CURRICULUM VITAE

Dr. Martín Alberto Díaz Viera

Date of Birth:	February 6th, 1964
Nationality:	Mexican
Marital State:	Married
Office Address:	Mexican Petroleum Institute Oil Recovery Research Program Eje Central Lázaro Cárdenas Norte 152, Col. San Bartolo Atepehuacan, Del. Gustavo A. Madero Apdo. Postal 14-805 C.P. 07730 MÉXICO D.F.
Phone:	(5255) 9175-6473
Mobile:	(5255) 3033-6076
e-mails:	mdiazv@imp.mx mdiazv64@yahoo.com.mx mdiazv64@gmail.com
Website:	http://mmc2.geofisica.unam.mx/gmee https://www.researchgate.net/profile/Martin_Diaz-Viera

Education

Aug 1997 – Nov 2001 **Universidad Nacional Autónoma de México (UNAM)**
PhD. in Earth Sciences, Mathematical Modeling of Earth Science Systems
Mexico City, Mexico

Thesis: "Trefftz-Herrera Collocation Method. Application to the Transport Problems in Earth Sciences".

Aug 1994 – Nov 1996 **Universidad Nacional Autónoma de México (UNAM)**
Master in Earth Sciences, Mathematical Modeling of Earth Science Systems
Mexico City, Mexico. Qualifications: 10/10

Aug 1982 – Feb 1988 **Moscow Power Engineering Institute (MPEI)**
Mathematician-Engineer, Applied Mathematics
Master of Science in Engineering
Moscow, Russia. Qualifications: 4.75/5

Thesis: "Expert System for the Numerical Solution of Evolution Differential Equations".

Languages: English, Russian, Spanish (native)

Research Experience

Current position (Jun 2003 – present)	**Scientific Researcher** Mexican Petroleum Institute, Hydrocarbon Recovery Research Program
Main Research Interests	Geostatistics and Stochastic Models for Reservoir Characterization and Mathematical, Numerical and Computational Modeling of Oil Recovery Processes

Professional Experience

- Computer Systems Technician. Protection Center of Radiation Hygiene and National Center for Nuclear Safety, Executive Secretariat for Nuclear Affairs of Cuba, from April 1988 to February 1992.
- Scientific Researcher. Institute of Geophysics and Astronomy, Ministry of Science, Technology and Environment of Cuba from February 1992 to February 2003.
- Academic Technician 'B' Full Time. Research Institute for Applied Mathematics and Systems, UNAM, for 27 November 1999 to 27 November 2000.
- Academic Technician 'B' Full Time. Institute of Geophysics, UNAM, since November 27, 2000 to June 16, 2003.
- Scientific Researcher. Mexican Petroleum Institute, from June 16, 2003 to the present.

Consulting Work

- Optimal Design of Monitoring Networks with a Geostatistical Approach, Aquifer: Zacatecas, San Luis Potosi and Toluca. Ariel SA, 1996-1997 Consultants.
- Optimal design of monitoring networks with Geostatistical Approach, aquifer: Celaya, Jaral Berrios and Pénjamo. GYMSA Integral Studies Planning SA, 1997-1998.
- Optimal design of monitoring networks with a Geostatistical Approach, aquifer: La Paz and San Jose de los Cabos. Project Antares SA, 1998-1999.
- Optimal design of monitoring networks with a Geostatistical Approach, aquifer: Guadiana and Vicente Guerrero Poanas. Ariel SA, 1998-1999 Consultants.
- Optimal design of monitoring networks with a Geostatistical Approach, aquifer: Hermosillo and San Quentin. GYMSA Integral Studies Planning SA, 1998-1999.
- Optimal design of monitoring networks with a Geostatistical Approach, aquifer: Guaymas. Project Antares SA, 1999-2000.
- Optimal design of monitoring networks with a Geostatistical Approach, aquifer: Aguanaval and La Laguna. Ariel Consultants Inc., 1999-2000.
- Geostatistical Design for Soil Sampling from the Monterrey Plant Industrial Minera Mexico. Consulting and Environmental Research, SC, 2000 Technical Report: "Environmental Assessment of the Monterrey Plant", 225 pp., LAFQA, IGg-UNAM and CIMA SC, Industrial Minera Mexico, Grupo Mexico, October 1999 - November 2000...
- Geostatistical Analysis of the 1999-2000 Joint Sampling Concentrations of Arsenic, Selenium and Lead the Monterrey Plant Industrial Minera Mexico. Consulting and Environmental Research, SC, 2000 Technical Report: "Environmental Assessment of the Monterrey Plant" LAFQA, IGg-UNAM and CIMA SC, Industrial Minera Mexico, Grupo Mexico, 225 pp., October 1999 - November 2000...

- Counseling In Geostatistics And Risk Models in the Draft Environmental Assessment Copper Plant San Luis Potosí (Second Stage) IMMSA. Consulting and Environmental Research, SC, 2002 Technical Report. "Environmental Assessment of the Copper Plant, San Luis Potosi," LAFQA, IGg-UNAM and CIMA SC, Industrial Minera Mexico, Grupo Mexico, pp. 189, August 2002 - March 2003.
- Counseling In The Review, Analysis And Diagnosis Of Geostatistical Models made in Petrel of Tajin, Agua Fria, Furbero, Coyotes, Miquetla, Humapa, Palo Blanco and Aragon within the Basin fields Chicontepec project conducted by the Faculty of Engineering UNAM for the National Hydrocarbons Commission, August-October 2012.

PUBLICATIONS

Books

- Martin A. Diaz-Viera: *Trefftz-Herrera Collocation Method. Application to the Transport Problems in Earth Sciences*. 08/2012; Editorial Académica Española., ISBN: 978-3659038099
- Martin A. Diaz-Viera, P. Sahay, M. Coronado, A. Ortiz-Tapia: *Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences*. 07/2012; CRC Press, Taylor & Francis Group, Leiden., ISBN: 978-0415665377

Booklets

- Course Notes on Applied Geostatistics, Geophysics Institute, UNAM, Institute of Geophysics and Astronomy, Ministry of Science, Technology and Environment of Cuba, 135 pp., 2002..
- Course Notes: Mathematical and Computational Modeling (Revilla Ismael Herrera, Martin A. Diaz Viera, Elizabeth Reyes Leon), Institute of Geophysics, UNAM, 2003.
- Presentations Course: Applied Geostatistics (Martin Diaz Viera, Ricardo Casar Gonzalez), Mexican Petroleum Institute, 480 pp., 2004..
- Modeling Geological-Petrophysical Reservoir (Martin Diaz Viera, Ricardo Casar Gonzalez), Mexican Petroleum Institute, 2006: Course Instructor Manual.

Book Chapters

1. A. Erdely, M. Díaz-Viera, V. Hernández-Maldonado: *Trivariate nonparametric dependence modeling of petrophysical properties*. In: M. Diaz-Viera, P. Sahay, M. Coronado and A. Ortiz-Tapia (eds): Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences. CRC Press, Taylor & Francis Group, Leiden 07/2012;
2. J Méndez-Venegas, M Díaz-Viera: *Stochastic modeling of spatial grain distribution in rock samples from terrigenous formations using the plurigaussian simulation method*. In: M. Diaz-Viera, P. Sahay, M. Coronado and A. Ortiz-Tapia (eds): Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences. CRC Press, Taylor & Francis Group, Leiden 07/2012; ISBN: 978-0415665377
3. M Díaz-Viera, A Moctezuma-Berthier: *Dynamic porosity and permeability modification due to microbial growth using a coupled flow and transport model in porous media*. In: M. Diaz-Viera, P. Sahay, M. Coronado and A. Ortiz-Tapia (eds): Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences. CRC Press, Taylor & Francis Group, Leiden 07/2012; ISBN: 978-0415665377

4. R Casar-González, M Díaz-Viera, G Murillo-Muñetón, L Velasquillo-Martínez, J García-Hernández, E Aguirre-Cerda: *A 3D geostatistical model of Upper Jurassic Kimmeridgian facies distribution in Cantarell oil field, Mexico*. In: M. Diaz-Viera, P. Sahay, M. Coronado and A. Ortiz-Tapia (eds): Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences. CRC Press, Taylor & Francis Group, Leiden 07/2012; ISBN: 978-0415665377

5. Victor Hernandez-Maldonado, M. Díaz-Viera, A. Erdely: *Joint stochastic simulation of petrophysical properties using Bernstein copulas*. In: M. Diaz-Viera, P. Sahay, M. Coronado and A. Ortiz-Tapia (eds): Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences. CRC Press, Taylor & Francis Group, Leiden 07/2012: pages 209-235;

6. Arturo Erdely, Martín Díaz-Viera: *Joint Porosity-permeability Stochastic Simulation and Spatial Median Regression by Nonparametric Copula Modeling*. 04/2012: pages 346-354; , ISBN: 978-3-87907-521-8

7. Arturo Erdely, Martin Diaz-Viera: *Nonparametric and Semiparametric Bivariate Modeling of Petrophysical Porosity-Permeability Dependence from Well Log Data*. 12/2009: pages 267-278;

8. Erdely A. and Diaz-Viera M.A., *Nonparametric and semiparametric bivariate modeling of petrophysical porosity-permeability dependence from well log data* (Chapter 13), In Jaworski, P.; Durante, F.; Härdle, W.K.; Rychlik, T. (eds.), *Copula Theory and Its Applications, Lecture Notes in Statistics* (ISSN: 0930-0325), Vol. 198, Part 2, Springer-Verlag Berlin Heidelberg, pp. 267-278, 2010.

