EDGAR GIOVANI MARTÍNEZ-MENDOZA

MSc in Modeling || Petroleum Engineer

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Passion for challenges in pore-scale imaging and modeling in porous media, the O&G industry, research and engineering, and data science.

EXPERIENCE

R&D Engineer June 2019 - Current
AspenTech *Mexico*

- Modeling, simulation, design, and rating of chemicals and refining processes.
- Design, develop, maintain, and support capabilities for industry and scientific software.
- Keep current with new and developing technologies as they appear in industry and academia.
- Assist in determining the feasibility of implementing new technologies.

Visiting researcher March 2018 - May 2018
University of Waterloo *Ontario, Canada*

- Developed a multiphase transport model for porous media.
- Contributed in an open source pore-network modeling project OpenPNM.
- Presented talks on Low Salinity Waterflooding at the research group meetings.

Thesis Student 2015 - 2016
Mexican Petroleum Institute *Mexico City*

- Conducted the research entitled "*Pore network models for obtaining effective flow and transport properties in petroleum reservoirs*".
- Presented talks on pore network modeling at seminars.
- Delivered monthly technical reports to the supervisor of Training & Development on Human Capital.
- Managed a research group website.

Field Practice 2014, 2013, 2013
Petróleos Mexicanos (PEMEX) *Unidad de Perforación*

- Well Completion and Maintenance | Drilling Engineering | Well Drilling Elements

EDUCATION

MSc in Modeling *2016 - 2018*
Universidad Nacional Autónoma de México, GPA: 9.89/10
BAL-UNAM 2018-2019 Prize

BSc in Petroleum Engineering (Hons) *2011 - 2016*
Universidad Nacional Autónoma de México, GPA: 9.19/10

LANGUAGES AND TECHNICAL SKILLS

Spanish	Mother tongue
English	Upper Intermediate

Programming	Python, C#, C++, Matlab
OS	GNU/Linux, Windows
Software	Inkscape, Gimp, Paraview, ImageJ, LaTeX, Petrel, Eclipse, Office

ORAL PRESENTATIONS

"Pore network approach for low salinity waterflooding process simulation: salinity effect on rock-fluid properties", Fifth Annual Meeting of the Mexican Chapter of InterPore, November 2018.

"Low salinity waterflooding simulation via pore network models: salinity impact on capillary pressure and relative permeability curves", XXXIII AIPM Technical Conferences, October 2018.

"Fluid flow property estimation using a pore network modeling approach", The InterPore 10^{th} Annual Meeting and Jubilee, New Orleans, LA. May 2018.

"Comparative study of pore network modeling software for the characterization of porous media: OpenPNM and PoreFlow", Fourth Annual Meeting of the Mexican Chapter of InterPore, November 2017.

"Methodology for porous media characterization at pore scale through pore network modeling", Third Annual Meeting of the Mexican Chapter of InterPore, October 2016.

"Methodology for obtaining effective flow properties employing a pore network model", XXX AIPM Technical Conferences, October 2015.

SCIENTIFIC PRODUCTION

Martínez-Mendoza E.G., Díaz-Viera M.A., Coronado M., Mendoza-Rosas A.T., 2019. **"Capillary pressure and relative permeability estimation for low salinity waterflooding processes using pore network models"**, Journal of Petroleum Science and Engineering, doi: 10.1016/j.petrol.2019.106253.

Martínez-Mendoza E.G., Díaz-Viera M.A., 2019. **"Pore network model based methodology for effective flow property estimation: a sandstone case study"**, In: *Modelación matemática III: biomatemáticas e ingeniería*, México.

Martínez-Mendoza E.G., Díaz-Viera M.A., 2018. **"Study of the impact of salinity change in a LSWF process on capillary pressure and relative permeability curves by flow and transport modeling at pore network scale"**, Record number: 03-2018-121914143500-01, National Institute of Copyright, Mexico, December 19, 2018.

GIVEN WORKSHOPS

"Visual Basic 6.0 for petroleum engineering students", Faculty of Engineering, Universidad Nacional Autónoma de México, March 2014.

COURSES

Reservoir Geomechanics *April 2019 - June 2019*
University of Stanford/Online

Applied Data Science with Python Specialization *January 2019 - June 2019*
University of Michigan/Coursera

Guanajuato Uncertainty Quantification: Workshop on Inference and Uncertainty Quantification in Science and Engineering Problems (GUQ2019) *January 2019*
CIMAT

Applied Data Science with Python *December 2018*
IBM/Cognitiveclass.ai

C++ Intermediate *January 2016*
Computational Technology Program (PROTECO)

MOOC Oil and Gas: From Exploration to Distribution *June 2015*
Institute Français du Pétrol

Geological Modeling with PETROMOD *July 2014*
Schlumberger

Advanced Drill Bit *April 2014*
Baker Huges

Introduction to PETREL *May 2013*
Schlumberger

EXTRACURRICULAR ACTIVITIES

- Member of the Student Society of Petroleum Engineers, 2013-2014
- Support in the Technical Program of CMP 2014
- Fundación TELMEX Scholar
- Volunteering and social activity in home community