

# Ehsan Askari M.

CHEMICAL ENGINEER · CFD ANALYST

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## Education

### Ph.D. in Chemical Engineering SHERBROOKE UNIVERSITY

Sherbrooke, CA Sep. 2014 - Dec. 2018

- Development, Validation and Application of Population Balance Models for Bubbly Flow Reactors

### Visiting Scholar IOWA STATE UNIVERSITY

Ames, US March. 2017 - Jun. 2017

- OpenQBMM Collaboration

### M.Sc. in Advanced Chemical Engineering TEHRAN POLYTECHNIQUE

Tehran, IR Sep. 2009 - Sep. 2011

- Dynamic CFD simulation for gas sweetening operation based on separation on trays of contact tower

### B.Sc. in Chemical Engineering-Gas Industries AZAD UNIVERSITY

Quchan, IR Sep. 2004 - Sep. 2008

- Methods of Process Control in Chemical Industries

## Skills

**Languages** Persian, English, French

**Programming** Python, C++, Fortran, OpenFOAM, UDF

**Software** Rocky, OpenFOAM, Fluent, CFX, Aspen Hysys, FluidFlow, AFT-Impulse, LIGGGHTS

**Others** LaTeX, Linux Administration, Git, PBS Pro, Azure, MS Office

## Research and Industrial Experience

### Freelance SENIOR CFD ANALYST

Calgary, Ca June. 2019 - present

- Tucker Once-Through-Steam Generator (OTSG) Combustion CFD Analysis and NOx Generation Study
- PSV Stability Analysis using 1D CFD Simulation
- WTDC CFD Model Development for a pilot OTSG
- Phase Change CFD Model Development for Boiling Flow Water in OTSG Tubes
- CFD Model Development for High Pressure Steam Separation (HPSS)
- Tube Rupture Overpressure Analysis on S&T Heat Exchangers
- Transient Pipeline Temperature Analysis
- Pipeline Failure Investigation Using 1D CFD Model in Python
- Linux System Administration and Cluster Setup

### Enerkem CFD ANALYST/POST-DOCTORAL FELLOW

Sherbrooke, Ca Jan. 2019 - May. 2019

- CFD-DEM modelling of fluidized bed reactors using LIGGGHTS+OpenFOAM and Rocky+Fluent

### Sherbrooke University PHD STUDENT

Sherbrooke, Ca Sep. 2014 - Dec. 2018

- Population Balance Models: Development, Validation and Application using OpenFOAM
- CFD-PBM modelling of gas-liquid stirred tank using OpenFOAM
- CFD-PBM modelling of bubble column using OpenFOAM
- CFD-PBM modelling of water electrolysis reactor using OpenFOAM
- Course Instructor in Unit Operation using Python
- Teacher Assistant in Mathematical Modelling of Engineering Process
- Teacher Assistant in Computation for Engineering

## Publications

### Sherbrooke University 1 DISSERTATIONS, 7 JOURNALS, 4 CONFERENCES

- Three Dimensional CFD Model Development and Validation for Once Through Steam Generator (OTSG): Coupling Combustion, Heat Transfer and Steam Generation (ChemEngineering, 2022)
- Application of Extended Quadrature Method of Moments for Simulation of Bubbly Flow and Mass Transfer in Gas-Liquid Stirred Tanks (CJCE, 2019)
- Modelling of Bubbly Flow Using CFD-PBM solver in OpenFOAM (chemEngineering, 2018)
- Simulation of bubbly flow and mass transfer in a turbulent gas-liquid stirred tank with CFD-PBM solver in OpenFOAM: EQMOM application, (AIP, 2018)
- Simulation of bubbly flow and mass transfer in a turbulent gas-liquid stirred tank with CFD-PBM solver in OpenFOAM: Study of Impeller Rotational Speed and Volumetric Mass Transfer Coefficient (Mixing 16, 2018)
- Simulation of bubbly flow and mass transfer in a turbulent gas-liquid stirred tank with CFD-PBM solver in OpenFOAM (ICNAAM, 2017)

**Other Publications:** [HTTPS://SCHOLAR.GOOGLE.CA/CITATIONS?USER=C2-HTCIAAAAJ&HL=EN](https://scholar.google.ca/citations?user=c2-HTCIAAAAJ&hl=en)