

**Cecilia**

**Martín-del-Campo  
Márquez.**



**Nationality:** Mexican

**Qualifications:**

- Bachelor's degree in Energy Engineering. Universidad Autonoma Metropolitana- Unidad Iztapalapa. 1975-79
- Engineer degree in Atomic Engineering. (Ingénieur en Génie Atomique) Institut National des Sciences et Techniques Nucléaires. Saclay, France. 1982-84
- Ph.D. degree in Physical Sciences on Nuclear Reactor Physics. Université de Paris IX, Orsay, France. 1984-87
- Training Diploma on Energy and Power Evaluation Program (ENPEP-BALANCE). IAEA TC-Project MEX/0/012 "Comparative Assessment of Energy Options and Strategies until 2025". Institution: Argonne National Laboratory and the Mexican Ministry of Energy. 2001-03.
- Other trainings:

IAEA Training Meeting on Nuclear Energy System Modeling and Assessment using the INPRO Methodology. Chile, 11 - 20 Nov, 2014.

IAEA Technical Meeting on Education and Training using E-learning Tools. Austria 24-26 Mars, 2015.

IAEA Education and Training Seminar on Fast Reactors Sciences and Technology 2015. México, 29 June – 03, 2015.

IAEA INPRO Dialogue Forum: Roadmaps for a transition to globally sustainable nuclear energy systems. Austria 20-23 Oct, 2015.

Training on Renewable energy scenarios for Mexico using Balmorel Model. SENER & UNAM: **Training I** 25 - 29 April 2016 (CECAL-SENER); **Training II** 6-10 June 2016 (IIEc-UNAM); **Training III** 7-9 Sept, 2016 (IIEc-UNAM); **Training IV** 8-11 Nov, 2016 (IIEc-UNAM).

Training sessions associated to the AFD-SENER project on the implementation of the ThreeME model for the Mexican economy. 2017.

Basic Training Course on VEDA-TIMES. Organized by ETSAP Secretary of Energy and UNAM. 31 Jan - 1 Feb 2018.

**Organisation:**

National Autonomous University of Mexico (UNAM) Faculty of Engineering. Full time Senior Professor & Director of the Energy Planning Unit.

**Languages**

Spanish (native), English (high) and French (high)

**Further information on selected projects**

2017-present

**National Autonomous University of Mexico (UNAM), Director of the Energy Planning Unit (EPU).**

The EPU is an interdisciplinary group of professionals who generate tools and knowledge for the planning of energy systems with economic, environmental and social goals. Cecilia as a Director of the EPU carried out the establishment of the strategic actions to follow to achieve the objectives of this Unit of research.

1999-present

**National Autonomous University of Mexico (UNAM), Faculty of Engineering, Mexico.****Professor and researcher.**

**Research Area:** Energy system model development and analyses. Specialised in mathematical modelling and optimisation for the analysis of problems that are power sector specific. Heavy cooperation with international research institutions. More than 64 peer reviewed international scientific publications.

Cecilia has been lecturer of courses in BC and Master's degree. The main topics: Energy and Environmental Impacts, knowledge Management. Electricity generation and transmission planning.

**Ongoing Supervision of PhD thesis for:**

Eréndira Velázquez López. Title: Long-term scenarios of the penetration of photovoltaic solar energy in Mexico.

Mariana Karina Hernández Escalante. Title: Modelling of biomass waste projections for electricity generation in Mexico.

Ulises Adair Hernández Hurtado. Title: Long-term planning scenarios for the Mexican electricity sector with nuclear power.

Rafael García Jolly. Title: Optimization of the supply chain of automotive fuels.

Abel Clemente Reyes. Title: Assessment of successful GHG emissions reduction by the use of complete combustion systems, within the Mexican Oil & Gas Upstream Facilities.

Marco Antonio Martínez Quintana. Title: Design and construction of an optimization model for energy planning.

María Felicia Jiménez Lavié. Title: Impact of climate change on Mexico's electricity system.

**Cecilia has participated in the following Academic Committees:**

2015 – 2018: Member of the Academic Committee of the Bachelor's program in Renewable Energy (LIER) of the Institute of Renewable Energy of the UNAM.

2011 - 2015: Member of the Academic Committee of the Graduate Engineering Program of the UNAM.

2015 – Present: Member of the Mexican Academy of Sciences.

2007 - 2012: Member of the Advisory Council of the Institute of Science and Technology of Mexico City (CDMX).

2005 – 2011: Member of the Academic Sub-Committee of Energy at the Graduate Engineering Program of the UNAM.

2003 – present: Member of the Academy of Engineering of Mexico.

2002 - present: Reviewer for CONACYT and PAPIIT-UNAM projects.

1990-1999

**Institute for Electrical Research, Mexico (Today the INEEL)**

Researcher.

