

JOSE ALBERTO GAMBOA

1521 E 74TH ST, Tulsa, OK 74136

918-477-7150 / 918-5131366

josea.gamboa@gmail.com

Education:

- Ph.D. Petroleum Engineering. University of Tulsa. Tulsa, Oklahoma. May, 2009.
 - Dissertation: "**Prediction of the Transition in Two-Phase Performance of an Electrical Submersible Pump**". Advisor: Dr. Mauricio Prado
- M. Sc Mechanical Engineering. Universidad Simon Bolivar. Caracas, Venezuela, 2000.
 - Master Thesis: "**Computation Simulation of the Performance of Progressing Cavity Pumps**". Advisor: Dr. Frank Kenyery
- B. Sc. Mechanical Engineering. Universidad Metropolitana. Caracas, Venezuela, 1994.
 - Thesis: "**Design and Built of a one-degree freedom Servo-Joint**". ISBN 980-08-1180-X. Advisor: Ivan Buson.

Area of Specialization:

- Artificial lift methods (ESP, Jet Pump, PCP and Beam Pumping)
- Sand transport in pipelines
- Multiphase flow modeling
- Uncertainty and Probabilistic Analysis

Awards:

- University of Tulsa Scholarship (2003-2009) - The University of Tulsa
- PDVSA Scholarship (1998-2000) - Petroleos de Venezuela (PDVSA)

Professional Experience:

(1) Multiphase System Integration - MSI LLC (Feb 09-Present)

- Positions: Technology Specialist and Manager
- Relevant Activities:
 - Conduct research in process control of multiphase flow, separation of oil-water-gas sand flow, instrumentation and measurements, and foam characterization based on customer needs.
 - Participate in preparing/developing plan for the evaluation and/or review of flow model and equipments
 - Provide leadership in management of new projects and future business development
 - Provide input and assist in writing research proposal to obtain funding from industry, government and non-governmental agencies and other publications
 - Promote MSI and its clients through industry presentations
 - Provide technical consulting and training service
 - Design and develop new experimental facilities
 - Supervise engineers and associated personnel

Contact Person: Dr. Luis Gomez (e-mail: luis-gomez@msieng.com, phone: 918-551-6060),

(2) University of Tulsa (Fall 2003- Fall 2009):

- Positions:
 - Research Student for Tulsa Artificial Lift Project (TUALP)
- Relevant Activities:
 - Conducted experiments to characterize the performance of an electrical submersible pump (ESP) under single phase and two-phase conditions
 - Participated in the design and building of the ESP high viscosity loop
 - Formulated and coded mathematical models in VBA and Fortran
 - Developed database (access-excel) program for experimental data acquired from consortium experimental facilities
 - Developed control and acquisition programs in Labview for the experimental loop facilities
 - Advised students in the development of their dissertations and thesis

Contact Person: Dr. Mauricio Prado (e-mail: mauricio-prado@utulsa.edu, phone: 918-631-5163)

(3) Chevron (Summer 2007):

- Positions: Summer Internship
- Relevant Activities:
 - Conducted state of the art in slug frequency and slug length prediction
 - Coded model in Excel VBA for the prediction pseudo-slug frequency in inclined pipes
 - Performed state of the art in solid transport in pipes under stratified flow and slug flow conditions
 - Developed program in Excel VBA for conducting the uncertainty analysis in the sand critical deposition velocity utilizing Monte Carlo simulation technique
 - Developed program in Excel VBA for the estimation of Sand Transport Probability in pipelines utilizing OLGA simulation outputs.

Contact Person: Dr. Gene Kouba (e-mail: genekouba@chevron.com, phone: 713-372-2654)

(4) PDVSA Research and Development Institute (INTEVEP) (Venezuela, 1995-2003):

- Positions:
 - Artificial Lift (AL) Specialist in Progressing Cavity Pumps (PCP) (1995-1998)
 - Research and Development Artificial Lift Project Leader (2000)
 - Experimental Oil Production Center Laboratory Chief Operating Officer (2001)
 - Heavy Oil Specialist and Artificial Lift Leader (2001-2003)
- Relevant Activities:
 - Coordinated group of 33 technicians and engineers, Operation Budget \$3MM/year, Planning and coordination of the lab portfolio as part of experimental oil production center (CEPRO) Chief Operating Officer.
 - Planning and coordination of Artificial Lift R&D (pumping division), Leader a group of 14 professional and responsible for operation of two small scale artificial lift labs as part of R&D project leader

- Held research and technology development in ternary recovery method for heavy oil wells (CHOPS, In-situ combustion and SAGD)
- Planning and building of downhole gas separator, two-phase PCP performance characterization and PCP destructive test experimental facilities
- Lead the research about the single-phase and two-phase performance of progressing cavity pump with rigid stator
- Teamed up artificial lift selection in integrated reservoir studies
- Participated in the development and evaluation of downhole temperature and pressure retractable gauges
- Conducted root-cause-analysis (RCA) studies for progressing cavity pump and sucker rod pumps in Venezuela western heavy oil fields
- Led PCP well design simulator updating and performance modeling
- Performed field training in well completion, well instrumentation, liquid level measurement (echometer), dynamograph, gas/oil measurement and separator calibration.
- Advised internship and thesis for undergraduate and graduate students

