

Curriculum Vitae

Rabebeh Bahreini

Current Position: Project Manager and Software developer at Sharif Idepardazan Company
Tehran, Iran. <https://www.isec.ir>

Date of Birth: ۱۹۸۳-۰۹-۲۳

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Education

۲۰۰۱-۲۰۰۴ (B.Sc.) in Chemical and Process Engineering, Sharif University of Technology (SUT), Iran, B-thesis: "Designing Static Multi Input/Multi Output Decoupler **Controllers** for Benzene-Toluene -Xylene Distillation Columns" using **MATLAB** and HYSYS Software.

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۲۰۰۴-۲۰۰۷ (M.Sc.) in Simulation and Process Control Engineering/ Chemical Engineering, Sharif University of Technology (SUT). Master thesis: "Designing an adaptive linearization method using **Neural Networks** For Control of two chemical reactors without using **states** and model of systems using Simulink and neural networks toolbox of **MATLAB**"

Work Experience

۲۰۰۷-۲۰۰۹ **Developing a Software for Numerical modeling and Optimization of Natural Gas Pipeline Networks.**
This project defined by National Iranian Gas Company (NIGC) for the mathematical modeling of Gas Transmission systems, which are usually composed of highly integrated pipe networks operating over A wide range of pressures. Simulation allows to predict the behavior of gas network systems under Different conditions to guide decisions regarding the design and operation of the real system.

۲۰۰۹-۲۰۱۱ **Developing a Software for Designing Three Types of Slug Catchers**
This project defined by National Iranian Gas Company (NIGC) to design a slug catcher model so that the Separation of methane and CO₂ gas can occur optimally. The slug catcher design resulting from this study Includes the value of the inlet pressure, diameter, and minimum length of the pipe where CO₂ begin to Form liquid.

۲۰۱۱-۲۰۱۲ **Developing a Software for Designing an Expert Systems for Predicting Foaming in Amin Units**
This project defined by Petrochemical Industry for predicting foaming as the result of causes such as Ineffective Inlet separation, Ingress of gas-phase contaminants carried with the feed gas, Hydrocarbon Condensation Inside the contactor, High concentration of suspended solids in the amine and...

۲۰۱۲-۲۰۱۵ **Developing a Software as a general solver for numerical simulation of chemical processes**
This project defined by Control and simulation laboratory of Sharif University of Technology for solving general system of equations in chemical engineering .we put A C++ wrapper around C Sundials Library which covers every type of equations. We used model reduction techniques in our design. Every type of equation Including Algebraic Linear and Nonlinear, PDE, ODE and DAE is covered with a decreasing order of Solving Process.

۲۰۱۵-۲۰۱۸ **Developing a Software for Simulating Firewater Pipeline Networks with GIS based data**
This project defined by BouAlisina Petrochemical Industry (BSPCHE) for designing Firewater network as The most Common and economical fire suppression system in gas processing .The firewater distribution Piping is designed in such a way that water flows evenly to all parts of the network and is able to isolate Any section of a network without affecting other loops.

Skills and Interests

Simulation and Control, Neural Network, Numerical methods, Artificial Intelligence
C++, C, C#, SQL, .Net framework, Builder, HYSYS, MATLAB,

Publications

