

JUAN ROSELLÓN

(March 2011)

A. PERSONAL INFORMATION

Complete Name: Juan de Dios Enrique Rosellón Díaz

Office telephone number: (52)(555)727-9870

Office Fax number: (52)(555)727-9878

Email: juan.rosellon@cide.edu

Place of birth: Monterrey, Mexico

Birth date: September 5, 1962

Marital status: Married, two kids

Citizenship: Mexican.

Languages: Spanish (native speaker), English, German (currently intermediate level
–B2 level of the Goethe Institut-- Zertifikat Deutsch)

B. POSITIONS

- Current position: Professor of Economics (with TENURE)
Institution: Centro de Investigación y Docencia Económicas (CIDE)
Period of employment: June 1993 - January 1995, July 1997 - present. Tenure since 2003.

Address: Carretera México-Toluca 3655, Lomas de Santa Fe, 01210. México, D.F.

Telephone number: (52)(555)727-9870

Fax number: (52)(555)727-9878

Email: juan.rosellon@cide.edu

- Current position: Research Professor,
Institution: DIW Berlin.
Period: Since April 2010.
- Current position: Visiting Professor,
Institution: Work Group for Infrastructure Policy (WIP), TU Berlin.
Period: Since April 2010.
- Past position: Visiting Research Associate
Institution: Lehrstuhl für Energiewirtschaft, Technische Universität Dresden (TU Dresden)
Period: April 2007-April 2010.
Address: Münchner Platz 3, 01069 Dresden, Germany
Telephone number: +49-(0)351-463-36221
Fax number: +49-(0)351-463-39763
Email: juan.rosellon@tu-dresden.de
- Past position: Visiting Senior Fellow
Institution: Harvard Electricity Policy Group, Center for Business and Government, Kennedy School of Government, Harvard University
Period: December 2007 through January 2008.
Previous periods (*Repsol-YPF-Harvard Kennedy School Senior Fellow*), June 2005 through August 2006, September 2002 through June 2004 .
Address: 79 JFK Street, Cambridge, MA, 02138.

C. EDUCATION

- **Ph. D. (Economics)**, GPA: 3.902/4.0, **RICE UNIVERSITY**, Houston, Texas, USA. 1991-1993. (**Areas of specialization:** Economics of Regulation, Energy Economics, Microeconomics and Industrial Organization)
- **M.A. (Economics)**, GPA: 3.902/4.0, **RICE UNIVERSITY, 1988-90.**
- **M.Sc. (Mathematics)**, GPA: 10/10, **UNIVERSIDAD NACIONAL AUTÓNOMA DE MÉXICO (UNAM)**, *Facultad de Ciencias*, Mexico City, 1987-88 (thesis pending).
- **B.Sc. (Mathematics)**, GPA: 9.56/10, **UNAM, Facultad de Ciencias**, 1982-86.
- **B.A. (Economics)**, GPA: 10/10, **UNAM, Facultad de Economía**, 1980-85.
- **High school**, GPA: 10/10, **UNAM, México, D.F.**, 1977-80.

D. PUBLICATIONS

Published Papers in International Refereed Journals

1. “Lumpy Investment in Regulated Natural Gas Pipelines: an Application of the Theory of the Second Best,” *Networks and Spatial Economics* (with D.L. Brito), *forthcoming*.
2. “Incentives for Transmission Investment in the PJM Electricity Market: FTRs or Regulation (or both?),” *Utilities Policy*, [Volume 19, Issue 1](#), January, Pages 3-13 (with Myslikova, Z. and E. Zenón), *forthcoming*.
Top Ten SSRN download list for: Energy Policy (Sub-Topic) and Transportation Science eJournal(September 10th, 2010). Top Ten SSRN download list for: Transportation Science eJournal (and December 30th, 2010).
3. “A Dynamic Incentive Mechanism for Transmission Expansion in Electricity Networks—Theory, Modeling and Application”, *The Energy Journal*, Vol. 32, No. 1, 2011 (with Hannes Weigt).
Winner of the 4th Reimut Jochimsen Prize, awarded by the German Central Bank: "European Infrastructure Policy, Challenges for Future Energy Markets in the European Community." Top Ten SSRN download list for: Theory: Networks, Other (April 2008).
4. “Strategic Behavior and International Benchmarking for Monopoly Price Regulation: The Case of Mexico,” *Zeitschrift für Energiewirtschaft (German Journal of Energy Economics)*, Springer, Volume 34, Number 3, 163-177, DOI: 10.1007/s12398-010-0023-z, 2010 (with D.L. Brito).
5. “Toward a Combined Merchant-Regulatory Mechanism for Electricity Transmission Expansion,” *Journal of Regulatory Economics*, Vol. 38, No. 2, 113-143, 2010 (with William W. Hogan, and Ingo Vogelsang).
6. “Merchant Electricity Transmission Expansion: A European Case Study,” *Energy*, Volume 35, Issue 10, October 2010, Pages 4107-4115 (with Tarjei Kristiansen).

7. "Pricing Natural Gas in Mexico: An Application of the Little-Mirrlees Rule – the Case of Quasi-Rents, *Southern Economic Journal*, 76(4), 2010, (with D.L. Brito).
8. "An Incentive Mechanism for Electricity Transmission Expansion in Mexico," *Energy Policy*, Vol. 35, Issue 5, pp. 3003-3014, May 2007, ISSN: 0301-4215, Imprint: ELSEVIER. (Previous version published in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers, William Hogan, editor, Cambridge, MA, Kennedy School of Government, Harvard University, April, 2005, http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf)
9. "Different Approaches to Supply Adequacy in Electricity Markets," *Energy Studies Review*, volume 14, issue 2, pp. 101-130, 2006, ISSN: 0843-4379 (Previous version published in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers, William Hogan, editor, Cambridge, MA, Kennedy School of Government, Harvard University, April, 2005, http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf)
10. "A Merchant Mechanism for Electricity Transmission Expansion," *Journal of Regulatory Economics*, vol. 29, no.2, , pp. 167-193, March, 2006, ISSN: 0922-680X (Print) 1573-0468 (Online) (with Tarjei Kristiansen). (Previous version published in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers, William Hogan, editor, Cambridge, MA, Kennedy School of Government, Harvard University, April, 2005, http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf)
11. "[The Political Economy of Solar Energy, in Energy and Nanotechnology: Prospects for Solar Energy in the 21st Century](#) , *The James A. Baker III Institute for Public Policy*, pp. 1-16, Rice University, December, 2005, http://www.rice.edu/energy/publications/docs/NANO_PotliticalEconSolarEnergy.pdf (with D.L. Brito)
12. "Price Regulation in a Vertically Integrated Natural Gas Industry: The Case of Mexico," *The Review of Network Economics*, vol. 4, issue 1, pp. 75-92, March, 2005, ISSN: 1446-9022, <http://www.rnejournal.com/index.html> (with D.L. Brito). (Previous version published in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers, William Hogan, editor, Cambridge, MA, Kennedy School of Government, Harvard University, April, 2005, http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf)
13. "Different Approaches Towards Electricity Transmission Expansion," *The Review of Network Economics*, vol. 2, issue 3, pp. 238-269, September 2003, ISSN: 1446-9022, <http://www.rnejournal.com/index.html>.
14. "Pricing Natural Gas in Mexico; An Application of the Little Mirrlees Rule," *The Energy Journal*, Vol. 24, No. 3, pp. 81-93, 2002, ISSN: 0195-6574 (with D. L. Brito).

15. "Pricing Natural Gas Distribution in Mexico," *Energy Economics*, Vol. 24, No. 3, pp. 231-248, May, 2002, ISSN: 0140-9883, Imprint: NORTH-HOLLAND (with J. C. Ramírez).
16. "Regulatory Reform in Mexico' Natural Gas Industry. Liberalization in the Context of a Dominant Upstream Incumbent," *Policy Research Working Paper, The World Bank*, 2537, pp. 1-37, January 2001, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=632633 (with J. Halpern).
17. "Designing Natural Gas Distribution Concession in a Megacity. Tradeoffs between Scale Economies and Information Disclosure in Mexico City," *Policy Research Working Paper, The World Bank*, 2538, pp. 1-26, January 2001, <http://ideas.repec.org/p/wbk/wbrwps/2538.html> (with J. Halpern).
18. "The Economics of Rules of Origin," *The Journal of International Trade and Economic Development*, Vol. 9, No. 4 December 2000, pp. 397-425, ISSN: 0963-8199 (print), 1469-9559 (online).
19. "Pricing Liquid Petroleum Gas in Mexico," *Southern Economic Journal*, Vol. 66, No. 3, pp. 742-743, January 2000, ISSN: 0038-4038 (with D.L. Brito and W. L. Littlejohn).

Submitted Papers to Refereed Journals

20. "Long-run cost functions for electricity transmission," *The Energy Journal* (with I. Vogelsang and H. Weigt), *Revise and Resubmit*.
21. "El modelo HRV para expansión óptima de redes de transmisión: una aplicación a la red eléctrica de Ontario," *Economía Mexicana. Nueva Época* (with. J Tregear and E. Zenón), *Revisar y Reenviar*.
22. "Expansión de las Redes de Transmisión Eléctrica en Norteamérica: Teoría y Aplicaciones", *El Trimestre Económico* (with E. Zenón)
23. "Transmission Investment in the Peruvian Electricity Market: Theory and Applications," *Energy Policy* (with E. Ruiz)

Book Chapters

24. Chapert Eight: Mexico, in Oil and Gas Management and Revenues in Federations, Goerge Anderson (editor), **Oxford University Press**, *forthcoming*.
25. Mechanisms for the Optimal Expansion of Electricity Transmission Networks, in International Handbook on the Economics of Energy (IHEE), Joanne Evans and Lester Hint (editors), **Edward Elgar Publishing**, 2009.
26. Regulation of Natural Gas Pricing in Mexico, in Robert Klitgaard (editor): Successful Policy Research: Case Studies from Around the World, **Rand Corporation**, *forthcoming*.
27. The Mexican Electricity Sector: Economic, Legal and Political Issues, in The Political Economy of Power Sector Reform, The Experiences of Five Major Developing Countries, David G. Victor and Thomas C. Heller (editors), **Cambridge University Press** 2007, pp. 175-214, 2007, (with V.G. Carreón, and A. Jimenez-San Vicente), ISBN-13: 9780521865029 | ISBN-10: 0521865026.

