzae* through solid state fermentation, *Biological Journal of Microorganism* 2016, 4(16):1-10.
13. **S. Behnam**, A. Zamani, K. Karimi, A. Mehrabani-Zeinabad, Copper removal from aqueous solutions using different fungal-based adsorbents: A comparative and detailed study, *Journal of Dispersion Science and Technology* 2015, 36(6): 866-876. www.doi.org/10.1080/01932691.2014.930351.
14. **S. Behnam**, K. Karimi, A. Zamani, A. Mehrabani-Zeinabad, A study on biosorption of copper ions by fungal chitosan: an alternative to shrimp chitosan, *Biological Journal of Microorganism* 2015, 3(12):1-14.
15. **S. Behnam**, K. Karimi, A. Zamani, A. Mehrabani-Zeinabad, Adsorption of hexavalent chromium by chitosans with different molecular weights, *Minerva Biotechnologica* 2014, 26(3):165-174.

**Seminar proceedings**

1. M. Panahi, **S. Behnam**, Investigating the ability of alga *Dictyota cervicornis* for adsorption of Malachite Green dye from aqueous solutions: Kinetics and isotherm study, National conference on new technologies in chemical engineering, 2016, Shahreza, Iran (in Persian).
2. S. Khorvash, **S. Behnam**, Comparison of methylene blue dye removal from aqueous solutions by two adsorbents of activated carbon and alga *Dictyota cervicornis,* National conference on new technologies in Chemical engineering, 2016, Shahreza, Iran (in Persian).
3. M. Salehi Robati, **S. Behnam**, Removal of copper ions from aqueous solutions by alga *Sargassum glaucescens* immobilized on calcium alginate, National conference on new technologies in Chemical engineering, 2016, Shahreza, Iran (in Persian).
4. H. Bastani-Nezhad, **S. Behnam**, Studying kinetics of lead removal from aqueous solutions by alga *Sargassum glaucescens* immobilized by polysulfone, National conference on new technologies in Chemical engineering, 2016, Shahreza, Iran (in Persian).
5. **S. Behnam**, K. Karimi, A. Zamani, A. Mehrabani-Zeinabad, Investigating the ability of chitosan for adsorption of metal ions of copper and chromium from aqueous solutions. The first bioremediation conference, 2013, Tehran, Iran (in Persian).
6. F. Rouhollahi, A. Zamani, K. Karimi, N. Etesami, **S. Behnam**, Investigation of adsorption of Ni ions present in wastewater by shrimp chitosan and *Mucor indicus* biomass, The third Iranian bioenergy conference, 2012, Tehran, Iran (in Persian).
7. M. Naghdi, A. Zamani, K. Karimi, **S. Behnam**, Investigating the growth and production of Metabolites in media containing sucrose, The third Iranian bioenergy conference, 2012, Tehran, Iran (in Persian).
8. H. Khaleghian, K.Karimi, T. Behzad, **S. Behnam**, Studying the effect of alkali treatment on glucose production from rice straw. The third Iranian bioenergy conference, 2012, Tehran, Iran (in Persian).
9. F. Radmanesh, K. Karimi, A. Zamani, **S. Behnam**, Studying kinetics of fermentation for ethanol production by *Mucor hiemalis*, The third Iranian bioenergy conference, 2012, Tehran, Iran (in Persian).
10. **S. Behnam**, K. Karimi, A. Zamani, A. Mehrabani-Zeinabad, Lead biosorption from aqueous solution by filamentous fungus *Mucor indicus*, The third Iranian bioenergy conference, October 2012, Tehran, Iran.
11. **S. Behnam**, GH. Vakili-Nezhad, S. Roodpeyma, Phase Equilibrium Calculations of the System Polystyrene- Methylcyclohexane with the Sanchez-

Lacombe Equation of State Using Continuous Thermodynamics, Seventeenth symposium on thermophysical properties, June 21- 26, 2009, Boulder, CO,USA.

12. **S. Behnam**, GH. Vakili-Nezhad, S. Roodpeyma, Modeling Phase Equilibria of polyethylene solutions with the Sanchez-Lacombe Equation of State , The 6th International Chemical Engineering Congress & Exhibition, 16-20 November 2009, Kish Island, Iran.
13. **S. Behnam**, GH. Vakili-Nezhad, S. Roodpeyma, Modeling Phase Equilibria of Polystyrene in Methylcyclohexane Solutions with SWP Equation of State , The 6th International Chemical Engineering Congress & Exhibition, 16-20 November 2009, Kish Island, Iran.
14. A. Farzi, **S. Behnam**, N. Ghazinour, Modeling and Simulation of Catalytic Reforming of Magnaformer Unit of Bandar-Imam Petrochemical Complex, The 5th International Chemical Engineering Congress & Exhibition, 2-5 January 2008, Kish Island, Iran.
15. **S. Behnam**, GH. Vakili-Nezhad, S. Roodpeyma, Modeling and calculating the phase equilibria of Polyethylene solutions using continuous thermodynamics, The 12th National Chemical Engineering Congress, 2008, Tabriz, Iran (in Persian).

