

MAURICIO URIONA MALDONADO

I study clean technologies driving the transition toward sustainable and low-carbon economies in Developing Countries from a socio-technical perspective. I am an expert in system dynamics modelling which I use to develop simulated scenarios of technology diffusion and sustainable transitions. I lead the Sustainable Energy Innovation Group (Sinergia) at UFSC. My research has been published in several journals and in specialized conferences across the world. I held visiting positions at Universidad Autonoma de Madrid (Spain), University of Tampere (Finland) and University of Bremen (Germany) and received training at the Massachusetts Institute of Technology (USA).



EDUCATION

2012
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2008

PhD. in Knowledge Management and Engineering

Federal University of Santa Catarina

Florianopolis, Brazil

- PhD Dissertation: Sectoral Innovation Dynamics, Innovation Systems, System Dynamics, IT Sector
- CAPES Fellow, PEC-PG. Supervised by Prof. G. Varvakis
- Co-supervised by Prof. V. Kern (UFSC) and Prof. R. Pietrobon (Duke University)

2008
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2006

M.Sc. in Knowledge Management and Engineering

Federal University of Santa Catarina

Florianopolis, Brazil

- Thesis: Business Process Management, System Dynamics, IT Sector
- CNPq Fellow, PEC-PG. Supervised by Prof. G. Varvakis

2004
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2000

B.S. in Industrial Engineering

Military School of Engineering (EMI)

La Paz, Bolivia

- Thesis: Strategic Planning, Service Industry



ACADEMIC EXPERIENCE

Current
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2013

Associate Professor

Federal University of Santa Catarina

Florianopolis, Brazil

- Department of Industrial and Systems Engineering
- Courses taught in Undergraduate Level: Decision Analysis, IT Management/Data Science, Microeconomics, Ethics in Business
- Courses taught in Graduate level: System Dynamics Simulation, Innovation and Industrial Economics, Renewable Energy Economics

2025
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2022

Associate Professor Extraordinary

Stellenbosch University

Stellenbosch, South Africa

- Department of Industrial Engineering
- Invited Position

2013
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2009

Research Associate

Duke University

Durham, NC, US

- Research on Research Group
- Under the lead of Dr. Ricardo Pietrobon
- Conducted research on system dynamics and Science and Technology Policy

View this CV online with links at <https://cv-muriona.netlify.app/>

CONTACT

Born and raised in La Paz,
Bolivia 🇧🇴

Lives in Florianopolis, Brazil 🇧🇷

Age: 41 years old

✉ m.uriona@ufsc.br

🌐 - 📧 - [in](#) - [id](#) - [R](#) - [Python](#)

LANGUAGE SKILLS

English

Portuguese

Spanish (Native)

French

SPECIFIC SKILLS

System Dynamics

Bibliometrics

Data Visualization

Data Analysis

Machine Learning

MODELLING SKILLS

[Stella](#)

[Vensim](#)


[Anylogic](#)

[R](#)


[Python](#)

VISITING POSITIONS


- 2017
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2017

Visiting Professor
 University of Bremen  Bremen, Germany

 - Visiting Professor at the Bremen Institute for Production and Logistics
 - CAPES-DFG Fellow
- 2017
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2017

System Dynamics Training
 MIT  Boston, USA


 - MIT Sloan School of Management
 - Advanced Course in System Dynamics
- 2011
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2011

Visiting Researcher
 Autonomous University of Madrid  Madrid, Spain


 - Visiting Scholar at the Economics and Business Faculty
 - EU 7th Framework Programme - Marie Curie Actions

FUNDING AND GRANTS


- 2026
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2024

Scenarios for green hydrogen production in Brazil
 CNPq - Principal Investigator  Brazil


 - Project funded by CNPq (Brazilian science foundation) which aims at developing quantitative scenarios for the ramp up of green hydrogen production in Brazil for the coming decades, including economic, technological and social variables.
 - Project Partners: UFSC.
- 2024
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2023

Public policies and corporate responses to promote sustainable economic development at the green hydrogen HUB with an emphasis in Ceara State
 CNPq - Co-Investigator  Brazil

 - Project funded by CNPq (Brazilian science foundation) which aims at developing a qualitative understanding of the feasibility of green hydrogen production in the State of Ceara (the leading State in green hydrogen promotion policies) for the next decade.
 - Project Partners: UFSC and Federal University of Ceara.
- 2023
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2022

Decision Support Systems for long-term hydrogen scenarios
 DAAD and GIZ - Principal Investigator  Germany

 - Project funded by DAAD (German Academic Exchange Service) and GIZ (German Cooperation Agency) under the German-Brazilian Research Cooperation in the Energy sector – NoPa 2.0/ cooperation in the areas of green hydrogen/PtX, direct electrification and energy storage 2023.
 - Project Partners: UFSC, Fraunhofer Institute for Systems Innovation and Federal University of Ceara.
- 2023
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2021

New index for green technologies in Latin America
 Universidad Militar Nueva Granada - Co-Investigator  Colombia

 - Project funded by Universidad Militar Nueva Granada which aims at developing new performance indexes for green technologies in Latin America, specially with patents.
 - Project Partners: UFSC and Universidad Militar Nueva Granada (Colombia).