- (Previous version published in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers, William Hogan, editor, Cambridge, MA, Kennedy School of Government, Harvard University, April, 2005, http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf).
28. Strategic Behavior and the Pricing of Gas in Mexico, in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers William Hogan, editor, Cambridge, MA, Kennedy School of Government, **Harvard University**, April, 2005 (with D.L. Brito), http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf.
 29. Implications of the Elasticity of Natural Gas in Mexico on Investment in Gas Pipelines and in Setting the Arbitrage Point, in Repsol YPF-Harvard Kennedy School Fellows 2003-2004 Research Papers, William Hogan, editor, Cambridge, MA, Kennedy School of Government, **Harvard University**, April, 2005 (with D.L. Brito), http://www.ksg.harvard.edu/m-rcbg/repsol_ypf-ksg_fellows/03-04_research_papers.pdf.
 30. Natural Gas Sector Review, in Private Solutions for Infrastructure in México, 2002 , **The World Bank**, PPIAF, ISBN: 0821354140.
 31. Economic and Political Implications of New Developments in Thin Film Solar Technology, in Global Warming: Science and Policy, Cambridge University Press, 2000, (with D. L. Brito), Baker Institute for Public Policy, **Rice University**, http://www.bakerinstitute.org/Pubs/faculty_brito1.pdf

Books

32. Financial Transmission Rights: Analysis, Experiences and Prospects, **Springer Verlag**, (with T. Kristainsen) *forthcoming*.

Refereed SSCI Latin American Journals

33. “Incentives for Supply Adequacy in Electricity Markets: An Application to the Mexican Power Sector,” *Economía Mexicana. Nueva Época (SSCI Journal)*, vol. XVIII, no. 2, 2009 (with V. Carreón)..
34. “Investigación académica que sustenta la toma de decisiones: El convenio CIDE-CRE”, 2008, *Gestión y Política Pública (SSCI Journal)*, Vol. 17, Núm. 1, pp.71-99, primer semestre de 2008. ISSN: 1405-1079.
35. “LNG in the Northwestern Coast of Mexico: Impact on Prices of Natural Gas in Both Sides of the U. S.-Mexico Border,” *Frontera Norte*, no. 36, pp. 7-27, 2006, ISSN: 0187-7372 (with Sophie Meritet, Alberto Elizalde).
36. “Un Modelo de Equilibrio General para la Fijación de Precios del Gas Natural en México,” *El Trimestre Económico (SSCI Journal)*, vol. LXXII (2), Num. 286, pp. 391-408, abril-junio, 2005, ISSN: 0041-3011 (with D.L. Brito).

37. "Regulation of Gas Marketing Activities in Mexico," *Estudios Económicos*, Vol.18, No.1 January-June 2003, pp. 15-35, ISSN: 0188-6916 (with D. L. Brito).
38. "Oportunidad de la Inversión en Gasoductos de GLP en México," *El Trimestre Económico (SSCI Journal)*, Vol. 69 (4), No. 276, 2002, pp. 567-581, ISSN: 0041-3011 (with D. L. Brito).
39. "La Reforma del Sector Eléctrico Mexicano: Recomendaciones de Política Pública," *Gestión y Política Pública (SSCI Journal)*, Vol. XI, No. 2, 2002, pp. 243-299, ISSN: 1405-1079 (with V. Carreón).
40. "Una nota sobre la regulación del gas en México: Comentarios críticos," *El Trimestre Económico (SSCI Journal)*, Vol. 69 (3), No. 275, pp. 435-441, January-March 2002, ISSN: 0041-3011 (with D. L. Brito)
41. "Reglas de Origen y Análisis del Bienestar," *El Trimestre Económico (SSCI Journal)*, Vol. LXVIII (1), No. 269, January-March, pp. 3-38, 2001, ISSN: 0041-3011.
42. "La Regulación de las Tarifas de Distribución del Gas Natural en México: Un Modelo Estocástico," *El Trimestre Económico (SSCI Journal)*, Vol. LXVII (2), No. 266, , pp. 239-276, April-June, 2000, ISSN: 0041-3011 (with J. C. Ramírez).
43. "Determinación de precios del gas licuado de petróleo en México," *El Trimestre Económico (SSCI Journal)*, vol. LXVI(4), No. 264, pp. 763-780, October-December 1999, ISSN: 0041-3011 (with D. L. Brito, and W. L. Littlejohn).
44. "Price and Rate Regulation for the Mexican Natural Gas Industry: Comments on Policy Decisions", *Economía Mexicana. Nueva Época (SSCI Journal)*, vol.II, no. 2, pp. 267-308, 1998, ISSN: 0185-0458.
45. "Temas Esenciales de La Economía de la Ciencia," *Investigación Económica*, UNAM, no. 223, pp. 125-158, enero-marzo 1998, ISSN: 0185-1667.
46. "Regulatory Reform in Mexico's Gas Industry," *Revista de Análisis Económico*, ILADES/Georgetown University, vol. 10, No. 2, pp. 267-283, November 1995, ISSN: 0716-5927
47. "Reglas de Origen de Tratados de Libre Comercio: Efectos sobre el uso de Factores Domésticos de la Producción," *Economía Mexicana. Nueva Época (SSCI Journal)*, CIDE, vol. II, no. 1, pp. 61-92, México, January-June 1994, ISSN: 0185-0458.
48. "La Economía Elemental de las Reglas de Origen," *El Trimestre Económico (SSCI Journal)*, F.C.E., No 231, pp. 481-496, 1991, ISSN: 0041-3011 (with Raúl Ramos Tercero).

Book Chapters in Spanish

49. Economía de la Ciencia in Enciclopedia Iberoamericana de Filosofía, Vol. 30. Sobre la Economía y sus Metodos, Editorial Trotta, Madrid, Spain, 2009, ISBN: 978-84-9879-056-6.
50. Incentivos para la Expansión de la Red de Transmisión Eléctrica en México Mediante la Regulación de Precios in La Realidad Económica Actual y sus Corrientes de Interpretación: Un Debate Inicial, edited by UNAM/ Miguel Angel Porrúa, 2002 (with A. Nevárez), ISBN 970-701-306-0.

51. El Modelo Principal-Agente en el Análisis de la Política Científica en Países en Desarrollo, en Ciencia Económica y Economía de la Ciencia: Reflexiones filosófico-metodológicas, edited by **SIAME/FCE**, 2001 (with B. de la Torre), ISBN: 84-375-0507-0.
52. Alternativas de Regulación en el Sector Eléctrico, in La Reforma Estructural del Sector Eléctrico, edited by **ITAM-Miguel Angel Porrúa**, June 2000, ISBN: 9707010304
53. La Regulación de Precios y Tarifas para la Industria del Gas Natural en México, in Transiciones Energéticas en México, Centro y Sudamérica (1999), Segundo Congreso Nacional de la Asociación Mexicana para la Economía Energética, A. C., ISBN: 968-36-7479-8.

Books Published in Mexico

54. Different Approaches to Electricity Transmission Expansion in Mexico, Centro de Investigación para el Desarrollo (CIDAC), Mexico, (bilingual version), ISBN: 978-968-9123-06-4, 2007.
55. División Óptima de la Zona Metropolitana de la Ciudad de México para fines de Distribución de Gas Natural, CIDE-CRE-Limusa coedition, 2000, (Editor).

Working Papers (Complete listing):

56. Regulated Expansion of Electricity Transmission Networks: The Effects of Fluctuating Demand and Wind Generation, Discussion Papers of DIW Berlin 1109, DIW Berlin, German Institute for Economic Research (with W.P. Schill and J. Egerer).
57. *El modelo HRV para expansión óptima de redes de transmisión: una aplicación a la red eléctrica de Ontario*, CIDE, (with. J. Tregear, E. Zenón), CIDE, DTE 493..
58. *Expansión de las Redes de Transmisión Eléctrica en Norteamérica: Teoría y Aplicaciones*, 2010, CIDE, DTE 479.
59. *The Hydrocarbon Sector in Mexico: from The Abundance to the Uncertain Future*, 2009, CIDE, DTE 472 (with Carreón-Rodríguez, V., E. Zenón).
60. *Long-run cost functions for electricity transmission*, 2009, CIDE, DTE 465, (with Vogelsang I., and H. Weigt).
Top Ten SSRN download list for: Randomized Social Experiments; Econometric Modeling in Microeconomics; Networks; Regulation; Energy Policy; Primary Taxonomy (December 27th). Top ten SSRN download list for Econometric Modeling in Microeconomics (December 31st, 2009). Top ten SSRN download list for Randomized Social Experiments (January 3rd, 2010). Top ten SSRN download list for Energy Policy (Sub-Topic). (December 30th, 2010)
61. *Incentives for Transmission Investment in the PJM Electricity Market: FTRs or Regulation (or both?)*, 2009, CIDE, DTE 463, (with Myslikova, Z. and E. Zenón).
Top Ten SSRN download list for: Energy Policy (Sub-Topic) and Transportation Science eJournal(September 10th, 2010). Top