## Books

F. Ahmadian, **S. Behnam**, "A Self-Study Guide to Writing a Research Proposal, Thesis, and Paper", in Persian, Azad University, Shahreza Branch, 2018.

## Courses Taught

I have taught several times a number of chemical engineering undergraduate and graduate courses as follows:

Chemical engineering Thermodynamics I & II
Mass and energy balance
Applied Mathematics in Chemical Engineering
An introduction to chemical engineering processes
Heat Transfer I
Process control I & II
Unit operation II
Industrial Chemistry I & II
Petrochemical Processes
Bioreactor Deign
Chemical Engineering Technical Language
Advanced Water and Wastewater Treatment (Graduate Course)
Advanced Chemical Engineering Thermodynamics (Graduate Course)

Advanced Mathematics (Graduate Course)
Research Methods and Writing a Research Proposal, Thesis, and Paper (Graduate Course)

## Teaching and work Experience

Teaching for "Faradars online-school"
Course: "Chemical-Engineering-Technical-Language"
https://faradars.org/courses/fvtiche104-chemical-engineering-technical-language#

Teaching for "Hamyardars online-school"

- Course: "Mass and Energy Balance"
  https://hamyar-dars.ir/product-category/chemical-engineering/

- Course: "How to write a research proposal"
  https://hamyar-dars.ir/product/proposal-writing/

[2020-Present]: Assistant Professor at Naghshejahan Institute of Higher Education, Isfahan, Iran.
[2008-2020]: Assistant Professor at Azad University, Shahreza Branch, Iran.

[2008-2010]: Full time working as the lecturer in petrochemical department at "Institute of Higher Education Jihad University of Isfahan Province", Isfahan, Iran.

[2005-2007] Assistant at "Polymer", "Fluid mechanics", "Petroleum", and "Unit operation" laboratories and "MATLAB software workshop" at "Isfahan University of Technology", Isfahan, Iran.

[2008] Full time working as the assistant of project in "Pars Peyvand Dana" Technical Engineering Services Company in Isfahan, Iran (for 3 months).

[2005] Working as an intern in "Gitiassa" paint company in Isfahan, Iran (for 3 months).

## Administrative positions:

[2020-Present] full time working as the chairwoman in the department of chemistry and chemical engineering in "Naghshejahan Institute of Higher Education", Isfahan, Iran. (https://naghshejahan.ac.ir/chemical-engineering)

[2022] Scientific Chair for "National Conference on the Application of New Technologies in Chemistry and Chemical Engineering", 30 May, 2022, Isfahan, Iran. (https://www.chconf2022.ir/fa/)

## Honors

[2009] Admitted at Isfahan University of Technology for Ph.D. studies in Chemical Engineering" with highest grade among other applicants.
[2005] Admitted (without entrance exam) at Isfahan University of Technology for M. Sc. studies in Chemical Engineering" and selected among more than 90 graduate bachelor students at Isfahan University of Technology.

## Skills

- Software: In depth practical experience with MATLAB, Familiar with Fluent, Gambit, Hysys, Aspen Plus, SPSS, Minitab, Design of Experiments
- Practical experiences in working with High Pressure Liquid Chromatography (HPLC), Gas Chromatography (GC), Atomic Adsorption Spectrophotometer, FTIR, UV spectrophotometer.
- Languages: Farsi (native), Arabic (a little), English (Fluent at reading, writing, and speaking (having CAE and FCE certificates); Tolimo score: 588 (Reading: 62.5, Listening: 54, Structure: 60, Writing: 4/6).

## Graduate Students (Master)

I have graduated more than 25 master students and I have been as the advisor or examiner for more than 100 students at Islamic Azad University of Shahreza and Naghshejahan Institute of Higher Education.

## Referees

1. Keikhosro Karimi, Professor, Department of Chemical Engineering, Isfahan University of Technology, karimi@cc.iut.ac.ir; Phone: +983133912504; +989133043704.
2. Arjomand Mehrabani-Zeinabad, Professor, Department of Chemical Engineering, Isfahan University of Technology, Arjomand@cc.iut.ac.ir; Phone: +983133915609.