9. Díaz-Viera, M., López-Falcón, D. and Herrera, I.: Trefftz-Herrera collocation method: Numerical modeling of combustion fronts in porous media (Chapter 25). In: M.C. Suárez-Arriaga, F.J. Domínguez-Mota and J. Bundschuh (eds): *Numerical modeling of coupled phenomena in science and engineering: Practical uses and examples*. CRC Press, Taylor & Francis Group, Leiden, pp. 309-322, 2009.

10. López-Falcón, D.A., Díaz-Viera, M., Herrera, I. and Rodríguez-Jáuregui, E.: Systematic formulation of continuum systems: Theoretical modeling of combustion fronts in porous media (Chapter 24). In: M.C. Suárez-Arriaga, F.J. Domínguez-Mota and J. Bundschuh (eds): *Numerical modeling of coupled phenomena in science and engineering: Practical uses and examples*. CRC Press, Taylor & Francis Group, Leiden, pp. 293-307, 2009.

11. Ismael Herrera, Martin Diaz-Viera, Robert Yates: *A More General Version of the Hybrid-Trefftz Finite Element Model by Application of TH-Domain Decomposition*. In Domain Decomposition Methods in Science and Engineering, Lecture Notes in Computational Science and Engineering, Vol. 40, Edited by R. Kornhuber et al., Springer, Berlin, Germany, ISBN-13: 978-3540225232, pp. 301-308, 2005.

12. Martin A. Diaz-Viera, I. Herrera: *Indirect Method of Collocation for the Biharmonic Equation*. 06/2003: pages 389-394; , ISBN: 970-32-0859-2

13. M. Diaz and I. Herrera, "Indirect Method of Collocation for the Biharmonic Equation". In *Domain Decomposition Methods in Science and Engineering*, Edited by I. Herrera, D. E. Keyes, O. B.Widlund, and R. Yates, *14th International Conference on Domain Decomposition Methods, Cocoyoc, Mexico*, pp. 389-394, 2003.

14. M. Diaz, I. Herrera, and R. Yates, "Indirect Method of Collocation: Second Order Elliptic Equations". In *Domain Decomposition Methods in Science and Engineering*, Edited by I. Herrera, D. E. Keyes, O. B.Widlund, and R. Yates,*14th International Conference on Domain Decomposition Methods, Cocoyoc, Mexico*, pp. 249-256, 2003.

15. I. Herrera, R. Yates and M. Diaz, "The Indirect Approach to Domain Decomposition". *In Domain Decomposition Methods in Science and Engineering*, Edited by I. Herrera, D. E. Keyes, O. B.Widlund,

and R. Yates, *14th International Conference on Domain Decomposition Methods*, Cocoyoc, Mexico, pp. 51-62, 2003.

Journal Publications

1. Martin Díaz-Viera, F. Canul Pech, *Optimal Network Design of Aquifer Monitoring "Saltillo-Ramos Arizpe", for the Proper Handling of Water Resources, Using a Geostatistical Approach*. Water Technology and Sciences. Vol. V, No. 5, September-October, 2014, pp. ??-??. (ISSN: 2007-2422) (accepted March 18, 2014).

2. Víctor Hernández-Maldonado, Martín Díaz-Viera, Arturo Erdely: *A multivariate Bernstein copula model for permeability stochastic simulation*. Geofísica Internacional 04/2014; 53(2):163-181.

3. Javier Méndez-Venegas, Martín A. Díaz-Viera: *Geostatistical modeling of clay spatial distribution in siliciclastic rock samples using the plurigaussian simulation method*. Geofísica Internacional 09/2013; 52(3):229-247.

4. Javier Méndez-Venegas, Martín A Díaz-Viera, Graciela S Herrera, Arturo Valdés-Manzanilla: *Geostatistical simulation of spatial variability of convective storms in Mexico City Valley*. Geofísica Internacional 03/2013; 52(2):111-120.

5. G Espinosa-Paredes, A Vázquez-Rodríguez, E.-G Espinosa-Martínez, O Cazarez-Candia, M Díaz Viera, A Moctezuma-Berthier, M Díaz-Viera: *A Numerical Analysis of Non-equilibrium Thermodynamic Effects in an Oil Field: Two-equation Model*. Petroleum Science and Technology 01/2013; 31:192-203.

6. Victor Lopez-Solis, David Velazquez-Cruz, Fabian Martinez-Gonzalez, Gustavo Espinosa-Castaneda, Martin Diaz Viera: *3D Seismic Pore Pressure Analysis in Offshore Arenque Field, Mexico*. 04/2012;

7. Victor Hernandez-Maldonado, Martina A. Diaz-Viera, Arturo Erdely: *A joint stochastic simulation method using the Bernstein copula as a flexible tool for modeling nonlinear dependence structures between petrophysical properties*. Journal of Petroleum Science and Engineering 01/2012; 90-91:112-113.

8. A. Erdely, M. A. Diaz-Viera: *Modeling porosity-permeability data by gluing copulas*. AGU Fall Meeting Abstracts. 12/2011;

9. Martín A Díaz-Viera, Graciela S Herrera-Zamarrón, Arturo Valdés-Manzanilla: *A Linear Coregionalization Model For Spatial Rainfall Estimation In The Mexico City Valley Combining Rain Gages Data And Meteorological Radar Images*. Ingenieria hidraulica en Mexico 07/2009; XXIV(3):63-90.

10. M. Diaz-Viera and I. Herrera, "TH-Collocation for the Biharmonic Equation", *Advances in Engineering Software*, Volume 36, Pages 243-251, April 2005.

11. M. Jiménez-Guerrero, M. Díaz-Viera, R. Casar-González, *Caracterización Integral de Yacimientos: Integración de Datos de Registros de Pozo con Atributos Sísmicos Usando Geoestadística*, Boletín Técnico de la Asociación Mexicana de Geofísicos de Exploración, A.C. (AMGE), Vol. 44, No. 2, April-June 2004.

12. I. Herrera, M. Díaz-Viera and Robert Yates, "Single collocation point methods for the advection–diffusion equation", *Advances in Water Resources*, Special Issue: A Tribute to George F. Pinder (invited paper), Volume 27, Issue 4, Pages 311-322, April 2004.

13. I. Herrera Revilla, Robert Yates and M. Díaz-Viera, *General Theory of Domain Decomposition: Indirect Methods,* Numerical Methods for Partial Differential Equations, Vol. 18, No. 3, pp. 296-322, may. 2002.

14. A. Utset, T. López, M. Díaz-Viera, *A comparison of soil maps, kriging and a combined method for spatially predicting bulk density and field capacity of ferrasoils in the Havana--Matanzas Plain*, Geoderma (96)3, pp. 199-213, 2000.

15. P. Malischewsky, M. Díaz-Viera, *Intersection Points of Reflection Coefficients of Body Waves*, Revista Geofísica No. 52-53, pp. 27-32, 2000.

16. I. Herrera Revilla, M. Díaz Viera, *Indirect Methods of Collocation: Trefftz-Herrera Collocation*, Numerical Methods for Partial Differential Equations, Vol. 15, No. 6, pp. 709-738, nov. 1999.

17. M. Cotilla, M. Díaz Viera, M. Pacheco, W. Korín, An Automatic Seismic-Tectonic Dictionary, IV Simposium Internacional de Comunicación Social, Revista de Estudios de Comunicación Social, Cuba, No 9, 1996.

18. M. Díaz-Viera, L. García-Fernández, E. Pérez-Almaguer, *Comparing Spatial Interpolators for Modeling Geomagnetic Field Anomalies*, Mapping , 1996.

In Conference Proceedings

1. M. A. Díaz Viera, A. Moctezuma-Berthier, O. Cazarez Candia, J. Hernández Pérez, E. Wilson García, R. Yates, G. Cisneros Stoianowski, *RESSIMP ®: A Multipurpose Simulator For The Design And Simulation Of Enhanced Oil Recovery Processes,* Mexican Petroleum Congress, Acapulco, Guerrero, Mexico, June 4-8, 2014.

2. M. A. Diaz-Viera, J R Hernandez-Perez: *A Flow and Transport Model in Porous Media for Microbial EOR Studies at Core Scale*. ECMOR XIII – 13th European Conference on the Mathematics of Oil Recovery, Biarritz, France; 09/2012.

3. Erdely A. and Diaz-Viera M.A. "Joint Porosity-Permeability Stochastic Simulation and Spatial Median Regression by Nonparametric Copula Modeling", Jekel, T., Car, A., Strobl, J. & Griesebner, G. (Eds.): GI_Forum 2012: Geovisualisation, Society and Learning, 346-354 pp., 2012.

4. Diaz-Viera M.A., D.A. Lopez-Falcon and A. Moctezuma-Berthier "Dynamic Porosity and Permeability Modification due to Microbial Growth Using a Coupled Flow and Transport Model in Porous Media", 8th North American Workshop on Applications of the Physics of Porous Media, Ensenada, México, October 9 -12, 2009.