**Ten SSRN download list for: Transportation Science eJournal
(and December 30th, 2010)**

62. *Lumpy Investment in Regulated Natural Gas Pipelines: An Application of the Theory of the Second Best*, 2008, CIDE, E-426 (with D.L. Brito)
63. *A Dynamic Incentive Mechanism for Transmission Expansion in Electricity Networks – Theory, Modeling and Application*, 2008, CIDE and EE2, E-424 (with Hannes Weigt).
Winner of the 4th Reimut Jochimsen Prize, awarded by the German Central Bank: "European Infrastructure Policy, Challenges for Future Energy Markets in the European Community." Top Ten SSRN download list for: Theory: Networks, Other (April 2008).
64. *Quasi-Rents and Pricing Gas in Mexico*, 2008, CIDE, E-423 (with D.L. Brito)
65. *Merchant Electricity Transmission Expansion: A European Case Study*, 2007, CIDE, E- 391, (with Tarjei Kristiansen).
66. *Toward a Combined Merchant-Regulatory Mechanism for Electricity Transmission Expansion*, 2007, CIDE, E-389 (with William Hogan, and Ingo Vogelsang).
67. *The political Economy of Solar Energy*, 2006, CIDE, E-357, (with Dagobert L. Brito)
68. *The Mexican Electricity Sector: Economic, Legal and Political Issues* , 2005, CIDE, E-342, (with Víctor Carreón, and A. Jiménez).
69. *Regulation of Natural Gas Pricing in Mexico*, 2005, CIDE, E-337.
70. *LNG in the Northwestern Coast of Mexico: Impact on Prices of Natural Gas in Both Sides of the US-Mexico Border*, 2005, CIDE, E-338 (with Sophie Meritet and Alberto Elizalde).
71. *Incentives for Supply Adequacy in Electricity Markets: An Application to the Mexican Power Sector*, 2005, CIDE, E-332, (with Víctor Carreón).
72. *Liquid Natural Gas and a New Policy for Pricing Gas in Mexico*, 2005, CIDE, E-314 (with D.L. Brito)
73. *Different Approaches to Supply Adequacy in Electricity Markets*, 2004, CIDE, E-298 .
74. *Implications of the Elasticity of Natural Gas in Mexico on Investment in Gas Pipelines and in Setting the Arbitrage Point*, 2004 , CIDE , E-299 (with D.L. Brito) .
75. *A Merchant Mechanism for Electricity Transmission Expansion*, 2003, CIDE, E-276 (with Tarjei Kristiansen).
76. *Pricing electricity transmission in Mexico*, 2003 , CIDE, E-270.
77. *Different Approaches Towards Electricity Transmission Expansion* , 2003 , CIDE, E-260
78. *Mexican Electricity Sector: Economic, Legal and Political Issues* , 2003, Center for Environmental Science and Policy, Stanford University , WP 05; also published as a CIDE working paper (with Víctor Carreón, and A. Jiménez).
79. *Privatization and Income Distribution in Mexico* , 2003 , Instituto de Políticas Públicas y Estudios del Desarrollo , Mexico , WP 2003-05 (with Luis Felipe López-Calva).

80. *Strategic Behavior and the Pricing of Gas*, 2003 , CIDE, E-259 (with D.L. Brito).
81. *A Solar Power Export Project in Mexico for the Californian Electricity Market*, Working Paper, E-230,CIDE, 2002 (with D. L. Brito).
82. *Pricing natural gas distribution in Mexico*, CIDE, E-229, 2002, (with José C. Ramírez & Juan Rosellón).
83. *A General Equilibrium Model of Pricing Natural Gas in México*, Working Paper, E- 228, CIDE, 2002 (with Dagobert L. Brito).
84. *On the Potential Distributive Impact of Electricity Reform in México*, Working Paper, E -223, CIDE, 2001 (with Luis F. López – Calva).
85. *Incentives for Expansion of Electricity Supply and Capacity Reserves in the Mexican Electricity Sector*, Working Paper, E – 219, CIDE, 2001 (with Victor Carreón).
86. *Incentivos para la Expansión de la Red de Transmisión Eléctrica en México Mediante la Regulación de Precios*, Working paper, E- 210, CIDE, 2001 (with Armando Nevárez).
87. *Economic and Political Implications of New Developments in Thin Film Solar Technology*, Working Paper, E-201, CIDE, 2001 (with D.L. Brito).
88. *The Economic Rationale of the Structural and Regulatory Reform of the Mexican Electricity Sector*, Working Paper, E-199, CIDE 2001 (with Víctor Carreón).
89. *The Reform of the Natural gas Market in Mexico: Effects on Production and Distribution*, Working Paper, E-198, CIDE, 2000 (with Luis Felipe López Calva).
90. *Regulatory Reform in Mexico's Natural Gas Industry. Liberalization in the Context of a Dominant Upstream incumbent*, Working Paper, E-194, CIDE, 2000 (with Jonathan Halpern).
91. *Designing Natural Gas Distribution Concession in a Mega-city: the case of Mexico City*, Working Paper, E-193, CIDE, 2000 (with Jonathan Halpern).
92. *Timing of investment in LPG Pipelines in Mexico*, Working Paper, E-184, CIDE, 2000 (with D.L. Brito).
93. *Regulation of Gas Marketing Activities in Mexico*, Working Paper, E-165, CIDE, 1999 (with D.L. Brito).
94. *La Regulación de las tarifas de Distribución del Gas Natural en México: Un Modelo Estocástico*, Working Paper, E-142, CIDE, 1999 (with J. C. Ramírez).
95. *División Óptima de la Zona Metropolitana de la Ciudad de México para Fines de Distribución de Gas Natural*, Working Paper, E-121, CIDE, 1998 (editor).
96. *Pricing Natural Gas in Mexico*, Working Paper, CIDE E-120, 1998 (with D.L. Brito).
97. *Pricing Liquid Petroleum Gas in Mexico*, Working Paper , E-108, CIDE, 1998 (with D.L. Brito and W.L. Littlejohn).
98. *Una reseña sobre Temas Esenciales de La Economía de la Ciencia*, Working Paper, E-88, CIDE, 1997.
99. *Price and Rate Regulation for the Mexican Natural Gas Industry: Comments on Policy Decisions*, Working Paper, E-86, CIDE, 1997.

100. *El Impacto del TLC en las Relaciones de Comercio e Inversión entre la CE y México (una Reseña de la Investigación y la Información Empírica)*, Working Paper, CIDE, E-43, México, 1995.
101. *Rules of Origin and Welfare Analysis*, Working Paper, CIDE, E-19, México, 1994.
102. *The Basic Economics of Rules of Origin*, Working Paper, CIDE, E-18, 1994 (with Raúl Ramos).

Work in progress

- Electricity transmission:
 - Applications of the HRV model to large scale renewable systems (RES) (eg., DESERTEC project). Implies an “upgrade” of the HRV approach to deal with timing issues dispatch for RES systems.
 - Applications of the HRV model to various networks in Europe and North America (border and institutional issues).
 - FTR-based cost and demand functions (theoretical and empirical).
 - A general theory of networks.
 - Substitution trade-off between transmission and generation expansion.
 - Welfare-based merchant FTR auctions. The idea is to generate “pure-merchant” mechanisms that are able to produce welfare-enhancing FTR auctions.
 - Application of “pure” merchant mechanism to European TLC (trilateral market coupling) arrangements.
- Natural gas transmission expansion:
 - Application of the HRV mechanism to European natural-gas networks. Implies an “upgrade” of the HRV approach to deal with discrete issues in natural-gas systems (such as trade-offs between investment in pipelines, LNG terminals and storage facilities).
 - Experimental-economics analysis of transmission expansion projects.
 - Distributive issues on price regulation of Local Distribution Companies.
- Hydrocarbon sectors in Latin America. This research studies the political economy of hydrocarbon sectors in Latin America, through a comparative analysis. Environmental issues will also be addressed
- Economic and political implications of solar energy technological developments. This research will make a cost analysis of the recent developments in photovoltaic-cells, as well as CSP projects, and will discuss the political-

economy implications. Public policies that promote technological innovation processes will also be addressed.

E. ACADEMIC ACTIVITIES

TU BERLIN, Work Group for Infrastructure Policy (WIP): Trainer at INFRATRAN 2010:

- Training Session: “Transmission Expansion of Electricity Networks with Time-Varying Supply and Demand,” October 4-8, 2010.

TU BERLIN, Work Group for Infrastructure Policy (WIP): Trainer at INFRATRAN 2009:

- Training Session: “Transmission Expansion of Electricity and Natural Gas Networks Theory and Numerical Simulations.” October 5-9, 2009.

TU DRESDEN: Instructor in the following course:

- Energiewirtschaft IV (Industrieökonomische Analyse von Energiemärkten): Regulatory Economics Course with Applications to the Energy Sector, Graduate Program in Energy Economics, Chair of Energy Economics and Public Sector Management, TU Dresden, Summer 2007, Summer 2008 (various readings).

CIDE: Instructor in the following courses:

- "Public Economics I", M.A program in economics, Fall 2008, 2007, 2006, 2005, 2004, 2001, 2000, 1999, 1998, 1997, 1996. Main text: Laffont, J. "Fundamentals of Public Economics", MIT Press, 1989;
- "Public Economics II", M.A program in economics, Spring 2009, 2008, 2007, 2006, 2005, 2001, 1999, 1998, 1997. Main text: Laffont, J. "Fundamentals of Public Economics", MIT Press, 1989;
- “Microeconomics II”, M.A. program in economics, Spring 2002. Main Text: “Microeconomic Theory”, Mas-Colell, Whinston and Green, Oxford, 1995
- "Regulation and Contracts", B.A and M.A programs in economics, Spring 2008, 2007, 2006, 2005, 1999. Main text: Armstrong, M., S. Cowan and J. Vickers, "Regulatory Reform", MIT Press, 1993;
- "Regulation and Contracts", B.A program in economics, Spring 1997, 1996. Main text: Armstrong, M., S. Cowan and J. Vickers, "Regulatory Reform", MIT Press, 1993;
- "Microeconomics III", B.A program in economics, Spring 1995. Main text: Varian, H.R., "Microeconomic Analysis", Norton&Co., 3rd edition, 1992;

- "Introduction to Econometrics", M.A program in public administration, Spring 1994. Main text Kmenta, J., "Elements of Econometrics", Mc Millan, 2nd edition, 1986.

