

I am a postdoc researcher working on climate and energy policy at the Potsdam Institute for Climate Impact Research. My research focuses on strategies to decarbonise the power sector and the role of the EU emission trading system in the energy transition. I obtained a PhD in Information Systems from the University of Lausanne in 2017. Engineer by formation, I have extensive experience in energy systems modelling, always working with interdisciplinary teams, which allowed me to build sound microeconomics foundations.

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## PROFESSIONAL EXPERIENCE

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| 7/2017<br>to date   | <p><b>Postdoctoral researcher at Potsdam Institute for Climate Impact Research (PIK), Germany</b></p> <ul style="list-style-type: none"><li>– Tasks. Update, operate, and extend the internal long-term investment model for the EU electricity sector (LIMES-EU). Participate in and contribute to several project groups researching, publishing, and presenting our work on the EU electricity sector and the EU Emission Trading System (EU ETS). Lead PIK's workstream and contribution to the project 'Future of Fossil Fuels in the wake of greenhouse gas neutrality' (<a href="#">FFF</a>), engaging with the remaining project partners, namely Deutsches Institut für Wirtschaft and Technische Universität Berlin. Contribute to project proposal writing.</li><li>– Achievements. Turned LIMES-EU into one of the few detailed models for the power sector that covers the whole EU ETS including the Market Stability Reserve (MSR). Published scientific papers in leading international journals targeting academic peers as well as policy briefs and blog posts aimed at a wider public; two of these studies have been widely recognized in the media and influenced political discourse (see 'Publications', Nr. 4 and 15). Contributed to the successful implementation of several high-profile projects with significant funding such as the Kopernikus Projects Enavi and <a href="#">Ariadne</a>, funded by the Federal Ministry of Education and Research, and the EU Horizon 2020 project <a href="#">Innopath</a>.</li></ul> |
| 9/2012<br>to 6/2017 | <p><b>PhD researcher at the Faculty of Business and Economics (HEC), University of Lausanne, Switzerland</b></p> <ul style="list-style-type: none"><li>– Tasks. Develop a system dynamics model for the Swiss electricity sector; formulate a conceptual framework to analyse the security of electricity supply.</li><li>– Achievements. Published four papers in leading international journals classified as Q1 in the 'Energy' category, and presented my research at 8 conferences.</li></ul>  |

9/2012 to 6/2017      **Teaching assistant at the Faculty of Business and Economics (HEC), University of Lausanne, Switzerland**

- Tasks. Lecture undergraduate course ‘Decision Analysis’ covering topics such as optimisation, decision trees, simulation, and queuing theory (attended by approximately 250 students). Develop teaching material. Hold office hours. Mark exams. Teach exercise classes.

9/2012 to 12/2013      **Teaching assistant at the Faculty of Business and Economics (HEC), University of Lausanne, Switzerland**

- Tasks. Follow up and advise group projects as part of the ‘Seminar: Applied Decision Analysis’ course, covering topics such as optimisation and simulation (attended by approximately 10 students). Hold office hours. Mark projects.

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## EDUCATION

9/2012 to 5/2017      **PhD in Information Systems at the Faculty of Business and Economics (HEC), University of Lausanne, Switzerland**

- Thesis on “Security of Supply in the Electricity Sector: The Case of Switzerland”
- Funded by the Swiss National Foundation and awarded with the Faculty Price in recognition of outstanding PhD Thesis by the Faculty of Business and Economics

1/2011 to 12/2012      **M.Sc. in Systems Engineering at Faculty of Mines, National University of Colombia, Colombia**

- Thesis on “Modelling capacity expansion in the LNG industry using system dynamics”
- Awarded the scholarship ‘Outstanding postgraduate student’ during the entire duration of the master’s (2011-2012)

1/2005 to 7/2010      **B.S. in Industrial Engineering at Faculty of Mines, National University of Colombia, Colombia**

- Thesis on “Mathematical models of oligopolistic competition applied to natural gas markets”
- Awarded the scholarship ‘Outstanding undergraduate student’ during four semesters of the bachelor’s (2005-1, 2009-1, 2009-2, 2010-1)

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## SKILLS

Computer skills: GAMS, R, Vensim, Matlab, Powersim

Language skills: Spanish (native), English (advanced), French (advanced), German (basic), Italian (basic)

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## AWARDS

Faculty Price for excellence in PhD thesis, awarded by the Faculty of Business and Economics (HEC Lausanne) (2017)

Scholarship 'Outstanding postgraduate student' during the entire duration of the masters (2011-2012)

Scholarship 'Outstanding undergraduate student' during four semesters of the bachelor (2005-1, 2009-1, 2009-2, 2010-1)

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## OTHER ACTIVITIES

Member of the International Association of Energy Economics (IAEE)

Occasional referee for the journal *Energy Policy*, *Nature Energy*, *Energy Economics*,