5. Diaz-Viera M.A. and A. Erdely "Joint Porosity-Permeability Stochastic Simulation by a Nonparametric Copula Modeling of their Dependence", 8th North American Workshop on Applications of the Physics of Porous Media, Ensenada, México, October 9 -12, 2009.

6. A Ortiz-Tapia, D A Lopez-Falcon, M A Diaz-Viera, S Lopez-Ramirez: *A Numerical Simulation of Adsorption Using Non-Standard Isotherm Equations in COMSOL*. COMSOL Conference, Boston, USA; 10/2008

7. D A Lopez-Falcon, M A Diaz-Viera, A Ortiz-Tapia: *Transport, Growth, Decay and Sorption of Microorganisms and Nutrients through Porous Media: A Simulation with COMSOL*. COMSOL Conference, Boston, USA; 10/2008

8. M A Diaz-Viera, D A Lopez-Falcon, A Moctezuma-Berthier, A Ortiz-Tapia: *COMSOL Implementation of a Multiphase Fluid Flow Model in Porous Media*. COMSOL Conference, Boston, USA; 10/2008.

9. Velázquez-Cruz David, López-Solís Víctor Manuel, Díaz-Viera Martín Alberto, "Predicción De Presiones Anormales Para La Planeación De La Perforación De Pozos Marinos En México",

INGEPET 2008, VI Seminario Internacional: Exploración y Producción de Petróleo y Gas, Lima, Perú, 13-17 octubre, 2008.

10. M. Díaz-Viera, D. A. López-Falcón, I. Herrera, "Numerical Simulation of a Combustion Front Model in Porous Media Applying Trefftz-Herrera Collocation Method", 4to Congreso Internacional, 2do Congreso Nacional de Métodos Numéricos en Ingeniería y Ciencias Aplicadas, Morelia, Mexico, 17-19 de enero 2007.

11. D. A. López-Falcón, M. Díaz-Viera, I. Herrera, E. Rodríguez-Jáuregui, "Theoretical Model Of Combustion Fronts In Porous Media Applying The Systematic Approach For Continuum Mechanics", 4to Congreso Internacional, 2do Congreso Nacional de Métodos Numéricos en Ingeniería y Ciencias Aplicadas, Morelia, México, 17-19 de enero 2007.

12. M. Díaz-Viera, P. Anguiano-Rojas, A. Mousatov, E. Kazatchenko and M. Markov, *"Stochastic modeling of permeability in double porosity carbonates applying a Monte Carlo simulation method with t-copulas"*, SPWLA 47th Annual Logging Symposium, Veracruz, Mexico, June 4-7, 2006.

13. M. Díaz-Viera, R. Casar-González, **"***Stochastic simulation of complex dependency patterns of petrophysical properties using t-copulas"*, Proceedings of IAMG'05: GIS and Spatial Analysis, Vol. 2, pp. 749-755, 2005**.**

14. M. Díaz Viera, I. Herrera Revilla y R. Yates, *Aplicación del Método Indirecto de Colocación Trefftz-Herrera a Problemas Elípticos en 2D*, in Proceedings of the II CONGRESS ON NUMERICAL METHODS IN ENGINEERING AND APPLIED SCIENCES, Guanajuato, México, JANUARY 17-19, 2002.

15. M. Díaz Viera, I. Herrera Revilla, *Implementation of Trefftz-Herrera Collocation Method for Transport Equation* on Groundwater, Proceedings of IV International Workshop Informatics and Geosciences, GEOINFO'2000, Havana, Cuba, March 21-24, 2000.

16. M. Díaz Viera, *A Geostatistical Approach for Monitoring Network Design on Ground Water*, Proceedings of IV International Workshop Informatics and Geosciences, GEOINFO'98, 1998.

17. M. Díaz Viera, I. Herrera Revilla, : *The Trefftz-Herrera Collocation Method using Bilinear Weighting Functions*, Proceedings of III International Workshop Informatics and Geosciences, GEOINFO'96, 1996.

18. B. Lazo, L.Lois, A. Falcón, A. Quintana, M. Díaz Viera, Variations of N(h) Profiles of Electronic Concentration over Cuba for Five Levels of Solar Activity, Proceedings of 4th COLAGE, Tucuman, Argentina,1996.

19. Quinto Diez P., Hernández Pérez J., Díaz Viera M., Ruiz Hernández B., Ortega Cuenca P., *A Termical Test for Proving Food Composition*, Proceedings of Workshop on Mathematical Modeling for Professors, UNAM, Mexico, 26-30 August 1996.

20. N. Sánchez Santillán, G. de la Lanza Espino, M. Díaz Viera, Precipitation and Temperature Cycles in an Exorreic Basin of México Gulf and its Relationship with Solar Spots, 1996.

Patents and copyrights

1. Diaz Viera MA, DA López Falcón and A. Ortiz Tapia "Mathematical Modelling And Numerical Simulation Of Microbial Enhanced Oil Recovery (MEOR)" Registration number: 03-2008-071111030100-01, National Institute of Copyright, 18 July 2008.
2. Diaz Viera MA, López Moctezuma Berthier Falcon DA and AE: "MATHEMATICS AND NUMERICAL SIMULATION OF CORE SCALE MODELING AND PROCESS LABORATORY

CONDITIONS Meor" Registration number: 03-2010-022411202600-01, National Institute of Copyright, 8 March 2010.

3. Casar R. Gonzalez Diaz Viera MA, Hernández V. Maldonado, J. Méndez Venegas, F. Mendoza and Torres Rojas P. Czech: "METHOD FOR GEOLOGICAL MODEL-BASED APPLICATION petrophysical METHODS geostatistical" Record number: 03 -2012-071712190800-01, National Institute of Copyright, July 26, 2012.
4. Diaz Viera MA, Hernández V. Maldonado, J. Méndez Venegas: "STOCHASTIC MODELING SOFTWARE FOR JOINT BY petrophysical properties copulations (PM-COP)" Registration number: 03-2013-091112252300-01, National Institute of Copyright , September 18, 2013.
5. Diaz Viera MA, González R. Casar, V. Hernández Maldonado, Venegas J. Mendez, and F. Mendoza Torres Rojas P. Czech: "GEOLOGICAL MODELING METHODOLOGY FOR USING METHODS-PETROPHYSICS geostatistical FRACTALES" Registration number: 03-2013 - 091112215300-01, National Institute of Copyright, September 18, 2013.
6. Casar R. Gonzalez Diaz Viera MA, Méndez J. Venegas, V. Hernández Maldonado, Czech Rojas P., Mendoza F. Torres, Cruz Castillo M., and R. Torres Vargas Acosta Angeles A.: "MODEL OF GEOLOGICAL petrophysical RANGE OF PILOT CO2 INJECTION IN MARCOPERA 331, COYOTES COUNTRY, BASIN CHICONTEPEC "TEST Registration number: 03-2013-091112234500-01, National Institute of Copyright, September 18, 2013.
7. Diaz Viera MA, Moctezuma Berthier AE, Yates RA Smith, "ADVANCED MATHEMATICAL MODEL SIMULATION OF WAG" Registration number: 03-2013-110512023700-01, National Institute of Copyright, 11 November 2013.
8. Diaz Viera MA, Austrich Senosiain AJ, Marcu Cusultchi A., Domínguez Hernández JL, AE Moctezuma Berthier, E. Serrano Saldaña, Valtierra Roses VH: "WAG BASIC CONCEPTUAL MODEL" Registration number: 03-2013-110512042600-01, National Institute Copyright, November 11, 2013.
9. Diaz Viera MA, Yates RA Smith: "NUMERICAL MODEL OF FRACTURE-AIR POROUS MEDIUM" Registration number: 03-2013-110512051400-01, National Institute of Copyright, 11 November 2013.
10. Diaz Viera MA, Candia O. Cázarez "MATHEMATICAL MODEL OF FRACTURE-AIR POROUS MEDIUM" Registration number: 03-2013-110512062100-01, National Institute of Copyright, 11 November 2013.
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12. Diaz Viera MA, Hernández Pérez J., Cázarez O. Candia, Moctezuma Berthier AE: "CONCEPTUAL MODEL OF IN-SITU COMBUSTION IN A SPLIT-SYSTEM POROUS MEDIUM SCALE LABORATORY" Registration number: 03-2013-110512083400-01 , National Institute of Copyright, 11 November 2013.
13. Diaz Viera MA, Hernández Pérez J., Cázarez O. Candia, Moctezuma Berthier AE: "CONCEPTUAL MODEL OF IN-SITU COMBUSTION IN A SPLIT-SYSTEM A POROUS MEDIUM SCALE SECTOR OF DEPOSIT" Registration number: 03-2013-110512101100 -01, National Institute of Copyright, 11 November 2013.
14. Diaz Viera MA, González R. Casar, Czech P. Rojas, V. Hernández Maldonado, Venegas J. Méndez, F. Torres Mendoza, C. Ramírez Ortega, LG Velasquillo Martínez "GEOLOGICAL MODEL OF MARCOPERA petrophysical-331, COYOTES COUNTRY , BASIN CHICONTEPEC "Registration number: 03-2013-110512112200-01, National Institute of Copyright, 11 November 2013.
15. Diaz Viera MA, Wilson E. García, Guerrero MA Caballero, Carrillo A. Ledezma, Stoianowski G. Cisneros, JL Hernández Domínguez, Esquinca C. Espinosa, Garcia Gutierrez FA, JR Pérez Hernández, JJ Angel Lizardi, Mendoza Bernal OJ, Moctezuma Berthier AE, Ruiz S. Salinas, Valtierra Roses VH, Yates RA Smith: "Numerical Simulation Of Flow Fields For

Multi-Compositional Thermal Fracture With Or Without: RESSIMP" Registration number: 03-2013-110512173200-01, National Institute of Law Author, November 11, 2013.