UNAM

- External Director of Ph.D. thesis in Energy at the Graduate School of Engineering (Facultad de Ingeniería) from UNAM, since 2006.
- External Academic Advisor at the Faculty of Engineering, Energy Program, UNAM, since 2006.

CIDE:

- Director of the economics journal "Revista Economía Mexicana, Nueva Época" from 2000 through 2002.

CIDE

- Academic Coordinator of the "Workshop on Energy Economics and Regulation" (Diplomado en *Economía y Regulación de la Energía*), targeted to train Mexican government officials in the energy sector, 1999 and 2000.

CIDE

- Director of 15 MA thesis, 2 Ph.D. thesis, and 8 BA thesis in CIDE's economics programs.

RICE UNIVERSITY: "Teaching Assistant" in the following courses:

- "Microeconomic Theory 508" (Dr. B. Jun), Ph. D. program in economics, Spring 1990.
- "Microeconomic Theory 501" (Dr. D. L. Brito), Ph. D. program in economics, fall 1989.

CIDE

- Member of the CIDE's *Committee for Sabbatical Periods and Licenses (Comité de Sabáticos y Licencias)* 2000-2002.

CONACYT (Mexican National Science Foundation)

- Member of the *Evaluation Committee of Mexican Technological and Scientific Journals* 2005-2007.
- Member of the *Evaluation Committee of the CONACYT Fund for Precompetitive Technologies* 2000-2002
- Evaluator of research projects since 1997
- Referee for the CONACYT's fellowship program for overseas PhD programs since 1994.

- Referee for the following Journals:

JOURNAL OF ECONOMIC BEHAVIOR AND OPTIMIZATION
ENVIRONMENT AND DEVELOPMENT ECONOMICS
ENERGY POLICY
IEEE TRANSACTIONS ON POWER SYSTEMS
MANAGEMENT SCIENCE
IBM JOURNAL OF RESEARCH AND DEVELOPMENT
ENERGY ECONOMICS
REVIEW OF DEVELOPMENT ECONOMICS
JOURNAL OF REGULATORY ECONOMICS
THE ENERGY JOURNAL
INTERNATIONAL ECONOMIC REVIEW
EL TRIMESTRE ECONÓMICO
ESTUDIOS ECONÓMICOS
ECONOMIA MEXICANA
PROBLEMAS DEL DESARROLLO
INVESTIGACIÓN ECONÓMICA
GESTIÓN Y POLÍTICA PÚBLICA

F. PROFESSIONAL POSITIONS

COMISIÓN REGULADORA DE ENERGÍA (CRE), Mexico City, General Director of Economic Policy, from 1995 through 1997:

- Direction of the team that elaborated the "Prices and Tariffs Directive" (*Directiva sobre la Determinación de Precios y Tarifas para las Actividades Reguladas en Materia de Gas Natural*), published on March 1996, which sets the specific price and rate for the natural gas industry in Mexico;
- Direction of the team that wrote the "Accounting Directive for the Regulated Activities on Natural Gas" (*Directiva de Contabilidad para las Actividades Reguladas en Materia de Gas Natural*) published on May 1996, which establishes the accounting guidelines that must be used by companies in their price and rate computations;
- Direction of the team that evaluated the economic and financial proposals presented for bids in order to obtain a distribution permit (in cities such as Mexicali, Chihuahua and Mexico City);
- Participation in the group that designed the new market structure for the natural gas industry in Mexico (according to the 1995 legal modifications that now allow private investment in transportation, distribution and storage services);
- Participation in the group that wrote the "Natural Gas Regulations" (published on November 1995). I advised mainly on topics such as market structure and price and tariff regulation;
- Participation in the group that evaluated the economic and financial proposals presented to obtain a transportation permit;
- Design of the methodology used to find the optimal number of geographic zones for gas distribution in Mexico City;
- Elaboration of the economic chapter of the bid package for the distribution of geographic zones;
- Analysis of the various options for a structural reform of the electric industry in Mexico;

- Writing of several documents, used for policy making, with respect to the international experiences in regulation. Participation in several international conferences and seminars with regulators from several countries such as: USA, Canada, Argentina, Colombia, Chile, Spain, United Kingdom and Brazil;
- Elaboration of CRE's funding proposals to the World Bank and the Inter-American Development Bank. These proposals won a two-million-dollar loan from the World Bank in 1995 and a one-million-five-hundred-dollar grant from the Inter-American Development Bank in 1996;
- Design of academic cooperation agreements between CRE and Mexican and US Universities;
- Coordination of the CRE's Center for Statistics, where the CRE's statistical and econometric studies are performed;
- Economic advisor of the CRE's President and the Electricity and Gas Directorate;
- Search and survey of literature related to regulation economics. Translation of abstract economic theory concepts into concrete ideas applicable to the decision making process.
- Presentations in several academic and industry forums explaining the new regulatory framework of the natural gas industry in Mexico;
- Participation in frequent consultings with the Mexican Gas Industry so as to evaluate CRE's policy decisions.

INSTITUTO DE RELACIONES EUROPEO-LATINOAMERICANAS (INSTITUTE FOR EUROPEAN-LATIN AMERICAN RELATIONS), Madrid, Spain: Consultant for the elaboration of a study about NAFTA effects on Mexico's economic relations with Europe, spring, 1994.

SECRETARÍA DE COMERCIO Y FOMENTO INDUSTRIAL, (MEXICAN MINISTRY FOR TRADE AND INDUSTRY) Office for the Negotiation of NAFTA, Mexico City: advisor for the design of NAFTA rules of origin, October 1990-August 1991. Examples of activities undertaken:

- Collaboration in the design of Mexico's position on rules of origin during NAFTA negotiations;
- Analysis of third-country to US/Canada/Mexico input ratios of Mexican industries;
- Firm advisory on rules of origin;
- Elaboration of documents which helped firms to understand the rules of origin mechanisms;
- Analysis of the rules of origin of other trade agreements;
- Surveys of economic literature on rules of origin, and
- Evaluation of US and Canada proposals on rules of origin.

G. LEVEL IN SNI (Mexican National System of Researchers)

- **Level: II , Third Period**(III is the highest level)
Area of Science: Economics.
Discipline: Economics.
Sub discipline: Public Economics.
Specialty: Regulatory Economics and Energy Economics.

H. RESEARCH PROJECTS

- Project name: Optimal Transmission Expansion For Large-Scale Renewables: General Aspects And Selected Case Studies

Financing institution: CONACYT.

Period: 2011-2013.

Amount: USD\$80,000 (approx.)

- Project name: An Incentive Mechanism for Electricity Transmission Expansion..

Financing institution: CONACYT.

Period: 2007-2010.

Amount: USD\$80,000 (approx.)

- Project name: A Regulatory Mechanism for Electricity Transmission Expansion in North America.

Financing institution: PIERAN-El Colegio de México.

Period: 2007-2010.

Amount: USD\$33,000 (approx.)

- Project name: Quasi-Rents and Pricing Associated Gas in Mexico

Financing institution: CRE.

Period: 2007-2008.

USD\$33,000 (approx.)

- Project name: Regulation of the Price of Natural Gas in Mexico as a Case Study of "Successful" Policy Research

Financing institution: RAND Corporation.

Period: 2004-2005.

USD\$7,000 (approx.)

- Project name: CIDE – CRE agreement; "Economía de la Regulación Energética" (The Economics of Energy Regulation), third emission.

Financing institution: Comisión Reguladora de Energía.

Period: 2002 – 2004.

USD\$100,000 (approx.)

- Project name: CIDE – CRE agreement; "Strategic Behavior and the Pricing of Gas in Mexico".

Financing institution: Comisión Reguladora de Energía.

Period: 2001-2002.

USD\$33,000 (approx.)

- Project name: "La Aplicación del Modelo Principal-Agente al Análisis de la Política Científica". (The application of the principal-agent model to the science policy analysis).

Financing institution: CONACYT.

Period: 2000 – 2002.

USD\$34,000 (approx.)

- Project name: "Economic and Political Implications of New Developments in Thin Film Solar Technology".
Financing institution: CONACYT.
Period: 2000 – 2002.
USD\$75,000 (approx.)
- Project name: "Regulatory Reform in Mexico Natural gas Industry, and Designing Natural Gas Distribution Concession in a Megacity. Tradeoffs between Scale Economies and Information Disclosure in Mexico City".
Financing institution: World Bank.
Period: 2000 – 2001.
USD\$25,000 (approx.)
- Project name: CIDE – CRE agreement; "Economía de la Regulación Energética" (The Economics of Energy Regulation), second emission.
Financing institution: Comisión Reguladora de Energía.
Period: 1999-2000.
USD\$100,000 (approx.)
- Project name: "The Structural Reform of the Mexican Electric Sector" (grant obtained in an international open contest).
Financing institution: The TINKER Foundation Incorporate.
Period: 1999 – 2000.
USD\$50,000.
- Project name: CIDE-CRE agreement, "Economía de la Regulación Energética". (The Economics of Energy Regulation), first emission
Financing institution: Comisión Reguladora de Energía.
Period: 1997 – 1998.
USD\$100,000 (approx.)

I. STUDENT THESIS ADVISING (BA, MA, and PHD)

Information ordered as follows: Student, degree, thesis title, year.

- Jorge Rafael Figueroa Elenes, MA Program in Economics, CIDE, "Las Relaciones Comerciales de Inversión entre México y la Unión Europea," 1994.
- José Luis Pérez Torres y Joaquín Zermeño Amuchástegui, MA Program in Economics, CIDE, "La Regulación de la Industria de Telecomunicaciones," 1996.
- Patricia Morales Sánchez, BA Program in Economics, CIDE, "La Regulación del Precio del Gas Natural en México: una Metodología Alternativa," 1998.
- José Luis Escobedo Sagaz, MA Program in Economics, CIDE, "Utilización de Tarifas para el Control de la demanda de Agua Potable en México," 1998.
- Mario A. Limón Rodríguez, MA Program in Economics, CIDE, "Las Telecomunicaciones en México (análisis de la regulación de precios de interconexión a la red)," 1998.
- Sandra U. Toral Ibarrola, MA Program in Economics, CIDE, "Regulación Ambiental: una aproximación teórica al caso de la industria en la Ciudad de México," 1998.

