

PABLO GARCIA HERREROS

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PROFILE

I am a researcher focused in the field of process optimization. I am interested in working on the design and improvement of industrial processes. I am skilled in developing mathematical models of chemical processes and using specialized software for the simulation of industrial production. I have teaching experience in the field of process optimization and research experience in the field of biofuels. I am currently a master student of Chemical Engineering and my goal is to obtain the Ph.D. degree in the area of Process Systems Engineering.

EXPERIENCE

Universidad de los Andes – Bogota, Colombia

March, 2009 – December, 2010

Department of Chemical Engineering

Teaching and Research Assistant

- ✓ I lead complementary sessions to the lecture on Optimization of Chemical Processes. In these sessions I work with undergraduate students in the application of optimization concepts to engineering problems.
- ✓ According to the surveys made at the end of each semester, my work has raised the efficiency of the learning process through the implementation of workshops, case studies, and learning oriented software.
- ✓ I have established the optimal design of an extractive distillation system for the production of bioethanol. This has been achieved using mathematical models of the process and applying optimization algorithms.

Tecnopack Ltd. - Cucuta, Colombia

September, 2007 – August, 2008

Medium sized company dedicated to the production of polyethylene packages for the food industry

Process Manager

- ✓ I set up performance indicators according to the characteristics of each process; they allowed a real-time analysis of the state of the processes.
- ✓ I developed software that allowed an efficient manner of managing the information concerning factory production; this software has become an important tool in everything concerned with making decisions.
- ✓ I implemented a stock management system that entailed in the reduction of 30% production time, generating a more efficient use of the physical space and a better cash flow.
- ✓ I developed a production planning system based upon the history of orders, which allowed a better comprehension of customer needs and a 50% drop in client claims.

EDUCATION

Master Student of Chemical Engineering

Expected degree on June, 2011

Average: 4.80/5.00

Universidad de los Andes - Bogota, Colombia

B.S. Chemical Engineer

September, 2007

Average: 4.09/5.00

Universidad de los Ande - Bogota, Colombia

AKNOWLEDGEMENTS

- ✓ Fellowship for Masters Degree in Chemical Engineering. Universidad de los Andes. Bogota, Colombia. August, 2009.
- ✓ Best Undergraduate Thesis in Chemical Engineering. Universidad de los Andes. "Modelling and Optimization of a Crude Distillation Unit in Function of the Mixtures of Crude Oil Charges, using the Commercial Software PRO/II". Bogota, Colombia. September, 2007.

- ✓ 1st Place Winner of the University Grand Program. SimSci – Esscor: Excellence in Simulation. “Case Study: Modeling and Optimization of a Crude Distillation Unit in Function of the Mixtures of Crude Oil Charges, using the commercial Software PRO/II”. Lake Forest, CA, United States of America. September, 2007.

PUBLICATIONS & CONGRESSES

- ✓ Garcia-Herreros, P.; Gil, I.D.; Rodriguez, G. & Gomez, J.M. Optimal Design of Extractive Distillation Systems using a Two-Level Approach. In: American Institute of Chemical Engineering – AIChE - Annual Meeting. Salt Lake City, UT, United States of America. 2010.
- ✓ Garcia-Herreros, P. & Gomez, J.M. Modeling and Optimization of a Crude Distillation Unit: A Case Study for Undergraduate Students. Computers Applications in Engineering Education. Accepted: 2010.
- ✓ Garcia-Herreros, P.; Gil, I.D.; Rodriguez, G. & Gomez, J.M. Numerical Optimization Applied to the Design of An Extractive Distillation System for the Production of Fuel Grade Alcohol. In: American Institute of Chemical Engineering – AIChE - Annual Meeting. Nashville, TE, United States. 2009.
- ✓ Garcia-Herreros, P.; Gil, I.D.; Rodriguez, G. & Gomez, J.M. Comparative Study of An Extractive Distillation System for the Production of Fuel Grade Ethanol Optimized From the Equilibrium Model and Its Rate-Based Representation. In: American Institute of Chemical Engineering – AIChE - Annual Meeting. Nashville, TE, United States. 2009.
- ✓ Garcia-Herreros, P. & Gomez, J.M. Modelling and Optimization of a Crude Distillation Unit using the Commercial Software PRO/II. In: 18th International Congress of Chemical And Process Engineering – CHISA. Prague, Czech Republic. 2008.

COMPLEMENTARY EDUCATION

- ✓ Quality Management Course (ISO 9001:2000). ICONTEC. Bogota, Colombia. November, 2008.
- ✓ Student Exchange: Verfahrenstechnik (Process Engineering). Technische Universität Kaiserslautern. Kaiserslautern, Germany. September, 2004 – July, 2005.
- ✓ High School Exchange: 11. Klasse. Ludwigsgymnasium. Straubing, Germany. September, 2000 – July, 2001.

Languages

Spanish :	Native		
English:	Toefl (IBT):	103/120	May, 2010
German:	TestDaf:	3-2-3-4	March, 2004

Informatics

Languages:	C++, Visual Basic, FORTRAN
Programs:	Microsoft Office, AutoCad, Solid Edge, MatLab, AspenPlus, Pro/II

EXTRACURRICULAR ACTIVITIES

- ✓ Chemical Engineering Laboratory Assistant Teacher. Universidad de los Andes. Bogota, Colombia. January – May, 2007.
- ✓ Chemical Engineering Representative at the Student Council. Universidad de los Andes. Bogota, Colombia. August, 2005 – August, 2006.
- ✓ Chemical Thermodynamic Assistant Teacher. Universidad de los Andes. Bogota, Colombia. January – May, 2006.