16. MA Diaz Viera, AJ Austrich Senosiain, Cázarez O. Candia, J. Hernández Pérez, AE Moctezuma Berthier: "Conceptual Model Of In-Situ Combustion In A Homogeneous System" Registration number: 03-2013-110512220900-01, National Institute Copyright, November 11, 2013.
17. Diaz Viera MA, González R. Casar, A. Marcu Cusultchi, Moctezuma Berthier AE: "Method For Determining The Distribution In A Stratigraphic Column Smectite" Registration number: 03-2013-110512280101-01, National Institute of Copyright, November 11, 2013.
18. Diaz Viera MA, Prego Odriozola GM, Cusultchi A. Marcu, Moctezuma Berthier AE: "Model Incorporating Porous Smectite Clays" Registration number: 03-2013-110512294000-01, National Institute of Copyright, 11 November 2013.
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20. Diaz Viera MA, Wilson E. García, Guerrero MA Caballero, Stoianowski G. Cisneros, JL Hernández Domínguez, Esquinca C. Espinosa, Garcia Gutierrez FA, JR Pérez Hernández, JJ Angel Lizardi, Mendoza Bernal OJ, Moctezuma Berthier AE, Ruiz Salinas S., Rosas Valtierra VH, Yates RA Smith: "TECHNICAL MANUAL AND NUMERICAL SIMULATION OF MULTI-FLOW DEPOSITS FOR THERMAL COMPOSITIONAL: RESSIMP" Registration number: 03-2013-110512320401-01, National Institute of Copyright 11 November 2013.
21. Diaz Viera MA, Wilson E. García, Guerrero MA Caballero, Stoianowski G. Cisneros, Esquinca C. Espinosa, Garcia Gutierrez FA, JR Pérez Hernández, JJ Angel Lizardi, Mendoza Bernal OJ, Moctezuma Berthier AE, Ruiz Salinas S., Yates Smith RA: "RESSIMP GRAPHICS INTERFACE GUI, BASE FILES FOR GENERATING AND RUN RESSIMP NUMERICAL SIMULATOR" Registration number: 03-2013-110512351600-01, National Institute of Copyright, 11 November 2013.
22. Diaz Viera MA, S. Botello Rionda, Iturriaga Acevedo RG, Berthier Moctezuma AE, MA Vázquez Moreles, G., Peña J. Acevedo "DIFFUSION MODELS FOR WELL WITH RADIAL GEOMETRY" Registration number: 03-2014-030411320300-01 , National Institute of Copyright, March 7, 2014.
23. Diaz Viera MA, S. Botello Rionda, Iturriaga Acevedo RG, Berthier Moctezuma AE, MA Vázquez Moreles, G., Peña J. Acevedo "STEADY FLOW IN FRACTAL MODEL MEDIA" Registration number: 03-2014-030411340800-01, National Institute of Copyright, March 7, 2014.
24. Diaz Viera MA, Austrich Senosiain AJ, S. Botello Rionda, Domínguez Hernández JL, Acevedo Iturriaga RG, Berthier Moctezuma AE, Moreles MA Vázquez, G., Peña J. Acevedo "SURROUND PURE PHASE COMPONENT" Record number: 03 -2014-030411360600-01, National Institute of Copyright, March 7, 2014.
25. Diaz Viera MA, Austrich Senosiain AJ, S. Botello Rionda, Iturriaga Acevedo RG, Berthier Moctezuma AE, Moreles MA Vázquez, G., Peña J. Acevedo "EQUILIBRIUM PHASE MIXING MULTICOMPONENT" Registration number: 03-2014-030411483000 -01, National Institute of Copyright, March 7, 2014.
26. Diaz Viera MA, Austrich Senosiain AJ, S. Botello Rionda, Iturriaga Acevedo RG, Berthier Moctezuma AE, Moreles MA Vázquez, G., Peña J. Acevedo "ENVELOPE GENERATOR PHASE COMPOUNDS FOR PURE" Record number: 03 - 2014-030411462400-01, National Institute of Copyright, March 7, 2014.

Referee of Journals

- Numerical Methods for Partial Differential Equations
- Transport in Porous Media

- Applied Numerical Mathematics
- Water Technology and Sciences (antes, Ingeniería Hidráulica en México)
- Revista Ingeniería, Investigación y Tecnología
- Geofísica Internacional

Technical Reports in Research Projects

- Study of Characteristics of Artificial Seismic Events. (Sauvalle Mario Rubio, Díaz Martín Alberto Viera, Aymee Rodriguez), 1991.
- ANDIS: A Program for Spectral Analysis and Digital Filtering in Geosciences. (Martín Alberto Diaz Viera, Mario Rubio Sauvalle), 1992.
- DIFID: A Program for the Design and Implementation of Digital Filters. (Martín Alberto Diaz Viera, Mario Rubio Sauvalle), 1992.
- PROFILES N(h): A local empirical model of variations in electron concentration profile in magneto-quiet conditions for different levels of solar activity. (Martin A. Diaz Viera, Alina Garmendía Quintana, Luis Menéndez Lois, Welcome Lazo Olazabal), 1993.
- GEOESTAD: A computer system for geostatistical applications. (Martin A. Diaz Viera, Ricardo Alonso Barandela), 1994.
- Seismotectonic Automated Dictionary. (Mario Cotilla, Martín Alberto Diaz Viera, Maritza Pacheco, William Rodriguez Korin.), 1995.
- Domain Decomposition Method based on Localized Adjoint Method (LAM), 1995.
- Preconditioners in Domain Decomposition Methods, 1995.
- State of the Art Review of Domain Decomposition Methods for solving Partial Differential Equations, 1996.
- Trefftz-Herrera (TH) Collocation Formulation for Domain Decomposition Methods, 1996.
- Application of TH Collocation Method for Transport Problems With Steady State Flow in Contaminated Aquifers, 1996.
- Preconditioners for domain decomposition procedures, 1997.
- Parallel Programming on a Network of Transputers, 1997.
- DISRED: A Matlab toolbox for Optimal Monitoring Network Design Using a Geostatistical Approach. (Martín Alberto Diaz Viera), 1997.
- Application of TH Collocation Method for Transport Problems With Unsteady State Flow in Contaminated Aquifers, 1998.
- A Methodology for Spatial Optimal Sampling Design for Estimating Mineral Reserves Using a Geostatistical Approach. (Martín Alberto Diaz Viera), 1998.
- Modeling of Salt Intrusion in Coastal Karst Aquifers. Joint Research Project IIMAS (UNAM) - IGA (CITMA), CONACYT Mexico-Cuba, 1999.
- "Computational and Mathematical Modeling of Dynamic Systems. Numerical Methods for Partial Differential Equations: Collocation Methods". CONACYT Project (Ismael Herrera, Martin A. Diaz Viera) 2000-2002.
- Estimation of Precipitation in the Mexico Valley using Rain Gages Data and Meteorological Radar Images. IMTA. (Martin A. Diaz Viera, Graciela Herrera) 2002.
- Geological and Petrophysical Modeling of Oil Reservoirs (Martin A. Diaz and Ricardo Viera González Casar). IMP. 2003-2004.
- Mathematical Modeling of Microbial Enhanced Oil Recovery (MEOR) Method (Martin A. Diaz Viera and Arturo Ortiz Tapia), IMP, 2004.
- "Mathematical Modeling of Enhanced oil Recovery Thermal Methods" (Martin A. Diaz Viera, Ezequiel Rodríguez Jáuregui) Research Report IMP, 17 p. December 2004.
- Joint Stochastic Simulation of Petrophysical Properties with Nonlinear Dependencies using t-Copulas (Martin A. Diaz and Ricardo Viera González Casar), IMP, 2005.