- Ignacio M. López, MA Program in Economics, CIDE, “Análisis de las Elasticidades de la Demanda ante el Cambio Estructural de la Industria del Gas Natural en México (1979 – 1999),” 1999.
- Héctor Osorio, MA Program in Economics, CIDE "Análisis costo – beneficio del gas natural y gas LP como carburantes alternos en el sistema de auto transporte de la ZMCM,” 1999.
- Valentina Barzalobre Aragón, BA Program in Economics, CIDE, "Alternativas de Desarrollo de Generación Eléctrica en Economías de Transición," 2000.
- Benjamín De La Torre, MA Program in Economics, CIDE, "Incentivos para la Investigación Básica en Economías en desarrollo," 2000.
- Armando Nevárez Sida, MA Program in Economics, CIDE, "Transmisión de Energía Eléctrica en México," 2001.
- Pablo Andrés Guerrón Quintana, MA Program in Economics, “Una alternativa a la crisis energética en California: generación eléctrica solar en Baja California. Aspectos técnicos y económicos," 2001.
- Roberto Ballinez Ambríz, MA Program in Economics, CIDE, "Un Análisis de Incentivos en la Política Científica en México," 2002.
- Alfredo Mier y Terán López Sánchez, BA Program in Economics, CIDE "Regulación en el sector eléctrico mexicano: una evaluación del uso de derechos financieros de Transmisión," 2006.
- Jonas Hedlund, MA Program in Economics, CIDE, "Imposición petrolera y restricciones de liquidez una discusión del régimen fiscal de PEMEX," 2006.
- Nadia Gabriela García Jiménez, BA Program in Economics, CIDE, "Análisis del impacto del gas natural licuado en la estructura de mercado del gas natural en México," 2007.
- Lizeth Azucena Uribe García, BA Program in Economics, CIDE, “Impacto de la modificación tarifaria en el sector eléctrico sobre la distribución del ingreso en México,” 2007.
- Jessica Miranda García, BA Program in Economics, CIDE, “El Subsidio al gas natural en México: su cálculo respecto al costo de oportunidad y análisis de incidencia de beneficios en el Estado de Nuevo León,” 2007.
- Estela Flores Romero, BA Program in Economics, CIDE, “Análisis de Incentivos para la asignación de recursos a proyectos de investigación básica científica en México,” 2007.
- Juan A. Tregear Maldonado, MA Program in Economics , CIDE, “Problemática de los servicios complementarios en el sector eléctrico Mexicano,” 2007.
- Julio Cesar Montañez Hernandez, MA Program in Economics, CIDE, “Mecanismos de incentivos para la expansión de la red de transmisión en el sector eléctrico canadiense,” 2008.
- Zdenka Miliskova, MA Program in Economics, CIDE, “Incentives for Transmission Expansion in PJM,” 2008-2009.
- Ricardo Ramírez, BA program in Economics, CIDE, “Los efectos esperados sobre la producción y el financiamiento de la iniciativa de Ley Orgánica de PEMEX al Congreso de la Unión,” 2008-2009.
- Jennifer Coronel, BA program in Economics, CIDE, “Efectos del aumento en el precio del petróleo sobre la economía: una aproximación a través del IPC 2004-2008,” 2008-2009.
- Jeff Pavlovic, MA Program in Economics, CIDE, “The role of wind energy on Mexico’s electricity supply and economic development,” 2009-2010.

- Erix Ruiz, MA Program in Economics, CIDE, “PJM transmission expansion under stochastic supply and demand behavior,” 2009-2010.

In process:

- Eric Zenón Olvera, PhD Program in Engineering (Energy), Facultad de Ingeniería (UNAM), “La regulación y el bienestar en la expansión de la red de transmisión eléctrica en un ambiente simulado,” 2008-2010.
- Juan A. Tregear Maldonado, Doctorado en Políticas Públicas (Phd program in Public Policy), CIDE, “ Expansión de las Redes de Transmisión en Norteamérica,” 2008-2010.
- Ismael Valencia, PhD Program in Economics, El Colegio de México, “Incentives for Transmission Expansion in Large Scale RESW Systems: a Mechanism Design Approach.”

J. ORGANIZATION OF EXTERNAL WORKSHOPS

- Name of workshop: "Economía y Regulación de la Energía" (Energy economics and regulation).
Participating institutions: SE/ CRE/ Instituto Mexicano del Petróleo/ Comisión Federal de Luz y Fuerza del Centro/Instituto de Eléctricas/ Gas y Petroquímica Básica/Comisión Nacional para el Ahorro de Energía.
Period: July- November 2000.
- Name of workshop: "Introducción a la Política de Energía" (Introduction to energy policy).
Participating institutions: Secretaría de Energía (SE)/Comisión Reguladora de Energía (CRE).
Period: April - October 1999.

K. SEMINARS AND CONGRESSES

- ASSA-IAEE 2011 meetings, Denver Colorado: IAEE/AEA Session, "Environment, Climate Change, and Economic Growth", 3rd Joint IAEE/AEA Session, January 7, 2011 Hyatt Regency, Capitol 5 Room.
- ASSA-IAEE 2011 meetings, Denver Colorado: IAEE/USAE Session, "Topics in Energy Modeling", 13th Annual IAEE/USAE Session, January 7, 2011 Hyatt Regency, Capitol 5 Room.
- 9th Conference on Applied Infrastructure Research (INFRADAY), “Sustainable Infrastructure – Theoretical and Policy Challenges” Technische Universität Berlin. Presentation: “Transmission Expansion in Electricity Networks: the Effects of Fluctuating Demand and Wind Generation (joint with Schill and Egerer),” Berlin, 8-9 October, 2010.
- INFRATRAN 2010 Training Session: “Transmission Expansion of Electricity Networks with Time-Varying Supply and Demand,”” Technische Universität Berlin, October 4-8, 2010, Berlin, Germany.

- Seminar at the Energiewirtschaftliches Institut an der Universität zu Köln, presentation: “A Mechanism for the Optimal Transmission Expansion of Energy Networks,” Cologne, Germany, July 1st, 2010.
- The Economics of Energy Markets; IDEI-Toulouse Conference, presentation: “Long-run Cost Functions for Electricity Transmission,” January 28-29, Toulouse, France, 2010.
- Seminar at the Institute of Technology and Management, TU Berlin, presentation: Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy, Germany, January 27th, 2010.
- Seminar at the Department of Economics, Technische Universität Dresden, presentation: “Economic efficiency and development of energy sectors: the role of expansion in transmission networks,” Dresden, Germany, October 23rd, 2009.
- 8th Conference on Applied Infrastructure Research (INFRADAY), “Innovation in Network Industries – Markets and Regulation, Pull and Push,” Technische Universität Berlin. Presentation: “Mechanisms for the Optimal Expansion of Energy Transmission Networks,” *Keynote Speaker*, Berlin, 9-10 October, 2009.
- INFRATRAN 2009 Training Session: “Transmission Expansion of Electricity and Natural Gas Networks: Theory and Numerical Simulations,” Technische Universität Berlin, October 5-9, 2009, Berlin, Germany.
- National Forum on Energy, Environment and Climate Change Policy, presentation “Incentives for Transmission Investment in Natural Gas and Electricity Networks– Theory and Roadmap,” conference organized by the Goldman School of Public Policy, University of California, Berkeley, Mexico City, August 24-25, 2009
- Regulating Investments in Energy Networks, workshop at CPB, NMA and TILEC/Tilburg University, presentation: “An Incentive Mechanism for Pipeline Expansion – Theory and Roadmap,” *Keynote Speaker*, July 3, 2009, The Hague, Netherlands.
- European Doctoral Seminar on Natural Gas, presentation: “An Incentive Mechanism for Pipeline Expansion – Theory and Roadmap,” *Keynote Speaker*, June 5th, 2009, DIW Berlin, Germany.
- Seminario en la Comisión Reguladora de Energía (CRE), “Incentive Price Mechanisms for Expansion in Electricity Networks: Theory and Policy,” April 22, 2009, México D.F., México.
- Seminar at the Jesse H. Jones Graduate School of Business, Rice University, “Incentive Mechanisms for Expansion in Energy Networks: Theory and Policy,” April 20, 2009, Houston, Texas, Estados Unidos.
- Seminar at the Alberta System Operator (AESO), “Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy,” April 14, 2009, Calgary, Alberta Canada.
- Seminar at the Alberta Utilities Commission (AUC), “Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy,” April 13, 2009, Calgary, Alberta Canada,
- Seminar at the National Energy Board of Canada (NEB), “Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy,” April 8, 2009, Calgary, Alberta Canada
- Seminar at the Department of Electrical and Computer Engineering, Schulich School of Engineering, University of Calgary, “Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy,” April 7, 2009, Calgary, Alberta Canada.