SELECTED PUBLICATIONS

Industry Experience

Consultant in Innovation Management (FIESC) - 2012-2013

Business Analyst (Dinamica Software) - 2005-2008


Noteworthy International Collaborations

w/ Prof. Sara Grobbelaar (Stellenbosch Univ) 

w/ Prof. Rainer Walz (Fraunhofer ISI) 

w/ Prof. Milton Herrera (Univ Militar Nueva Granada) 

w/ Prof. Minelle Silva (La Rochele Business School) 

w/ Prof. Guillermo Davila (Univ de Lima) 

w/ Prof. Peter Wells (Cardiff Univ) 

Most Recent Publications			
Year	Title	Journal	doi
2024	Exploring the influence of Brazilian project cancellation mechanisms on new wind power generation	RENEWABLE ENERGY	10.1016/j.renene.2023.119755
2023	Scaling actors? perspectives about innovation system functions: Diffusion of biogas in Brazil	TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	10.1016/j.techfore.2023.122359
2022	A multi-country simulation-based study for end-of-life solar PV panel destination estimations	SUSTAINABLE PRODUCTION AND CONSUMPTION	10.1016/j.spc.2022.07.021
2022	The evolution, consolidation and future challenges of wind energy in Uruguay	ENERGY POLICY	10.1016/j.enpol.2021.112758
2022	Review of Social Dynamics in complex energy systems models	INTERNATIONAL JOURNAL OF SUSTAINABLE ENERGY PLANNING AND MANAGEMENT	10.54337/ijsepm.7478
2021	Modeling smallholder agricultural systems to manage Striga in the semi-arid tropics	AGRICULTURAL SYSTEMS	10.1016/j.agsy.2020.103008
2021	Scenarios for end-of-life (EOL) electric vehicle batteries in China	REGE. REVISTA DE GESTÃO USP	10.1108/REGE-12-2020-0143
2021	A systems modeling approach to estimate biogas potential from biomass sources in Brazil	RENEWABLE & SUSTAINABLE ENERGY REVIEWS	10.1016/j.rser.2020.110518
2020	The influence of e-carsharing schemes on electric vehicle adoption and carbon emissions: An emerging economy study	TRANSPORTATION RESEARCH PART D-TRANSPORT AND ENVIRONMENT	10.1016/j.trd.2020.102226
2020	Dynamics performance of the wind-power supply chain with transmission capacity constraints	International Journal of Electrical and Computer Engineering	10.11591/ijece.v10i2.pp1142-1148
2020	Using technology to improve access to healthcare: The case of the MomConnect programme in South Africa	Local Economy	10.1177/0269094219897544
2020	The Influence of Company Size on Energy Management Systems Adoption: A System Dynamics Model	BBR. Brazilian Business Review (English Ed.)	10.15728/bbr.2020.17.5.6
2020	Similarities and differences between business process management and lean management	BUSINESS PROCESS MANAGEMENT JOURNAL	10.1108/BPMJ-09-2019-0368
2020	Decentralized Water Supply Management Model: a Case Study of Public Policies for the Utilization of Rainwater	WATER RESOURCES MANAGEMENT	10.1007/s11269-020-02575-8
2020	Innovation ecosystems in platform apps	Revista Brasileira de Inovação	10.20396/rbi.v19i0.8655371
2020	Using system dynamics for hidrological disaster prevention	Revista FSA (Faculdade Santo Agostinho)	10.12819/2020.17.2.7
2019	Product-service systems in solar PV deployment programs: What can we learn from the California Solar Initiative?	RESOURCES CONSERVATION AND RECYCLING	10.1016/j.resconrec.2018.09.017
2019	The impact of CO2 mitigation policies on light vehicle fleet in Brazil	ENERGY POLICY	10.1016/j.enpol.2018.11.014
2019		EM QUESTÃO	10.19132/1808-5245240.258-277
2019	Dinâmica de geração e dissipação do estresse na equipe de enfermagem num centro de oncologia	Revista Latino-Americana de Enfermagem	10.1590/1518-8345.2874.3156

Top-10 Highly Cited Publications

Year	Title	Journal	DOI	citations
2020	The influence of e-carsharing schemes on electric vehicle adoption and carbon emissions: An emerging economy study	Transportation Research Part D: Transport and Environment	10.1016/j.trd.2020.102226	62
2017	Long term diffusion dynamics of alternative fuel vehicles in Brazil	Journal of Cleaner Production	10.1016/j.jclepro.2017.07.051	42
2018	Diffusion of photovoltaic technology in Germany: A sustainable success or an illusion driven by guaranteed feed-in tariffs?	Energy	10.1016/j.energy.2018.02.104	39
2016	Process improvement for professionalizing non-profit organizations: BPM approach	Business Process Management Journal	10.1108/BPMJ-08-2015-0114	24
2019	Innovation system policy analysis through system dynamics modelling: A systematic review	Science and Public Policy	10.1093/scipol/scy034	24
2012	State of the art on the Systems of Innovation research: A bibliometrics study up to 2009	Scientometrics	10.1007/s11192-012-0653-5	23
2021	A systems modeling approach to estimate biogas potential from biomass sources in Brazil	Renewable and Sustainable Energy Reviews	10.1016/j.rser.2020.110518	22
2015	Big Data and Business Analytics in the Supply Chain: A Review of the Literature	IEEE Latin America Transactions	10.1109/TLA.2015.7387245	20
2019	The impact of CO2 mitigation policies on light vehicle fleet in Brazil	Energy Policy	10.1016/j.enpol.2018.11.014	18
2017	A functions approach to improve sectoral technology roadmaps	Technological Forecasting and Social Change	10.1016/j.techfore.2016.08.006	17

ASIDE

PUB RECORD

64 Journal Publications
5 Books
32 Book Chapters
162 Conference Papers

SUPERVISIONS

4 Completed PhD Supervisions
9 Completed MSc Supervisions

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