- "Geological and Petrophysical Modeling of Amatitlan-Soledad-Coyotes oil field" (Martin A. Diaz Viera, Casar Ricardo Gonzalez and Juan Araujo Mendieta), within the IMP F.42432 PROJECT: "Update Diagenetic Model Of Rocks Formation Chicontepec" For the Production Active Altamira-Poza Rica, PEMEX, March 2005.
- "Modeling the Dynamics of Combustion Fronts in Porous Media" (Martin A. Diaz Viera, Dennys A. López Falcón, Ezequiel Rodríguez Jáuregui) Research Report IMP, 28 pp., November 2005.
- "Basic Statistical Analysis of Petrophysical Data Obtained in Different Lithofacies" (Martin A. Diaz Viera, Ricardo González Casar) F.30617 within the project: "Petrographic Studies Of Core And Channel Samples And Research Technical Assistance In Sedimentology, Diagenesis And Fracture Analysis In The Northeastern Marine Region ", January-July 2006.
- "3D Model of Lithostratigraphic and Pollutant Concentration Distributions" (Martin A. Diaz Viera, Ricardo González Casar) F.21399 within the project "Support for the characterization and restoration of the northern area of the former - Refinery March 18 ", 19/06 to 31/10 2006.
- "Statistical analysis of geological and petrophysical data, elaboration of maps of geological, petrophysical and dolomitization data distribution" (Martin A. Diaz Viera, Ricardo González Casar) F.30693 within the project: "Petrophysical Property Distribution Models of Reservoirs in Northeast Marine Region", Nov 2006-Sep 2007.
- F.30686: "Geological Interpretation Producing Horizons In The Cretaceous And Jurassic Cantarell Field," May-December 2007.
- "Mathematical Modelling and Numerical Simulation of Enhanced Oil Recovery using Microorganism (MEOR)" (Martin A. Diaz Viera, Dennys A. López Falcón, Arturo Ortiz Tapia) D.00417 within the project: "Enhanced Oil Recovery by Microorganism" Nov. 2006-Feb. 2008.
- F.30798: "Geological Update and Geostatistical Distribution Modeling of Kimmeridgian Upper Jurassic Facies in Cantarell Field", from May to September 2008.
- "Mathematical Modeling and Numerical Simulation at Core Scale and Laboratory Conditions of a MEOR Process" (Martin A. Diaz Viera, A. López Falcón Dennys Andres Moctezuma Berthier) D.00417 within the project: "Enhanced Oil Recovery Via Microbial" , March 2008-August 2009.
- "Parameter Fitting of Flow And Transport Simulation Model using Experimental Data Obtained in a Laboratory Test at Core Scale for a MEOR Process" (Martin A. Diaz Viera, Joaquín Pérez Hernández, Andrés Moctezuma Berthier) within the D.00417 project "Enhanced Oil Recovery by Microorganism" 2010-2011.
- RGEOESTAD: An Open Source Program for Geostatistical Applications Based on R-Project, Mexico, Diaz-Viera. M, Hernández-Maldonado, V., Mendez-Venegas, J.. (Http://mmc2.geofisica.unam.mx/gmee/paquetes.html), 2010.
- "Mathematical and Numerical Model of the Air Injection Simulator for a Homogeneous Porous Medium And Heavy Oil" within the SENER-CONACYT project funds No.119942 (Y.00101): "Air injection system is enhanced recovery" 2010.
- "Mathematical and Numerical Model of a Basic Simulator for Water Alternating Gas Injection (WAG) Process" Funds within SENER-CONACYT project No. 116606 (Y.00102): "Water Alternating Gas Injection (WAG) as a Enhanced Recovery Process", 2010.
- "Mathematical And Numerical Model Of The Air Injection Simulator for a Homogeneous Porous Medium and a Single Fracture" within the Funds SENER-CONACYT No.119942 (Y.00101) project "Air Injection as Enhanced Recovery Process" , 2011.
- "Mathematical and Numerical Model of an Advanced Simulator for Water Alternating Gas Injection (WAG) Process" Funds within SENER-CONACYT project No. 116606 (Y.00102): "Water Alternating Gas Injection (WAG) as a Enhanced Recovery Process", 2011.
- "Methodology for Geological and Petrophysical Modeling with Fractal Properties, Based on the Application of Geostatistical Methods" within the Funds SENER-CONACYT project No. 143 935 (Y-00114), "New Methodologies and Tools for Static and Dynamic Characterization Considering the Fractals Properties of Oilfields", October 24, 2011.

- "Geological and Petrophysical Model of the CO2 Injection Test Interval in Well Array 331, Coyotes Field, Chicontepec Basin" within the SENER-CONACYT No. 116606 Fund (Y.00102) project "alternating injection of water and gas (WAG) and enhanced recovery system ", July 29, 2013.
- "Mathematical, Numerical and Computational Model of Enhanced Oil Recovery using Microorganisms (MEOR)" (Martin A. Diaz Viera, Arturo Ortiz Tapia, Joaquin Hernández Pérez) D.00417 within the project: "Enhanced Oil Recovery by Microorganism", March 12, 2014.
- "Geological and Petrophysical Model of an Outcrop as Analog of Siliciclastic Reservoir, in Acatepec, Hidalgo" within the SENER-CONACYT Fund No. 143 935 (Y-00114) project: "New Methodologies and Tools for Static and Dynamic Characterization Considering the Fractals Properties of Oilfields", May 12, 2014.

Conferences

- First International Workshop Computing and Geosciences, Geoinfo-92: ANDIS: A Program For Spectral Analysis and Digital Filtering of General Purpose. Havana, Cuba, July 1992.
- First International Workshop Computers And Geosciences, Geoinfo-92: DIFID: A Program For The Design and Implementation of Digital Filters. Havana, Cuba, July 1992.
- II International Workshop Computing And Geosciences, Geoinfo-94: N(h) Profiles: A Local Empirical Model of Variations in Electron Concentration Profile at Magneto-Quiet Conditions For Different Levels of Solar Activity. Havana, Cuba, August 1994.
- II International Workshop Computing and Geosciences, Geoinfo-94: GEOESTAD: A Computer System for Geostatistical Applications. Havana, Cuba, August 1994.
- II International Workshop Computing and Geosciences, Geoinfo-94: Estimation of Ferrasoil Physical Properties Through Kriging and Soil Mapping. Havana, Cuba, August 1994.
- Regional Conference of Latin-American and Caribbean Countries, International Geographical Union: The Seismotectonic Dictionary. Havana, Cuba, 31 July-5 August, 1995.
- VI Latin American Congress On Marine Sciences: "Cycles Of Precipitation and Temperature in An Exorreic Basin Of Mexico Gulf and its Relationship With Sunspots." Mar del Plata, Argentina, 23-27 October 1995.
- Aquifer Remediation Workshop, Mexico City, December 5-6, 1995, Sponsored By National Groundwater Association.
- II International Workshop on Parallel Processing, Tipp'96, Mexico City, 8-10 July 1996, Iimas, Unam.
- Modeling Workshop For Teachers Of Mathematics, Mexico City, 26-30 August 1996, Unam.
- XI Forum of Science and Technology and VI IGA Scientific Meeting, Havana, Cuba, 26-27 September 1996.
- III International Workshop Computing and Geosciences, Geoinfo-96: The Trefftz-Herrera Collocation Method using Bilinear Weighting Functions. Havana, Cuba, November 1996.
- First National Congress on Groundwater: DISRED: A Tool for Monitoring Network Design using a Geostatistical Approach. Merida, Mexico, 11-15 November 1997.
- IV International Workshop Computing and Geosciences, Geoinfo-98: Optimal Monitoring Network Design in Groundwater using a Geostatistical Approach. Havana, Cuba, 24-27th March 1998.
- VIII Mexican American Exchange in Mathematics and Its Applications (MAXIMA): Numerical Treatment of Elliptic Equation Using Collocation Methods. Cuernavaca, Mexico, July 31-August 3, 1999.