- Seminar at DIW Berlin, “Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy,” February 5, Berlin, Germany, 2009.
- Seminar series of the Program on Energy Sustainable Development, Stanford University, “Incentive Mechanisms for Electricity Transmission Expansion: Theory and Policy,” January 26th, Palo Alto, California, U.S.A., 2009.
- The Economics of Energy Markets; IDEI-Toulouse Conference, presentation: Lumpy Investment in Regulated Natural Gas Pipelines: An Application of the Theory of the Second Best, June 20-21, Toulouse, France, 2008
- Natural Gas in North America: Markets and Security Congress, James A. Baker Institute for Public Policy, presentation: “Incentive regulation and investment: Developments in the Mexican natural gas market,” Rice University, Houston, Texas, USA, November 16, 2007.
- Trans-Atlantic INFRADAY, Conference on Applied Infrastructure Modeling and Policy Analysis, Critical Infrastructures in Energy and Other Networked Industries, “A Combined Merchant-Regulatory Mechanism for Electricity Transmission in Europe”, University of Maryland, Riggs Alumni Center, Friday, 02 November, Maryland, USA, 2007.
- IDEI/Bruegel Conference, “A Combined Merchant-Regulatory Mechanism for Electricity Transmission Expansion in Europe”, 25-26 October, Brussels, 2007.
- 5° Congreso Internacional en Innovación y Desarrollo Tecnológico, IEEE, “Timing of Investment in Regulated Natural Gas Pipelines with Lumpy Investment: An Application of the Theory of the Second Best”, 10-12 de Octubre, Cuernavaca, Morelos, 2007.
- 6th Conference on Applied Infrastructure Research (INFRADAY), “A Combined Merchant-Regulatory Mechanism for Electricity Transmission Expansion in Europe”, TU-Berlin, 5-6 October, Berlin, Germany, 2007
- The DIW Berlin Information Society and Competition and TU Berlin Workgroup for Infrastructure Policy” joint Seminar Series, presentation: “A Regulatory Mechanism for Network Expansion”, TU Berlin, Berlin, Julio 26, 2007
- 9th IAEE European Conference, “A Combined Merchant-Regulatory Mechanism for Electricity Transmission Expansion”, Florence, Italy, 10-13 June 2007.
- 9th IAEE European Conference, “Merchant Electricity Transmission Expansion- An European Case Study-“, 10-13 June, Florence, Italy, 2007.
- 1st CESSA conference Natural Gas, Nuclear Energy, and Security of Supply, “Infrastructure Investments and Incentive Regulation” ,TU Berlin, Berlin, Germany, 31 May – 01 June, 2007.
- ENERDAY, Conference on Energy Economics and Technology: Market Development, Market Power, and Market Regulation, **Keynote Speaker:** “A Regulatory Mechanism for Electricity Transmission Expansion,” Dresden University of Technology, Chair for Energy Economics and Public Management, Dresden Germany, April 13, 2007.
- 4o Congreso Internacional sobre Innovación y Desarrollo Tecnológico, CIINDET 06, IEEE, "Hacia un Desarrollo Sustentable con Tecnología Propia"; ponencia: "Economic and Political Implications of Solar Energy Technological Developments"; Cuernavaca, Morelos, México, 11 al 13 de octubre 2006.
- Conferencia Internacional de Competencia y Regulación, Red Mexicana de Competencia y Regulación (CIDAC), ponencia: Regulación de la Red de Transmisión Eléctrica, Club de Industriales, México D.F., 21 de agosto, 2006.

- Seminar, TU Dresden Department of Management and Technology, Chair for Energy Economics, presentation: Different Approaches to Electricity Transmission Expansion in Mexico, Dresden, Germany, June 13, 2006.
- Seminar, TU Dresden Department of Management and Technology, Chair for Energy Economics, presentation: Regulation of vertically integrated natural gas industry: The case of Mexico, Dresden, Germany, June 13, 2006.
- 29th IAEE International Conference, presentation: Electricity Transmission I/Different Approaches to Electricity Transmission Expansion in Mexico, Potsdam, Germany, June 6, 2006.
- Seminario de Presentación de Proyectos para la Red Mexicana de Competencia y Regulación (CIDAC), ponencia: Mecanismos para la Expansión de la Red de Transmisión Eléctrica, México D.F., 7 de marzo, 2006
- Seminar at the Division of Economics and Business, Colorado School of Mines. Presentation: "Different approaches to electricity transmission expansion," Golden, Colorado, U.S., February 22, 2006.
- Seminario en el Banco de México, Ponencia: "Different approaches towards electricity transmission expansion; The Mexican case", DF, México, 28 Octubre, 2005
- 4th Conference on Applied Infrastructure Research TU Berlin, DIW Berlin and TU Dreden. Presentation (joint with D.L. Brito): "Timing of investment in regulated natural gas pipelines", Berlin-Germany, October 08, 2005
- 25th Annual North American Conference United States Association for Energy Economics / International Association for Energy Economics, Presentation: "LNG in the Northwestern coast of Mexico : Impact on prices of natural gas in both sides of the US-Mexico border", Denver, Colorado-USA, August 18-25, 2005
- Program on Energy Policy: Analysis Applications and Strategy. Presentation: Perspectives on the electricity sector and reform in Mexico. Held at the John F. Kennedy School of Government, Harvard University. June 19-July 30, 2005
- Dynamics, Economic Growth and International Trade (DEGIT X), Presentation: Incentives for Supply Adequacy in Electricity Markets: an Application to the Mexican Power Sector (with V. Carreón-Rodríguez), CIDE-Copenhagen Business School, Mexico City, Mexico, June 3-4, 2005
- Linking Think Tanks Conference, Successful Policy Research: Case Studies from around the World, Presentation: Regulation of Natural Gas Pricing in Mexico. The Pardee RAND Graduate School, Santa Monica, CA, May 2-3, 2005.
- El Gas Natural en México: ¿Es necesario? ¿Qué beneficios y retos trae consigo? ¿Cómo afecta al precio del gas natural?. Presentación: Liquid Natural Gas and A New Policy for Pricing Gas in Mexico. Organizado por la Asociación Mexicana para la Economía Energética y el CIDE, 24 de February, 2005.
- Accelerating Innovation in the 21st Century: U.S. Science & Technology: Energy & Nanotechnology Workshop I: Prospects for Solar Energy. Presentation: Solar Energy and the Implications of Nanotechnology. Organized by Rice University, Houston, Texas, USA, October 15 through 17, 2004
- 35th. Plenary Session Harvard Electricity Policy Group, John F. Kennedy School of Government, Harvard University, Cambridge, MA, June 3-4, 2004.
- Seminar on Energy Regulatory Developments in North America, Organizer and Speaker, Presentation: "Different Approaches Towards Electricity Transmission Expansion," co-organized by SENER, CRE and CIDE, Mexico City, January 13, 2004.

- 23rd IAEE North American Conference, Camino Real Hotel, Mexico City, October 19-21, 2003
- 2nd Workshop on Applied Infrastructure Research, "Regulation and Investment in Infrastructure Provision-Theory and Policy," Presentation (joint with T. Kristiansen): "A Merchant Mechanism for Electricity Transmission Expansion", Berlin University of Technology, DIW Berlin, Berlin, Germany, 11 October 2003
- LACEA, 8th Annual Meeting, Universidad de las Américas, Cholula, Puebla, October 9-11 2003.
- Segundo seminario de avance del Convenio CIDE-CRE IIIb, February 2003, C: "DIFFERENT APPROACHES TOWARDS ELECTRICITY TRANSMISSION EXPANSION."
- University of California Energy Institute, Center for the Study of Energy Markets, Seminar Series, Presentation: "Regulatory Reform In Mexico's Energy Sector: Liberalization in the Context of a Dominant Incumbent," April 28, 2003
- Harvard Electricity Policy Group Forum, Cincinnati, Ohio, Estados Unidos, April 8, 2003
- Harvard Electricity Policy Group, 31st Plenary Session, Boston, Massachusetts, May 31, 2003
- 22nd Annual North American Conference of the USAEE/IAEE,: Energy Markets in Turmoil: Making Sense of it All. Presentation: "Incentives for the Expansion of Electricity Supply and Capacity Reserves in the Mexican Electricity Sector", Vancouver, Canada, October 6-8, 2002;
- Regulación y Competencia en los mercados de electricidad (Regulation and competition in electricity markets), presentation: "Asignación de Precios de la Transmisión de Mercados de Electricidad", organized by the CRE, APEC Y CFC, Mexico City, May 30, 31 2002;
- VI Annual Meetings of LACEA, presentation "The impact of the subsidy scheme in the Mexican electricity sector on income distribution and poverty", Montevideo, Uruguay, October 17-20, 2001.
- Conferencias sobre Petróleo y Gas Natural (Conferences on Oil and Natural Gas), presentation: "Regulatory reform in Mexico's natural gas industry. Liberalization in the context of a dominant upstream incumbent", Oxford Institute for Energy Studies/CIDE, CIDE, Mexico city, October 3, 4, 2001.
- La Reforma Estructural del Sector Eléctrico Mexicano, (The Structural Reform of the Mexican Electric Industry), presentation: "The market architecture of the Mexican electricity sector", Tinker-CIDE conference, CIDE, Mexico city, September 27, 28, 2001.
- La Realidad Económica Actual y sus Corrientes de Interpretación: Un Debate Inicial, (The Current Economic Reality and its Alternative Interpretations: An Initial Debate), presentation: "Incentivos para la Expansión de la Red de Transmisión Eléctrica en México Mediante la Regulación de Precios" (Incentives for the expansion of the electricity transmission network in Mexico through price regulation), Instituto de Investigaciones Económicas, UNAM, Mexico city, September 3, 2001.
- International Program on Privatization Regulatory Reform and Corporate Governance, presentation: "Regulatory reform in Mexico's natural gas industry. Liberalization in the context of a dominant upstream incumbent", Princeton University, Princeton, N. J., July, 2001.

