

## PERSONAL INFORMATION **Gholamreza Masoudi Rad**

### RESEARCH INTERESTS

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Environmental Engineering	Biofuel production, Biomass conversion technologies, Water and Wastewater Engineering, Air Pollutants Control, Renewable Energies
Material Engineering	Composite Materials Fabrication, Characterization, and Application
Separation Processes	Material Characterization, Adsorption
Computational Fluid Dynamic	Fluid Mechanics, Heat Transfer, Combustion, Multiphase Flow

### EDUCATION AND TRAINING

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- 2021-Now **M.Sc. in Chemical Engineering (chemical engineering for innovative processes and products)**  
Sapienza University of Rome, Italy  
Taught entirely in English
- Thesis: Modelling of Hydrodynamic cavitation for lignocellulosic biomass pretreatment by the Method of CFD (Fluent)
- Supervisors: Prof. G. Vilardi, Eng. Daniele Patrizi
- 2014-2018 **B.Sc. in Chemical Engineering** Total Average: 17.65/20  
Petroleum University of Technology, Ahwaz, Iran  
Ranked First among students of chemical engineering
- Thesis: Modelling of Turbulent Forced Convection Heat Transfer of Non-Newtonian Nanofluids by the Method of CFD
- Supervisors: Prof. A. Shariati, Dr. B. Bazooyar
- 2020 **Introduction to Programming with MATLAB**  
by École Vanderbilt University in Nashville, Tenn, US, from coursera
- 9 weeks of study, 3-4 hours/week, Grade Achieved: 100.00%
- 2020 **Introduction to Household Water Treatment and Safe Storage**  
by École Polytechnique Fédérale de Lausanne, from coursera
- 5 weeks of study, 4-6 hours/week, Grade Achieved: 95.54%

### HONORS AND AWARDS

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- 2014-2018 **1<sup>st</sup> Rank among B.Sc. Students of Chemical Engineering (summa cum laude)**  
Petroleum University of Technology, Total Average: 17.65/20
- 2014-2018 **Received Scholarship**  
Petroleum University of Technology
- 2014 **Top 1.0% In Nationwide Entrance Exam of Iranian Universities, Very Competitive with Nearly 220,000 Participants**
- 2014 **1<sup>st</sup> Rank Among High-School Students of Mathematics & Physics Group**

Total Average: 19.63/20

## WORK EXPERIENCE

- 2018-2020 **Quality Control and Laboratory Inspector**  
National water and wastewater company of Iran  
▪ Regular water and wastewater sampling and laboratory analysis
- 2017-2017 **Summer Work Experience**  
Iranian Offshore Oil Company (IOOC), Falat Ghare Company (Bahregan)
- 2016-2016 **Summer Work Experience**  
Catalytic Cracking Unit, Isfahan Refinery, Isfahan, Iran.

## TEACHING ASSISTANCE

- 2017-2018 **Heat transfer II under Dr. A. Shariati's supervision**  
Petroleum University of Technology
- 2017-2018 **Applied mathematics under Dr. A. Shariati's supervision**  
Petroleum University of Technology

## PUBLICATIONS

- 2021 **Nanomaterial-Incorporated Polymer Composite for Industrial Effluent: from Synthesis to Application (Material Science and Material Engineering, Elsevier Chapter Book, 2021).**  
Author: Y. Tamsilian, M. Shirazi, Gh. Masoudi Rad
- 2021 **Polymer nanocomposite characterization and applications (Material Science and Material Engineering, Elsevier Chapter Book).**  
Author: M. Shirazi, Gh. Masoudi Rad, Y. Tamsilian

## ACADEMIC PROJECTS

- 2023 **Automation of the fluidized bed reactor cleaning system of SANOFI company**  
Conducted unsteady simulations of a reactor tank using ANSYS FLUENT and the DPM model to evaluate the efficacy of a rotating water jet for automated cleaning. Demonstrated expertise in fluid dynamics and engineering analysis for process optimization.  
Sapienza University of Rome
- 2022 **Numerical study of temporal evolution of the concentration field in a 2-d square cavity of side length L equipped with the velocity field deriving from the stream-function Using COMSOL**  
Sapienza University of Rome
- 2017 **Applied Numerical Mathematics course project, supervised by Dr. A. Shariati.**  
In this project, MATLAB software was used to model an unsteady reactor. The concentration of limiting components and the temperature was calculated along the reactor, using the finite element method.

## PERSONAL SKILLS

Mother tongue  
Other languages

Persian (Farsi)

IELTS TEST WAS TAKEN ON JAN 28 <sup>TH</sup> 2021				OVERAL
Listening	Reading	Speaking	Writing	

English	8.5	8	7.5	6.5	7.5
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**Computer skills**

- Excellent at Ansys fluent, Matlab, Aspen Plus, Aspen Hysys, Excel, Word, PowerPoint
- Good command of Solid Works, Microsoft Publisher, Python

#### ADDITIONAL INFORMATION

**Hobbies** Tennis, Photography, Traveling, Reading, Music  
Professional Football Player

#### REFERENCES

- ✓ **Dr. Yousef Tamsilian**  
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