- 1st Seminar On Numerical Simulation of Aquifers: Methodological and Practical Aspects of Optimal Groundwater Monitoring Network Design for Management Purposes, UAM, Mexico City, 5-6 October 1999.
- VIII IGA Scientific Meeting: A Geomatic Methodology for the Optimal Design of Groundwater Monitoring Network for Management Purposes, Havana, Cuba, 20-21 December 1999.
- V International Workshop Computing and Geosciences, Geoinfo-2000: Implementation Of Method Posted Trefftz-Herrera Equation For Transport In Groundwater, Havana, Cuba, 21-24 March 2000.
- V International Workshop Computing and Geosciences, Geoinfo-2000: Optimization And / Or Redesign Of A Network Monitoring Groundwater Management Purposes Using Genetic Algorithms, Havana, Cuba, 21-24 March 2000.
- V Joint Meeting American Mathematical Society-Mexican Mathematical Society: Guest Lecture: "Unified Theory Of Domain Decomposition III: A New Collocation Method", Morelia, Mexico From 23 To 26 May 2001.
- 3rd International ISAAC Congress, "Unified Theory of Domain Decomposition III: An Indirect Collocation Method", Freie University, Berlin, Germany 20-25 August 2001.
- III National Congress On Groundwater, "Geostatistical Analysis Of Aquifer Groundwater Levels Querétaro Valley", Torreon, Coahuila, Mexico, 21-23 November 2001.
- 14th International Conference On Domain Decomposition Methods "Indirect Collocation Method", "Indirect Collocation Method For Biharmonic Equation", Cocoyoc, Mexico, 6-11 January 2002.
- Second Conference on Numerical Methods in Engineering And Applied Science: "Application of Indirect Trefftz-Herrera Collocation Method to Elliptic Problems in 2D", Guanajuato, Mexico, 17-19 January 2002.
- IX Mexican American Exchange in Mathematics and Its Applications (MAXIMA): "A Geostatistical Analysis of Piezometric levels for modelling purposes: Querétaro Aquifer as a case study," Elizabeth Martin Leon And Diaz, Camino Real Sumiya, Cuernavaca, Mexico, 12-16 August, 2002.
- IX Mexican American Exchange In Mathematics and Its Applications (MAXIMA): "Indirect Method Of Domain Decomposition", Martin Diaz, Ismael Herrera, Robert Yates, Camino Real Sumiya, Cuernavaca, Mexico, August 12-16, 2002.
- IX Mexican American Exchange In Mathematics and Its Applications (MAXIMA): "Nonconventional Collocation Method For The Biharmonic Equation", Martin Diaz, Ismael Herrera, Camino Real Sumiya, Cuernavaca, Mexico, August 12-16, 2002.
- IX Mexican American Exchange In Mathematics and Its Applications (MAXIMA): "A Single-Point Collocation Method Of High Efficiency", Ismael Herrera, Martin Diaz, Camino Real Sumiya, Cuernavaca, Mexico, August 12-16, 2002.
- III National Meeting of Earth Sciences, "Estimation of The Precipitation in Mexico City Valley using Data From Rain Gauges and Weather Radar", Puerto Vallarta, Jalisco, 4-8 November 2002.
- III Training Workshop On Air Pollution And Mathematics, IIMAS, UNAM, Mexico Df, 14-15 November 2002.
- 15th International Conference On Domain Decomposition Methods "Trefftz-Herrera Domain Decomposition Method For Biharmonic Equation", Berlin, Germany, 21-25 July 2003.
- XVIII National Forum On Statistics, "Geostatistical Applications: Estimation Versus Simulation", Faculty of Sciences, UNAM, 13-17 October 2003.
- First Congress on Geosciences for the Oil Industry (XI Symposium Of Geophysics And Exhibition - AMGE 2003), Cancun, Quintana Roo, Mexico, 9 -12 November 2003.
- International Petroleum Conference In Mexico, SPE, Puebla, Mexico, November 7 To 9, 2004.
- 2005 Annual Conference of The International Association For Mathematical Geology (IAMG), "Stochastic Simulation of Complex Dependency Patterns of Petrophysical Properties Using t-Copulas", Toronto, Canada, 21-26 August, 2005.

- Symposium “Plays and Oil and Gas Reservoirs in Siliciclastic Rocks”, "Modeling The Distribution of Reservoir Facies In Siliciclastic Turbidite using PluriGaussian Stochastic Simulations" Martin Diaz-Viera, Ricardo Casar-Gonzalez, Juan Araujo Mendieta, Humberto Soto Salazar, AMGP, Reynosa, Tamaulipas, 9 To 11 October 2005.
- XX Technical Meeting of AIMP, "Joint Stochastic Simulation of Petrophysical Properties using t-Copulas" Martin Diaz-Viera, Ricardo Casar-Gonzalez, Imp, Mexico City, October 27, 2005.
- XX Technical Meeting Of The AIMP, "Systematic Modeling of In Situ Combustion Processes for Thermal Oil Recovery", D. López-Falcón, M. Diaz-Viera, I. Herrera And E. Rodríguez-Jáuregui, Imp, Mexico, Df , October 27, 2005.
- Symposium “Plays and Oil and Gas Reservoir in Carbonated Rocks”, "Statistical Analysis of Well Log Data for Geological and Petrophysical Modeling," Martin Diaz-Viera, Ricardo González Casar, Yari Daniel Rodriguez, Gustavo Murillo Muñetón, Luis Germán Martínez Velasquillo, Toledo Cresencio Cabrera, Jose De Jesus Torres Villaseñor, AMGP, Ciudad Del Carmen, Campeche, 15-17 March 2006.
- SPWLA 47th Annual Logging Symposium, "Stochastic Modeling of Permeability in Double Porosity Carbonates Applying a Monte-Carlo Simulation Method with t-Copulas", M. Diaz-Viera, P. Anguiano-Rojas, A. Mousatov, E. And M. Kazatchenko Markov, Veracruz, Mexico, June 4 To 7, 2006.
- 7th World Congress on Computational Mechanics, "Trefftz-Herrera Collocation Method For Combustion Fronts in Oil Reservoirs: Application", Ma Diaz-Viera, Da López-Falcón, I. Herrera, Los Angeles, California, Usa, 16 -22 July, 2006 .
- The 4th International Congress, 2nd National Congress Of Numerical Methods In Engineering And Applied Sciences, "Numerical Simulation of a Combustion Front Model in Porous Media Applying Trefftz-Herrera Collocation Method", M. Diaz-Viera, D. López-Falcón, I. Herrera, Morelia , Mexico, 17-19 January 2007.
- SPE/AMGE Applied Technology Workshop: The Added Value Of Geosciences For Reservoir Characterization and Performance Simulation ", Villahermosa, A Mexico, 10-11 March 2008.
- COMSOL Conference 2008, "COMSOL Implementation of a Multiphase Fluid Flow Model in Porous Media," Diaz-Viera M., D. Lopez-Falcon, A. Moctezuma-Berthier And A. Ortiz-Tapia, Boston, October 9 To 11, 2008.
- COMSOL Conference 2008, "Transport, Growth, Decay and Sorption of Microorganisms and Nutrients Through Porous Media: A Simulation With Comsol," Lopez-Falcon Da, Ma Diaz-Viera And. Ortiz-Tapia, Boston, October 9 To 11, 2008.
- XXIII Technical Meeting Of The AIMP: "Modeling Microbial Enhanced Recovery I: Two-Phase Flow Model at Core Scale" Martin A. Diaz Viera, A. López-Falcón Dennys Andres Moctezuma-Berthier, IMP, Mexico City , October 24, 2008.
- XXIII Technical Meeting Of The AIMP: "Modeling Microbial Enhanced Recovery II: Multicomponent Transport Model at Core Scale" Dennys A. López-Falcón, Martin A. Diaz Viera, IMP, Mexico City, October 24, 2008.
- I Joint Meeting of Mexican Mathematical Society with The Royal Spanish Mathematical Society "Multiphase Flow and Multicomponent Transport Model in Porous Media at Core Scale for Numerical Simulation of Laboratory Tests of Oil Recovery Processes," Martin A. Diaz Viera, Dennys A. López-Falcón, Andres Moctezuma-Berthier, Oaxaca, Mexico, 22 To 24 July 2009.
- 8th North American Workshop on Applications of the Physics of Porous Media, 2009, "Porosity and Permeability Dynamic Modification due to Microbial Growth using a Coupled Flow And Transport Model in Porous Media," Martin A. Diaz Viera, Dennys A. López-Falcón, Andres Moctezuma-Berthier, Ensenada, Mexico, October 9-12, 2009.
- 8th North American Workshop on Applications of the Physics of Porous Media, 2009, "Joint Porosity-Permeability Stochastic Simulation by a Nonparametric Copula Modeling of their Dependence", Martin A. Diaz Viera, Arturo Erdely, Ensenada, Mexico, October 9-12, 2009.