Contact Person: Jorge Robles (e-mail:roblesjor@gmail.com)

Skills and Certificates:

- Completed certificated short courses in: advanced progressing cavity pumps, advanced beam pump design, horizontal well completion, under-balance well drilling, and oil production module I, II and III, Fuzzy logic and Control Robust.
- Experienced with the following commercial packages: SARP, PC pump, PipeSim, PipePhase, Echometer, OLGA, Rod Pump, MS Office, AutoCAD, CFX, Mathematica, Matlab, MathCad and StarCD.
- Programming skill in: LabView, Fortran 77 & 90/95, Visual Basic and VBA-excel.

Service Activities:

1. Reviewer for Journal of Petroleum Science and Engineering
2. Reviewer for International Journal of Multiphase Flow

Professional Memberships:

1. American Society of Mechanical Engineering
2. Society of Petroleum Engineering

Short Course Activities:

1. “Análisis de Fallas en Bombas Eletrosumergible” (ESP Failure Analysis). Short course for PetroEcuador. Quito, Ecuador, 2007.
2. “Advance Progressing Cavity Pump Course”. Short course for Universidad Corporativa – Petrobras. Bahia. Brasil, 2004.
3. “Beam Pumping”. Short course for Colegio de Ingenieros Petroleros de Mexico. Villahermosa. Mexico, 2003.

Master and Doctoral Committees:

M.S Degree Advisor and Co-Advisor

1. Olivet, A. (2002). Estudio Experimental del desempeño de una BCP de Estator Rígido con Flujo Bifásico (Experimental Study of Two-Phase Performance of a Rigid Stator PCP). Master Tesis. Universidad Simón Bolívar, Sartenejas-Venezuela.
2. Mendez, J. (2002). Estudio Experimental del Efecto de la Temperatura en el Desempeño de una Bomba de Cavidades Progresivas (Experimental Study of Temperature Effect on Performance of a Progressing Cavity Pump). Universidad Simón Bolívar, Sartenejas-Venezuela.
3. Becerra, O. (2001). Modelaje Hidrodinamico de una Bomba de Subsuelo de Doble Piston (Two-Phase Performance of a Double Plunger Sucker Rod Pump). Master Tesis. Universidad Simón Bolívar, Sartenejas-Venezuela.

Bachelor Degree/Internship Advisor and Co-Advisor

1. Haddad, A. (1996). Diseño de un Controlador Difuso para un sistema de Control Ambiental(Design of a Fuzzy Logic Controller for Confort Control). Thesis. Mechanical Engineering Department. Universidad Metropolitana, Caracas. Venezuela.
2. Flores, R. Rodriguez, A. (1996). Control de un Sistema de Refrigeración a partir de la Regulación de una motor AC monofásico (AC Control based on Compressor Rotational Speed Control). Thesis. Mechanical Engineering Department. Universidad Metropolitana, Caracas. Venezuela
3. Martin, A. (1996). Diseño y Construcción de un Controlador Experto para una Turbina Francis (Design and Implantation of a Expert Control for a Francis Turbine). Thesis. Mechanical Engineering Department. Universidad Metropolitana, Caracas. Venezuela.
4. Gomez, B. (2000). Modelo Analítico para la Estimación del NPSH Requerido para Bombas de Cavidades Progresivas (Analytical Model for NPSH required for a Progressing Cavity Pump). Internship Report for PDVSA Intevep. Mechanical Engineering Department. Universidad Simón Bolívar, Sartenejas-Venezuela.
5. Ablan, E. (2001). Algoritmo para la Estimación del factor de Seguridad en Sartas de Cabillas para BCP (Computer Program for calculating PCP Rod String Safety Factor) . Thesis. Mechanical Engineering Department. Universidad Simón Bolívar, Sartenejas-Venezuela.
6. Sanchez, Carlos. (2002). Efecto de la Interferencia sobre el Comportamiento de una BCP metal-metal (Stator-Rotor Gap Effect over Performance of a Metallic Rotor PCP). Thesis. Petroleum Engineering Department. Universidad Central de Venezuela, Caracas-Venezuela.
7. Peraza, C. Parra, E. (2002) Diseño de una Metodología para la Preselección de Pozos Candidatos a ser Completados con Bombas de Cavidades Progresivas (BCP) (Methodology for candidate Wells for PCP). Thesis. Petroleum Engineering Department Universidad Central de Venezuela, Caracas- Venezuela.