1987-1988

**National Institute for Nuclear Research, Mexico (ININ)**

Researcher.

**Google Scholar publications: 87; Citations: 422; h-index: 12.**

<https://scholar.google.com/citations?hl=en&user=HlycjTcAAAAJ>

#### **Further information on selected publications**

Castro, Luis M.; Rodríguez-Rodríguez, J. R.; Martín-del-Campo., Cecilia; (2020). Modelling of PV systems as distributed energy resources for steady-state power flow studies. *Journal of Electrical Power and Energy Systems*. Vol 115.

Ferat Toscano, Catalina; Martín-del-Campo, Cecilia; Moeller-Chavez, Gabriela; Leon de los Santos, Gabriel; François, Juan-Luis; Revollo Fernandez, Daniel; (2019). Life Cycle Assessment of a Combined-Cycle Gas Turbine with a Focus on the Chemicals Used in Water Conditioning. *Sustainability*. Vol 11(10).

Solano-Rodríguez, Baltazar; Pizarro-Alonso, Amalia; Vaillancourt, Kathleen; Martín-del-Campo, Cecilia; (2018). Mexico's Transition to a Net-Zero Emissions Energy System: Near Term Implications of Long-Term Stringent Climate Targets. *Limiting Global Warming to Well Below 2 C: Energy System Modelling and Policy Development; Lecture notes in energy* Vol 64 pages 315-331.

Martín-del-Campo, Cecilia; François, Juan Luis; Estrada, Guillermo Jose; (2016). Minimal global regret analysis for electricity generation expansion. *Energy Sources, Part B: Economics, Planning, and Policy*. Vol 11(4) pages 363-370.

Giraldi, Mario R; François, Juan-Luis; Martín-del-Campo, Cecilia; (2015). Life cycle assessment of hydrogen production from a high temperature electrolysis

process coupled to a high temperature gas nuclear reactor. International journal of hydrogen energy. Vol 40(10) pages 4019-4033.

Barragán-Martínez, Alejandra-Maribel; Martín-del-Campo, Cecilia; François, Juan-Luis; Espinosa-Paredes, Gilberto; (2013). MCNPX and HELIOS-2 comparison for the neutronics calculations of a Supercritical Water Reactor HPLWR. Annals of Nuclear Energy. Vol 51 pages 181-188

Martín-del-Campo, Cecilia; Reyes-Ramírez, Ricardo; François, Juan-Luis; (2013). Validation of simplified methods for fuel depletion calculations in gas-cooled fast reactors. Annals of Nuclear Energy. Vol 60 pages 218-225.

Martín-del-Campo, Cecilia; Reyes-Ramírez, Ricardo; François, Juan-Luis; Reinking-Cejudo, Arturo G; (2011). Contributions to the neutronic analysis of a gas-cooled fast reactor Annals of Nuclear Energy. Vol 38 (6) pages 1406-1411.

Reyes-Ramírez, Ricardo; Martín-del-Campo, Cecilia; François, Juan-Luis; Brun, Emeric; Dumonteil, Eric; Malvagi, Fausto; (2010). Comparison of MCNPX-C90 and TRIPOLI-4-D for fuel depletion calculations of a Gas-cooled Fast Reactor. Annals of Nuclear Energy. Vol 37(8) pages 1101-1106.

Martín-del-Campo, Cecilia; Palomera-Pérez, Miguel-Ángel; François, Juan-Luis; (2009). Advanced and flexible genetic algorithms for BWR fuel loading pattern optimization. Annals of Nuclear Energy. Vol 36(10) pages 1553-1559.

Martín del Campo-Márquez, C; Nelson-Edelstein, PF; García-Vázquez, MÁ; (2009). La energía del viento en México: Simulación de un parque eólico y aplicación de análisis probabilístico de seguridad. Ingeniería, investigación y tecnología. Vol 10(4) pages 343-352.

Martin-del-Campo, Cecilia; François, Juan Luis; Carmona, Roberto; Oropeza, Ivonne P; (2007). Optimization of BWR fuel lattice enrichment and gadolinia distribution using genetic algorithms and knowledge. Annals of Nuclear Energy. Vol 34(4) pages 248-253.

Martin-del-Campo, Cecilia; François, Juan Luis; Barragan, Alejandra M; Palomera, Miguel A; (2007). Boiling water reactor fuel lattice enrichment distribution optimization using tabu search and fuzzy logic. Nuclear technology. Vol 157(3) pages 251-260.

Conzelmann, Guenter; Quintanilla, Juan; Aguilar, Vicente; Conde, Luis Alberto; Fernández, Jorge; Mar, Elizabeth; del Campo, Cecilia Martín; Serrato, Gerardo; Ortega, Rubén; (2006). Mexico's Long-Term Energy Outlook: Results of a Detailed Energy Supply and Demand Simulation. Energy Studies Review. Vol 14.