- V International Congress of Numerical Methods in Engineering, "A Finite Element Two-Phase Flow Model in Porous Media For Secondary Oil Recovery Studies in Waterflooding Core Tests", Martin A. Diaz Viera, Andres Moctezuma-Berthier, Guanajuato, Gto., Mexico 3-5 February, 2010.
- 9th World Congress on Computational Mechanics, "A Finite Element Flow Model in Porous Media For Oil Recovery Studies At Core Scale And Laboratory Conditions", Martin A. Diaz Viera, Andres Moctezuma-Berthier, Sydney Convention And Exhibition Centre, Australia, July 19 - 23, 2010.
- Round Table "Statistics As a Fundamental Tool in Multidisciplinary Research" At The Second Congress "Multidisciplinary Research Balances And Perspectives." Paper "Geostatistics Modelling of Oil Fields" Martin A. Diaz Viera, FES Acatlán, UNAM, 26-29 October 2010.
- SPE Reservoir Simulation Symposium 2011, The Woodlands, Texas, USA, 21-23 February 2011.
- 9th North American Workshop On Applications Of The Physics Of Porous Media, 2011, "A Non-Isothermal Flow And Transport Model For A Single Fracture In A Porous Medium At Core Scale", Martin A. Diaz Viera, Rafael Cabrera-Gutierrez, Ensenada, Mexico, October 26-29, 2011.
- Modeling And Simulation Workshop, "Mathematical Modeling And Numerical Simulation Of Microbial Enhanced Oil Recovery At Core Scale Processes And Laboratory Conditions", Martin A. Diaz Viera, 1-4 September, Calgary and Banff, Alberta, Canada, 2011.
- Differential Equations Workshop, "Flow And Transport Model For Simulation of Microbial Enhanced Recovery (MEOR) at Core Scale And Laboratory Conditions, Villahermosa, Tabasco, Mexico, 22-23 March 2012.
- III National Congress Of Students In Earth Science, Invited Conference "Geostatistics, as Integrating Tool in Geological and Petrophysical Modeling of Oil Reservoirs", Geoscience Center, UNAM, Juriquilla, Querétaro, 26-28 March 2012.
- 2012 GSA Cordilleran Section Meeting, Theme Session 13: Heterogeneous Geologic Formations: Variability Spatial Modeling: "Spatial Stochastic Models As A Powerful Tool For Uncertainty Modeling In Heterogeneous Reservoir Formations" Martin Diaz-Viera, Javier Mendez-Venegas, Victor Hernandez-Maldonado, Juriquilla, Querétaro, Mexico, 29-31 March 2012.
- 10th World Congress On Computational Mechanics (WCCM 2012). Minisymposium Ms-159 - Numerical Methods For Stabilized Complex Flows And Applications On Earth Sciences: "TH-Collocation Method For Numerical Simulation Of Combustion Fronts In Porous Media", Martin Diaz-Viera And Robert Yates, São Paulo, Brazil, 8 -13 July 2012.
- Symposium On Geophysical Flows, "A Two-Phase Flow Model For A Single Fracture In A Porous Medium at Core Scale", Xi'an Jiaotong University, Xi'an, China, July 22-24, 2012.
- ECMORXIII: 13th European Conference On The Mathematics Of Oil Recovery, "A Model Flow And Transport In Porous Media Studies For Microbial EOR at Core Scale", Biarritz, France, September 10-13 2012.
- Second Workshop on Parallel EDP Solutions: "TH-Collocation Method For Numerical Simulation Of Combustion Fronts In Porous Media", CIMAT, Guanajuato, Mexico, 27th - 28th September 2012.
- SPE Reservoir Simulation Symposium 2013, The Woodlands, Texas, Usa, 18 To 20 February 2013.
- Seventh M.I.T. Conference On Computational Fluid And Solid Mechanics. Special Session: Multiscale Mathematical And Numerical Modeling Of Enhanced Oil Recovery Methods. "A Multiscale Multiphase Flow Model For A Single Fracture In A Porous Medium At Core Scale", Boston, Massachusetts, Usa, 12 To 14 June 2013.
- IAMG 15th Annual Conference, Madrid 2-5 September 2013.
- XXVIII Technical Meeting Of The AIMP: RESSIMP®: A Multipurpose Reservoir Simulator for Design And Simulation Of Enhanced Recovery Processes, IMP, Mexico City, October 25, 2013.
- Congress Of Environmental Engineering "Generating Sustainable Ideas". Recognition By Winning First Place In Free Oral Presentation Within The Workbench Energy. "Study Of The Dynamics Of Two Oil-Water Phases In An Oil Field Using Numerical Simulations", Carolina Contreras,

Themistocles Mendivil, Luis Patricio Ramirez, Martin A. Diaz, Ciudad Obregon, Sonora, Mexico 7 Al 11 April 2014 .

- 6th International Conference On Porous Media & Annual Meeting (Interpore): "Fluid Flow Simulation Through a Porous Medium with Fractal Petrophysical Properties", Martin A. Diaz-Viera, Victor Hernandez-Maldonado, Javier Mendez-Venegas, Eduardo Linares-Perez And Arturo Ortiz-Tapia, Milwaukee, Wisconsin, Usa, May 27-30, 2014.
- Mexican Petroleum Congress 2014: "RESSIMP ®: A Multipurpose Simulator for Design And Simulation Of Enhanced Oil Recovery Processes", Acapulco, Guerrero, Mexico, June 4-8, 2014.

Organizing Conferences

* Member of the Organizing Committee of I International Workshop Computing and Geosciences, GEOINFO-92, Havana, Cuba, July 1992.
* Member of the Organizing Committee of II International Workshop Computing and Geosciences, GEOINFO-94, Havana, Cuba, August 1994.
* Organizer of the Seminars on Computing at the Earth Sciences Graduated Program, Institute of Geophysics, UNAM, Mexico, 1995-1996.
* Co-organizer of the Seminars on Domain Decomposition Methods and its Parallelization, IGF-IIMAS, UNAM (MEXICO), 1996-1997.
* Member of the Local Organizing Committee of the "14th International Conference on Domain Decomposition Methods", Cocoyoc, México, January 6-11, 2002.
* Member of the Organizing Committee of "SPE/AMGE Applied Technology Workshop: The Added Value of Geosciences for Reservoir Characterization and Performance Simulation", Villahermosa, Mexico, March 10-11, 2008.
* Organizer of the Mathematics in Sciences Session in the "I Joint Meeting of Mexican Mathematical Society with The Royal Spanish Mathematical Society", Oaxaca, México, July 22-24, 2009.
* Member of the Organizing Committee of "V International Congress on Numerical Methods in Engineering", Guanajuato, México, February 3-5, 2010. Co-organizer of the special session: "Mathematical and Numerical Modeling of Oil Recovery Methods".
* Co-organizer of the Mini-symposium "Computational Methods of Enhanced Oil Recovery" in the 9th World Congress on Computational Mechanics en Sydney, Australia, July 19 – 23, 2010.
* Member of the Organizing Committee of 9th North American Workshop on Applications of the Physics of Porous Media, Ensenada, México, October 26 - 29, 2011.
* Member of the Organizing Committee of the Partial Differential Equations Workshop, Centro Internacional de Vinculación, Villahermosa, Tabasco, México, March 22 – 23, 2012.
* Co-organizer of the Mini-symposium "Stabilized Numerical Methods for complex flows and applications on Earth Sciences" in the 10th World Congress on Computational Mechanics, Sao Paulo, Brasil, July 8 – 13, 2012.
* Organizer of the Special Session "Multiscale Mathematical and Numerical Modeling of Enhanced Oil Recovery Methods" on Seventh MIT Conference on Computational Fluid and Solid Mechanics, Boston, Massachusetts, USA, 12 to 14 June 2013.

Editorial Work

- Technical editor of Proceedings of the "14th International Conference on Domain Decomposition Methods", Cocoyoc, México, January 6-11, 2002.
- Member of the Editorial Board of "Multiphysics Modeling" series, Taylor and Francis/Balkema.
- Editor of the volume *Mathematical and Numerical Modeling in Porous Media: Applications in Geosciences*. M. Diaz-Viera, P. Sahay, M. Coronado and A. Ortiz-Tapia (eds). "Multiphysics Modeling Series", CRC Press, Taylor & Francis Group, Leiden, 370 pages, July 24, 2012.

- Member of the Editorial Board of Journal "Numerical Methods for Partial Differential Equations", John Wiley & Sons.

Teaching Experience

- Spectral Analysis and Digital Filtering in Geosciences. Institute of Geophysics and Astronomy (IGA), *Ministry of Science, Technology and Environment of Cuba*, April 1993.
- Applied Geostatistics. Institute of Geophysics and Astronomy (IGA), *Ministry of Science, Technology and Environment of Cuba*, July 1994.
- Programming in C Language and FORTRAN 77, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, Mexico, 1995.
- Applied Geostatistics, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, Mexico, 1995.
- Numerical Methods, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, Mexico, 1997.
- Programming in C Language and FORTRAN 77, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, Mexico, 1997.
- Geo-mathematics in Agricultural Sciences: Observational Problems and Exploratory Data Analysis, High Institute in Agricultural Sciences of Havana, Cuba, April 1997.
- Applied Geostatistics, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, Mexico, 1998.
- Numerical Methods, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, Mexico, 1998.
- Introduction to Operating System UNIX, Institute of Geophysics and Astronomy, *Ministry of Science, Technology and Environment of Cuba*, May 1997 and April 1998.
- Mathematical and Computational Modeling, Earth Sciences Post graduated Program, Institute of Geophysics, UNAM, Mexico, 1999.
- Mathematical and Computational Modeling, Earth Sciences Post graduated Program, Institute of Geophysics, UNAM, Mexico, 2000.
- Introductory course on Geostatistics (1st Part). Mexican Oil Institute, IMP, February 27-28, 2002.
- Mathematical and Computational Modeling I, Post graduated Program, Institute of Geophysics, UNAM, Mexico, 2002.
- Basic course on Applied Geostatistics. Institute of Geophysics and Astronomy, *Ministry of Science, Technology and Environment of Cuba*, March 20-25, 2002.
- Introduction to Mathematical and Computational Modeling of Continuum Systems. Institute of Geophysics and Astronomy, *Ministry of Science, Technology and Environment of Cuba*, March 27 to April 2, 2002.
- Introductory course on Geostatistics (1st Part). Mexican Petroleum Institute, IMP, August 1 and 2, 2002.
- Introductory course on Geostatistics (2nd Part). Mexican Petroleum Institute, IMP, August 21-23, 2002.
- Applied Geostatistics Course/Workshop. Mexican Institute on Water Technology, IMTA, Jiutepec, Morelos, 28 October - 1 November, 2002.
- Statistics. Mexican Petroleum Institute, IMP, 1 September-19 December, 2003.
- Geostatistics. Mexican Petroleum Institute, IMP, 2 February - 21 May, 2004.
- Applied Geostatistics for Reservoir Modeling. Graduate Division, Engineering Faculty, UNAM, August - December, 2004.
- Geostatistics. Earth Sciences Graduate Program, Institute of Geophysics, UNAM, February - June, 2005.