- Cuarto Congreso Nacional de la Asociación Mexicana para la Economía Energética (Fourth AMEEE annual conference), El Sector Energía en México de Cara al Siglo XXI: Tendencias, Política, Abastecimiento y Financiamiento", Mexico city, June 13, 14, 2001.
- 24th International USAEE/IAEE, Conference 2001: An Energy Odyssey?, presentations: "Economic and political implications of new developments in thin film solar technology", "Pricing natural gas in Mexico; an application of the Little Mirrlees rule", and "The reform of the natural gas market in Mexico: effects on production and distribution", Houston, Tx., April 25-27, 2001.
- El Sector Privado ante las Reformas Eléctricas (The private sector and the electricity reforms), Asociación Mexicana para la Economía Energética, Mexico City, January 27, 2001.
- Congreso del Comité de Ciencias de la Economía, Administración, Política y Relaciones Internacionales de CONACYT (Economic Administrative, Political and International Relations Sciences Committee of CONACYT), presentation: "La aplicación del modelo principal-agente al análisis de la política científica" (The application of the principal-agent model to the science policy analysis), Cholula, Puebla, November 23, 24, 2000.
- CIDE-CRE International Seminar, Reforma Estructural y Regulación en el Sector Energético (Structural reform and regulation in the energy sector), presentation: "The structural reform of the Mexican electricity sector", Mexico City, October 30, 31, 2000.
- 21st Annual North American Conference. Transforming Energy, presentation: "Regulation of Gas Marketing Activities in Mexico", Philadelphia, Pennsylvania, USA, September 24, 27, 2000).
- V Annual Meetings of LACEA, presentation: "Regulation of Gas Marketing Activities in Mexico", Río de Janeiro, Brazil, October, 2000)
- Seminario ITAM-AMDE, Ciudad de México (October 2000).
- I Congreso Iberoamericano de Filosofía de la Ciencia y la de la Tecnología, Presentation: La Aplicación del Modelo Principal-Agente al Análisis de la Política Científica", Morelia (25 al 29 de September, 2000).
- Conference on Global Climate Change, Presentation: "Economic and Political Implications of New Developments in Thin Film Solar Technology", Rice University (7 y 8 de September, 2000).
- Workshop on Markets for Electricity - Economics and Technology (MEET): A Flow-based Paradigm for Systems Operation and Market Coordination, Electricity Policy Research Institute, Stanford University (17 al 19 de August, 2000).
- International Program on Privatization Regulatory Reform and Corporate Governance, organizado por Harvard University. Presentations: "Structural Reform and Regulation in the Mexican Energy Sector", Cambridge Massachusetts, Estados Unidos (July, 2000).
- Tercer Congreso Nacional de la Asociación Mexicana para la Economía Energética. El Futuro Energético de México. Presentación: "La Regulación del Precio del Gas Natural en México", México D. F. (25 y 26 de May, 2000).
- Seminario del Departamento de Economía, Universidad de Guanajuato, Presentation: "Reforma Estructural y Regulación del Sector Energético Mexicano", Guanajuato (12 de May, 2000)

- Access Mexico 99. Five Years of Nafta. Past and Future. Presentation: Regulatory Reform in Mexico's Energy Sector, Houston, Estados Unidos (6 y 7 de December, 1999)
- 54th European Meeting of the Econometric Society. Presentation: "Average Revenue Regulation and Uncertainty", Santiago de Compostela, España (August 29 al 1 de September 1999)
- XII Latin American Meeting of the Econometric Society. Presentations: "Average Revenue Regulation and Uncertainty" y "Regulation of the Price of Gas in Mexico", Cancún (2 al 6 de August 1999)
- International Program on Privatization Regulatory Reform and Corporate Governance, organizado por Harvard University. Presentation: "Structural Reform and Regulation in the Mexican Energy Sector", Cambridge Massachusetts, Estados Unidos (July 1999)
- Seminario de la Facultad de Economía de la Universidad Autónoma del Estado de Hidalgo. Presentation: Reforma Estructural del Sector Energético Mexicano, Hidalgo, Pachuca, Hidalgo (April 1999).
- Segundo Foro Regional para la Reforma de la Energía Eléctrica, organizado por el Senado de la República. Presentation: "Alternativas de Regulación de precios en el sector eléctrico", Campeche (April 1999)
- Reforma del Sector Eléctrico, organizado por el ITAM. Presentation: "Alternativas de Regulación de precios en el sector eléctrico", México, D. F. (February 1999).
- Desafíos y opciones para el sector eléctrico mexicano. Qué podemos aprender de la experiencia internacional, organizado por el Programa Universitario de Energía, UNAM, y la Secretaría de Energía. Presentation: Alternativas de Regulación de Precios en el Sector Eléctrico, México D. F. (January 1999).
- Colloquium Cornell Institute for Public Affairs, organizado por Cornell University. Presentation: "Structural Reform and Regulation of the Gas Industry of Mexico", Ithaca, New York, Estados Unidos (September 1998).
- Reforma Estructural y Regulación en el Sector Energético, organizado por el CIDE. Presentation: "Regulación de Precios del Gas L.P y del Gas Natural", México D. F. (August 1998).
- International Program on Privatization Regulatory Reform and Corporate Governance, organizado por Harvard University. Presentations: "Country and Sector-Specific Case: Deregulation of Gas Distribution in Mexico" y "Regulatory Issues in the Private Distribution of Gas in Mexico", Cambridge, Massachusetts (July 1998)
- Conferencia Internacional sobre el Uso del Etanol como Combustible para Transporte Automotor, organizado por la Secretaría de energía, la Comisión Nacional para el Ahorro de la Energía, y la Secretaría de Relaciones Exteriores: participación en representación del Centro de Investigación y Docencia Económicas, México, D.F., June 8 y 9 de 1998.
- MIT Energy and Environmental Workshop, Center for Energy Policy Research, organizado por el CEEPR del Massachusetts Institute for Technology: participación en representación del Centro de Investigación y Docencia Económicas, Cambridge, Estados Unidos, November 13 y 14 de 1997.
- "The impact of Globalization and Privatization on Malaysian and Asia", presentation: Regulatory Reform in México's Natural Gas Industry, organized by HIID, Harvard University, Langkawi, Malaysia, November, 1997.

- Seminario sobre Regulación Energética, organizado por la Secretaría de Energía, participación en representación de la Comisión Reguladora de Energía, México D.F., April de 1997.
- Restructuring and Regulation of the Electricity Market (International Electricity Trade under Competition), organizado por el Banco Mundial y el Swedish National Board for Industrial and Technical Development: participación en representación de la Comisión Reguladora de Energía, Västeras, Suecia, 3 al 5 de February de 1997.
- International Training Program. Utility Regulation and strategy, organizado por El Banco Mundial y The Utility Research Center at the University of Florida. January 13 – 24, 1997. Gainesville, Florida.
- Segundo Congreso Nacional de la Asociación Mexicana de la Economía Energética: selección del artículo "Regulación de Precios y Tarifas para la Industria del Gas Natural" para ser presentado en la mesa "Externalidades Ambientales en los Sistemas Energéticos -Impacto sobre los Costos y los Precios de la Energía-", México, D.F., 23 al 25 de September de 1996.
- SO2 Allowance Trading and the Cost of Compliance with Title IV of the 1990 Clean Air Act Amendments, organizado por el CEEPR del Massachusetts Institute for Technology: participación en representación de la Comisión Reguladora de Energía y de la Secretaría de Energía, Washington, D.C., Estados Unidos, 11 al 13 de September de 1996.
- Unbundling Natural Gas LDC's, organizado International Business Communications (*Keynote Speaker*): presentación de "Tariffs and Pricing of Natural Gas in Mexico", San Antonio, Texas, Estados Unidos, 26 al 28 de June de 1996
- North American Energy Roundtable: Prospects for Natural Gas and Electricity Integration", organizado por el College of Business Administration Energy Institute, University of Houston: presentación de la presentation "Toward a NAFTA Energy Market: Regulatory Reform in Mexico", Houston, Texas, Estados Unidos, 5 al 7 de June de 1996.
- Executive Seminar on Natural Gas and Electricity in Mexico, organizado por el College of Business Administration Energy Institute, University of Houston y el Instituto Tecnológico de Monterrey: presentación de la presentation Mexico's Natural Gas Regulatory Framework: Prices and Tariffs, Monterrey, México, 25 y 26 de March de 1996.
- Marco Regulatorio del Gas Natural, seminario organizado por International Energy Agency (IEA) y Comisión Reguladora de Energía: presentación de la presentation "Prices and Tariffs", México D.F., 19-20 de February de 1996 (los resultados de este seminario se utilizaron para elaborar la publicación "Regulatory Reform in Mexico's Gas Sector" publicado por IEA/OECD en 1996).
- US-Mexican Roundtable on Energy Developments of Mexico , organizado por el "Institute of the Americas", University of California at San Diego: participación en representación de la Comisión Reguladora de Energía, México, D.F., 29 de November de 1995.
- Seminario sobre las Perspectivas del Gas Natural en México, organizado por la CRE: participación en representación de la Comisión Reguladora de Energía, 8 de November de 1995.
- Mexico in Transition: Changes ,Opportunities, and Realities in the Energy Market", organizado por la Natural Gas Association of Houston y College of Business Administration Energy Institute, University of Houston: presentación de

"Mexico: the New Gas Regulation", Houston, Texas, Estados Unidos, October 17 de 1995.