Presentation and Publications:

Publications:

1. Experimental Study of Two-Phase Pumping in a Progressing Cavity Pump Metal to Metal. SPE 77730. Gamboa, J. Olivet, A. SPE Annual Meeting. San Antonio, 2002. Texas, US.
2. Modeling a Double Piston Pump. SPE 78997-MS. Becerra, O. Gamboa, J. Kenyery, F. SPE International Thermal Operations and Heavy Oil Symposium and International Horizontal Well Technology Conference. Alberta, Canada 2002.
3. New Approach for Modeling Progressive Cavity Pumps Performance. SPE 84137. Gamboa, J. Olivet, A. Espin, E. SPE Annual Meeting. Denver, 2003. Colorado, US.
4. Understanding the Performance of Progressive Cavity Pump with Metallic Stator. Gamboa, J. Olivet, A. 20th Pump Users. Houston, 2003. Texas, US.
5. Multiphase Performance of ESP Stages: Part I. Gamboa, J. Prado, M. TUALP Technical Report #30, 2007.
6. Visualization Study of the Performance Breakdown in the Two-Phase Performance of an Electrical Submersible Pump. Gamboa, J. Prado, M. Pump User Symposium, 2010.

Presentations

1. Experimental Study of Performance PCP Metal to Metal. 2001 PCP Workshop (ATW SPE). Puerto. La Cruz, 2001. Venezuela.
2. Experimental Study of the Effect of Fluid Temperature and Running Time on the Performance of a Progressing Cavity Pump. 2002 PCP Workshop (ATW SPE). Calgary, 2002. Canada.
3. New Approach for Understanding the Behavior of Progressing Cavity Pump. 2002 PCP Workshop (ATW SPE). Calgary, 2002. Canada.
4. Two-Phase ESP Performance, Tulsa University Artificial Lift Project, Spring 2004 Annual Advisory Board Meeting, April 2004, Houston, Texas
5. Multiphase Performance of ESP Stages, Tulsa University Artificial Lift Project, Fall 2004 Annual Advisory Board Meeting, September 2004, Tulsa, Oklahoma
6. Multiphase Performance of ESP Stages, Tulsa University Artificial Lift Project, Spring 2004 Annual Advisory Board Meeting, April 2005, Houston, Texas
7. Multiphase Performance of ESP Stages, Tulsa University Artificial Lift Project, Fall 2005 Annual Advisory Board Meeting, October 2005, Tulsa, Oklahoma
8. Multiphase Performance of ESP Stages, Tulsa University Artificial Lift Project, Spring 2006 Annual Advisory Board Meeting, April 2006, Houston, Texas
9. Multiphase Performance of ESP Stages, Tulsa University Artificial Lift Projects, Fall 2006 Annual Advisory Board Meeting, September 2006, Tulsa, Oklahoma
10. Study of Two-Phase Flow Regimes Transitions for an Electrical Submersible Pump, PhD Proposal, Tulsa University Artificial Lift Projects, Spring 2007 Annual Advisory Board Meeting, April 2007, Tulsa, Oklahoma
11. Prediction of Transitions in Two-Phase Performance of an ESP – Dissertation Progress, Tulsa University Artificial Lift Projects, Fall 2007 Annual Advisory Board Meeting, April 2007, Tulsa, Oklahoma

12. Prediction of Transition in Two-Phase Performance of an ESP, Tulsa University Artificial Lift Projects, Spring 2008 Annual Advisory Board Meeting, April 2008, Houston, Texas
13. Prediction of Transition in Two-Phase Performance of an ESP, Tulsa University Artificial Lift Projects, Fall 2008 Annual Advisory Board Meeting, September 2008, Tulsa, Oklahoma
14. Visualization Study of the Performance Breakdown in the Two-Phase Performance of an Electrical Submersible Pump. March 2010. Pump User Symposium.
15. Statistical Approach for PCP Standardizing. 2010 SPE Progressing Cavity Pumps Conference. SPE-137184-PP

Paper under Review

1. Mapping of Two-Phase Performance an Electrical Submersible Pump: Experimental Results. Journal of Petroleum Science and Engineering. Gamboa, J. Prado, M.
2. Review on ESP Surging Correlation and Models. Gamboa, J. Prado, M. SPE-140937-PP. 2011 Production and Operations Symposium.
3. Prediction of the Transitions in Two-Phase Performance of an Electrical Submersible Pump. Gamboa, J. Prado, M. Abstract Submitted to ESP Workshop Committee.

Technical Report

1. Effect of Surfactants on Two-Phase Performance of an Centrifugal Pump. TR#-2010-PUMP-SURFT-EXPT.
2. Wellbore Sand Transport Simulator. TR#2009-SANDTRANS200912-R01
3. Solid Transport Experimental Study. TR-2009-SAND-TAN-EXPT R01

Manuscripts in Preparation

1. Sensitivity Analysis of Batch Separator Model. Urdaneta, N. Gamboa, J.
2. Methodology for Predicting Sand Transport Probability in Pipelines. Kouba, G. Gamboa, J. Gomez, L. Shoham, O.