- Applied Geostatistics to Reservoir Modeling, Graduate Division, Engineering Faculty, Earth Sciences Graduate Program, Institute of Geophysics UNAM and IMP, August - December, 2005.
- Spatial Stochastic Models in Earth Sciences. Earth Sciences Graduate Program, Institute of Geophysics, UNAM, February - June, 2006.
- Geological and Petrophysical Modeling of Oil Reservoirs, Graduate Division, Engineering Faculty, UNAM, 25-29 September, 2006.
- Applied Geostatistics to Reservoir Modeling. Graduate Division, Engineering Faculty, UNAM and IMP, August - December, 2006.
- Geostatistics. Earth Sciences Graduate Program, Institute of Geophysics, UNAM, February - June, 2007.
- Geostatistics. Engineering Faculty, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, and IMP, August - December, 2007.
- Geostatistics. Engineering Faculty, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, August - December, 2008.
- Geostatistics, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, February - June, 2009.
- Geostatistics, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, August - December, 2009.
- Geostatistics, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, August - December, 2010.
- Basic Geostatistics. Mathematics Department, Universidad Católica del Norte, Chile, April 18-25, 2011.
- Geostatistics, Earth Sciences Graduate Program, Institute of Geophysics, UNAM, August - December, 2011.
- Applied Geostatistics to Mining Evaluation. Mathematics Department, Universidad Católica del Norte, Antofagasta, Chile, August 1-5, 2011.
- Geostatistics, Earth Sciences Graduate Program (Institute of Geophysics) and Graduate Division (Engineering Faculty), UNAM, August - December, 2012.
- Geostatistics, Earth Sciences Graduate Program (Institute of Geophysics) and Graduate Division (Engineering Faculty), UNAM, August - December, 2013.

Advising and Tutoring

- Counseling student Luis Ochoa Toledo in developing the Master's thesis entitled "A Direct Collocation Method with Overlapping Domains," Science and Engineering Graduate Computer, IIMAS, May 8, 2001.
- Counseling graduate student of Elizabeth León in the Application of Geostatistics on Groundwater Modeling, Graduate in Science and Computer Engineering, IIMAS, 2001-2002.
- Tutoring the thesis "A Computer Software for Geostatistical Modelling of Spatial Phenomena", Martinez David Lerma and Raul Gaona Serrano. School of Computing, IPN, June 21, 2005.
- Tutoring master's thesis "Integral Reservoir Characterization: Integrating Well Log Data with Seismic Attributes Using Geostatistics", Jimenez Martin Guerrero. Division of Graduate Studies, Faculty of Engineering, UNAM, September 14, 2005.
- Tutoring master's thesis "Pest Management With Geostatistical Methods", Cristina Ramirez Leon, Master in Geographic Information Systems, Technical University of Catalonia, 2006.
- Tutoring master's thesis: "Dynamic Permeability Upscaling in Double Porosity Reservoirs Using a Multiscale Model for Well Test Data", Jose Maria Pétriz Munguía, Graduate Mexican Petroleum Institute, September 12, 2007.

- Tutoring master's thesis: "Application of t-Copulas for Joint Porosity-Permeability Stochastic Simulation Constrained with Well Test Data" Hugo Enrique Huerta Medina, Graduate Program, Mexican Petroleum Institute, October 1, 2007.
- Tutoring master's thesis "Modeling the Spatial Distribution of Precipitation in Mexico City Valley using Geostatistics", Javier Venegas Mendez, Master of Statistics, Graduate College, Campus Montecillo, Chapingo, 29 May 2008.
- Tutoring master's thesis "Optimal Design of Monitoring Network of Saltillo-Ramos-Arizpe Aquifer for the Adequate Management Of Water Resources Applying a Geostatistical Approach", Félix Canul Pech. Graduate Earth Sciences, Institute of Geophysics, UNAM, May 19, 2011.
- Tutoring the thesis "Application Of Gauss Theorem in Secondary Oil Recovery", Patricia Moreno Wong, BS in Physics, Unison, August 18, 2011.
- Tutoring master's thesis "Geostatistical Estimation of Spatial Distribution of Monthly and Annual Precipitation Mean in Nuevo Leon State", Silvio Gustavo Villarreal Maces. Graduate Earth Sciences, Institute of Geophysics, UNAM, September 19, 2011.
- Tutoring thesis "Exploratory Data Analysis in Geostatistical Estimation", Aura Archundia Avila, Faculty of Sciences, UNAM, December 8, 2011.
- Postdoctoral advisory of Dr. Carlos Javier Sosa Paz with the research topic: "Inverse Flow And Transport Problems in Porous Media," Mexican Petroleum Institute 2010-2012.
- Tutoring master's thesis "A Model for Geostatistical Uncertainty Assessment Of Coal Reserves Estimation in Mine Peñitas-Guadalupe, Nuevo Laredo, Tamaulipas", Juan Carlos Marquez Adame. Graduate Earth Sciences Program, Institute of Geophysics, UNAM, November 28, 2013.
- Tutoring master's thesis "Automated Classification of Facies at Well Log Scale Using Artificial Neural Networks in Siliciclastic Turbidite Fields", Christian Agni Herrera Ramirez. Division of Graduate Studies, Faculty of Engineering, UNAM, March 14, 2014.
- Tutoring doctoral thesis "Stochastic Spatial Simulation of Petrophysical Properties Using Bernstein Copulas", Hernandez Victor Maldonado, Graduate Program, Mexican Petroleum Institute, April 29, 2014.
- Tutoring the thesis "Mathematical Flow Models in Porous Media with Fractal Properties", Juan Eduardo Perez Linares, Faculty of Sciences, UNAM, May 22, 2014.
- Tutoring master's thesis "Geological and Petrophysical Modeling of a Well Array in a Sicicíclastic Turbidite Reservoir", Paola Checa Rojas, Master of Geosciences and Natural Resources Management, ESIA-Ticoman, IPN, (ongoing), 2014.
- Tutoring doctoral thesis "Geostatistics-Stochastic Modeling Of Spatial Distribution of Facies in a Sicicíclastic Turbidite Reservoir Using a Process Approach", Javier Venegas Mendez, Graduate Earth Sciences, Institute of Geophysics, UNAM, (finished, currently under review), 2014.
- Tutoring the thesis "Continuum percolation models for discrete fracture networks in naturally fractured porous media", Daniella Carla Garcia Ayala, Faculty of Sciences, UNAM, (ongoing), 2014.
- Tutoring the thesis "Models Of Flow And Transport Using Discrete Fracture Approach For Naturally Fractured Reservoirs", Carlos Alberto Romano Pérez, Engineering Faculty, UNAM, (ongoing), 2014.
- Tutoring doctoral thesis "Optimization Modeling For Geological Resource Estimate Porphyry Copper: Optimal Prediction Of Occurrence Wad. Case Study: Deposit Lomas Bayas", Andrea Rojas Pardo. Doctor of Science, Geology mention, UCN, Chile, (ongoing), 2014.
- Tutoring doctoral thesis "Methodology for Estimating Hydrocarbon Content in Clay Facies for Unconventional Reservoirs as Shale Gas Type". Case Study: Deposit Lomas Bayas", Abel Castro Mesa. Ph.D. in Mathematics with specialization in Applied Statistics, IIMAS, UNAM, (ongoing), 2014.

- Tutoring doctoral thesis "Copula Based Models For Joint Stochastic Simulation of Discrete Fracture Network Properties in Fractured Porous Media", Francisco Mendoza Torres, Graduate Earth Sciences, Institute of Geophysics, UNAM, (ongoing), 2014.

Awards

- Red Diploma for obtaining qualifications 4.75/5, Moscow Power Engineering Institute (MPEI), Russia, 1988.
- First Degree Diploma for the best thesis made by a foreigner student, Moscow Power Engineering Institute, Russia, 1988.
- Honorific Mention for Doctor in Sciences degree dissertation, 12 November, 2001
- Second Place Award "Motivation System Exploration" Sismotex 2009, awarded by the Technical Department of PEMEX Exploration Exploration Production (PEP), the work "3D sedimentary facies of the Kimmeridgian Model and their impact on the business plan in the Akal Block, Cantarell field ".
- National Researcher Level II
- Certificate of recognition for 10 years of academic services at UNAM, CU, Mexico City, August 2012.
- Certificate of recognition for being 10 years of continuous member of the Society of Petroleum Engineers (SPE), 28 May 2013.

Scientific Memberships

- Mexican Society of Numerical Methods in Engineering (founder member).
- Society of Petroleum Engineers (SPE)
- International Association of Mathematical Geosciences (IAMG)
- Mathematical and Computational Model Network, National Council of Sciences and Technologies (CONACYT), since March 27th, 2011.
- Mexican Mathematical Society (SMM).
- International Society for Porous Media (InterPore). Secretary of the Mexican Chapter of InterPore since January 24th, 2014.

Others

- Founder of the research group "Mathematical and Computational Modeling" (http://mmc.geofisica.unam.mx/) Member since 2003.
- Promoter and founder member of the research group of "Spatial Stochastic Modeling" (http://mmc2.geofisica.unam.mx/gmee/index.html) since January 20, 2010.
- Member of the Thematic Area of Hydrocarbon Exploration Graduate IMP, from 19 June 2009 until 17 May 2013.
- Promoter and founder member of the Mexican Chapter of InterPore, since January 24th, 2014.