- Conference on the Economics of Regulation, organizada por ITAM e ILADES (Chile): selección del artículo "Regulatory Reform in Mexico's Gas Industry" para ser presentado en la mesa "Regulation in the Energy Sector", México D.F., August de 1995.
- Seminario México/Canadá/Argentina sobre Regulación del Gas Natural, organizado por la CRE: participación en representación de la Comisión Reguladora de Energía, 15 y 16 de June de 1995.
- Mexico/US/Canada Regulatory Workshop, organizado por el College of Business Administration Energy Institute de University of Houston: participación en representación de la Comisión Reguladora de Energía, 30 de May de 1995.
- Gas Fair 1995, organizada por Canadian Enerdata, LTD: participación en representación de la Comisión Reguladora de Energía y de la Secretaría de Energía, Toronto, Canadá, 8 y 9 de May de 1995.
- Workshop on Economics of Energy, Center for Energy Policy Research, organizado por el CEEPR del Massachusetts Institute for Technology: participación en representación de la Comisión Reguladora de Energía y de la Secretaría de Energía, Cambridge, Estados Unidos, April de 1995.
- Primer Encuentro de Participantes en el Esquema de FIDETEC, organizado por CONACYT: participación en la mesa redonda sobre "Avance hacia un Mercado Tecnológico", Veracruz, México, 16 al 18 de October de 1994.
- First Trinational Institute on Innovation, Competitiveness and Sustainability, organizado por Simon Fraser University: participación en el grupo de trabajo: "Academic-Industry Linkages, Education, and Training", Whistler, Canadá, del 14 al 21 de August de 1994.
- 3er. Encuentro Nacional de Investigadores en Economía, organizado por ITAM-ANIDIE: selección del artículo "Reglas de Origen y Análisis de Bienestar", para ser presentado en la mesa de "Teoría Económica", May de 1994.
- Las Relaciones Bilaterales México-Estados Unidos Bajo el Gobierno de Clinton: Evaluación y Perspectivas, seminario organizado por el CIDE: comentarista en la mesa "El Futuro de las Relaciones Comerciales de América del Norte", February de 1994.
- Confronting Free Trade: Policies for Technological Development, Seminario Internacional organizado por el CIDE: presentación del artículo "Confronting Free Trade: Some Challenges for the Mexican Science System", January de 1994.
- Seminario del Departamento de Economía de la Universidad de las Americas, Cholula, Puebla: presentación del artículo "Rules of Origin and Welfare Analysis", November 1993.
- I International Seminar: Science in a Transforming Economy, organizado por CONACYT en Cancún, Q.R. del 3 al 7 de November de 1993.
- Seminario de la División de Economía del CIDE: presentación del artículo "Rules of Origin and Welfare Analysis", October de 1993.
- Seminario de la División de Economía del CIDE: presentación del artículo "The Basic Economics of Rules of Origin", June de 1993.
- XII Latin American Meeting of the Econometric Society, Universidad Nacional de Tucumán, Argentina: selección del artículo "Rules of Origin and Welfare Analysis" por la Sociedad Econométrica para ser presentado del 17 al 20 de August de 1993.

L. VISITS TO RESEARCH INSTITUTIONS

- Position: Visiting professor at the *INFRATRAN* 2009 Training Session: Transmission Expansion of Electricity and Natural Gas Networks: Theory and Numerical Simulations.
Institution: Technische Universität Berlin.
Place: Berlin, Germany.
Period: October 2009.
- Position: Visiting Senior Fellow.
Institution: Center for Business and Government, Harvard Electricity Policy Group, John F. Kennedy School of Government, HARVARD UNIVERSITY.
Place: Cambridge, MA.
Period: December 2007-January 2008.
- Position: Research Associate
Institution: Lehrstuhl für Energiewirtschaft , Chair of Energy Economics and Public Sector Management, TU Dresden.
Place: Dresden, Germany
Period: Since April 2007.
- Position: Visiting Researcher
Institution: Lehrstuhl für Energiewirtschaft , Chair of Energy Economics and Public Sector Management, TU Dresden.
Place: Dresden, Germany
Period: June 2006.
- Position: Repsol-YPF-Harvard Kennedy School Senior Fellow.
Institution: Center for Business and Government, Harvard Electricity Policy Group, John F. Kennedy School of Government, HARVARD UNIVERSITY.
Place: Cambridge, MA.
Period: June 2005-August 2005.
- Position: Repsol-YPF-Harvard Kennedy School Senior Fellow.
Institution: Center for Business and Government, Harvard Electricity Policy Group, John F. Kennedy School of Government, HARVARD UNIVERSITY.
Place: Cambridge, MA.
Period: September 2003-June 2004.
- Position: Senior Fellow.
Institution: Center for Business and Government, Harvard Electricity Policy Group, John F. Kennedy School of Government, HARVARD UNIVERSITY.
Place: Cambridge, MA.
Period: September 2002-August 2003.
- Position: Visiting professor at the *International Program on Privatization and Regulatory Reform*.
Institution: PRINCETON UNIVERSITY.
Place: Princeton, New Jersey, United States.
Period: July 2001.
- Position: Visiting professor at the *International Program on Privatization and Regulatory Reform*.
Institution: HARVARD UNIVERSITY.
Place: Cambridge, Massachussets, United States.
Period: July 2000.

- Position: Visiting professor at the *International Program on Privatization and Regulatory Reform*.
Institution: HARVARD UNIVERSITY.
Place: Cambridge, Massachusetts, United States.
Period: July 1999.
- Position: Visiting professor at the *International Program on Privatization and Regulatory Reform*.
Institution: HARVARD UNIVERSITY.
Place: Cambridge, Massachusetts, United States.
Period: July 1998.
- Position: Visiting professor at the *International Program on Privatization and Regulatory Reform*.
Institution: HARVARD UNIVERSITY.
Place: Cambridge, Massachusetts, United States.
Period: From October 27 through November 5, 1997.
- Position: Visiting professor at the *International Training Program on Utility Regulation and Strategy*. Seminar held at Langkawi, Malaysia.
Institution: UNIVERSITY OF FLORIDA AT GAINESVILLE. Workshop designed for regulatory agencies throughout the world staff and organized by the World Bank and the University of Florida.
Place: Gainesville, United States.
Period: January 13-14, 1997.

M. AWARDS, PRIZES, FELLOWSHIPS, MEMBERSHIPS

- Member of the Editorial board of *Economics of Energy & Environmental Policy* (newest refereed journal of the International Association for Energy Economics, IAEE).
- 4th Reimut Jochimsen Prize, awarded by the Deutsche Bundesbank (Federal Reserve Bank of Germany) to the paper "A Dynamic Incentive Mechanism for Transmission Expansion in Electricity Networks - Theory, Modeling and Application (joint with H. Weigt)."
Grant date: February 4th, 2009
- Georg Forster Research Award, Humboldt Foundation, so as to carry out research visits to Germany from 2009-2011.
Grant date: March 11th, 2008.
- "Top authors in Europe" since December 2007, IDEAS-RePEc (database), Department of Economics, The University of Connecticut.
Grant date: since 2007.
- "Top authors in Mexico" since December 2007, IDEAS-RePEc (database), Department of Economics, The University of Connecticut.
Grant date: since 2007.
- Research Associate, Lehrstuhl für Energiewirtschaft, Technische Universität Dresden, since 2007.
- Who's Who in America 2006, 2007, 2008, 2009, U.S.A. Biographee.
- Who's Who in the World 2005, 2006, 2007, 2008, 2009, 24rd edition, U.S.A. Biographee.

- Who's Who in Science and Engineering 2005-2006, 2006-2007, 10th edition, U.S.A. Biographee.
- Who's Who in Science and Engineering 2005-2006, 8th edition, U.S.A. Biographee.
- Fundación Mexico en Harvard Scholarship.
Grant date: September 2002 – June 2004.
- Repsol-YPF-Harvard Kennedy School Fellowship.
Grant date: September 2003 – June 2004.
- Fulbright Research Fellowship.
Grant date: September 2002 – August 2003.
- CONACYT Sabbatical Fellowship.
Grant date: September 2002 – August 2003.
- Fundación Mexico en Harvard Scholarship.
Grant date: September 2002 – August 2003.
- Member of the advisory board of the IAEE's Mexican Chapter (AMEE), elected by voting.
Grant date: October 1999 - September 2001.
- Secretary of the IAEE's Mexican Chapter (AMEE), elected by voting.
Grant date: Since October 2001.
- Coordinator of the project "La aplicación del modelo Principal – Agente al análisis de la política científica" (The application of the principal-agent model to scientific policy análisis) financed by CONACYT.
Grant date: 2000 – 2002.
- Member of the CIDE's Committee on sabbaticals and leave of absence.
Grant date: Since 2000.
- Member of the *International Association for Energy Economics* (IAEE).
Grant date: Since 2000.
- Grant from "The Tinker Foundation Incorporated": earned in international open contest, with the project "The Structural Reform of the Mexican Electric Sector".
Grant date: July 1999.
- National prize of Political Economy "Juan F. Noyola" of the "Colegio nacional de economistas" (National School of Economists). Prize delivered by the President of Mexico, Dr. Ernesto Zedillo.
Grant date: December 21, 1994.
- "Ora N. Arnold Fellowship" offered in Rice University as recognition to the project and job developed in doctoral thesis. The purpose of this prize is to stimulate research that contributes to the "better understanding among the United States, Mexico, the South American countries, the Western Indias and the Philippines".
Grant date: 1992.
- Scholarship offered by CONACYT to support the culmination of the graduate program in Rice University.
Grant date: 1992.
- Best grade average at the Economics graduate program of Rice University.
Grant date: 1991 – 1993.
- Scholarships offered by Rice University to perform graduate studies.
Grant date: 1988-1989, 1989-1990 and 1991-92 academic periods.
- Scholarships offered by the "Fundación Interamericana" (Interamerican Foundation) to perform graduate studies in the United States.
Grant date: 1988-1989 and 1989-1990 academic periods.

- Scholarships, earned in 1988 but not used, to perform graduate studies in several universities in the United States:
 - "E.D. Farmer Fellowship", University of Texas at Austin;
 - Scholarship of the University of California at Riverside;
 - Scholarship of George Washington University, Washington, D.C.;
 - "New School Dean's Fellowship, New School for Social Research, New York;
 - Scholarship UC- MEXUS-CONACYT, University of California at San Diego.

- "Gabino Barreda" diploma and medal for having obtained the best grade average (10/10), in 1985 at the B.A program in economics of the UNAM Economics Faculty.
Grant date: 1985.
- "The Archibald Mac Murchy Memorial Scholarship" offered to academic excellence by the University of Toronto, Canada.
Grant date: 1981.
- "Diploma al mérito académico" offered by the "Instituto Anglo Mexicano de cultura".
- Academic excellence diploma offered by the UNAM high school for obtaining the highest grade average (10/10).
Grant date: 1980.
- Third place at the "Mathematics Contest" (Concurso de matemáticas) at the "*Escuela Nacional Preparatoria*" (high school), UNAM.
- Highest grade average at the "Escuela Secundaria No. 28 Dr. Manuel Barranco" (Secondary school).