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 | 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 | 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 | 2000

B.S. in Industrial Engineering

Military School of Engineering (EMI) — La Paz, Bolivia

- Thesis: Strategic Planning, Service Industry

ACADEMIC EXPERIENCE

Current | 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 | 2022

Associate Professor Extraordinary

Stellenbosch University — Stellenbosch, South Africa

- Department of Industrial Engineering
- Invited Position

2013 | 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

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CONTACT

Born and raised in La Paz, Bolivia

Lives in Florianopolis, Brazil

Age: *41 years old*

m.uriona@ufsc.br

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

*Made with **pagedown**, an R package.*
Last updated on 21-Dec-2023.

VISITING POSITIONS

2017 | 2017

Visiting Professor

University of Bremen — Bremen, Germany

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

2017 | 2017

System Dynamics Training

MIT — Boston, USA

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

2011 | 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 | 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 | 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 | 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 | 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

Year	Title	Journal	DOI
2024	Exploring the influence of Brazilian project cancellation mechanisms		

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)

Year	Title	Journal	DOI
on new wind power generation	RENEWABLE ENERGY	[doi:10.1016/j.renene.2023.119755]	
2023	Scaling actors? perspectives about innovation system functions: Diffusion of biogas in Brazil	TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	[doi: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	[doi:10.1016/j.spc.2022.07.021]
2022	The evolution, consolidation and future challenges of wind energy in Uruguay	ENERGY POLICY	
2022	Review of Social Dynamics in complex energy systems models	INTERNATIONAL JOURNAL OF SUSTAINABLE ENERGY PLANNING AND MANAGEMENT	[doi:10.54337/ijsepm.7478]
2021	Modeling smallholder agricultural systems to manage Striga in the semi-arid tropics	AGRICULTURAL SYSTEMS	[doi:10.1016/j.agsy.2020.103008]
2021	Scenarios for end-of-life (EOL) electric vehicle batteries in China	REGE. REVISTA DE GESTÃO USP	[doi:10.1108/rege-12-2020-0143]
2021	A systems modeling approach to estimate biogas potential from biomass sources in Brazil	RENEWABLE & SUSTAINABLE ENERGY REVIEWS	[doi: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	[doi:10.1016/j.trd.2020.102226]
2020	Dynamics performance of the wind-power supply chain with transmission		

Year	Title	Journal	DOI
capacity constraints	International Journal of Electrical and Computer Engineering	[doi: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	[doi:10.1177/0269094219897544]
2020	The Influence of Company Size on Energy Management Systems Adoption: A System Dynamics Model	BBR. Brazilian Business Review (English Ed.)	[doi:10.15728/bbr.2020.17.5.6]
2020	Similarities and differences between business process management and lean management	BUSINESS PROCESS MANAGEMENT JOURNAL	
2020	Decentralized Water Supply Management Model: a Case Study of Public Policies for the Utilization of Rainwater	WATER RESOURCES MANAGEMENT	[doi:10.1007/s11269-020-02575-8]
2020	Innovation ecosystems in platform apps	Revista Brasileira de Inovação	[doi:10.20396/rbi.v19i0.8655371]

SELECTED PUBLICATIONS (CONTINUED)

Year	Title	Journal	DOI
2020	Using system dynamics for hidrological disaster prevention	Revista FSA (Faculdade Santo Agostinho)	[doi: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	[doi:10.1016/j.resconrec.2018.09.017]
2019	The impact of CO2 mitigation policies on light vehicle fleet in Brazil	ENERGY POLICY	
2019		EM QUESTÃO	[http://seer.ufrgs.br/EmQuestao/article/view/86934]
2019	Dinâmica de geração e dissipação do estresse na equipe de enfermagem num centro de oncologia	Revista Latino-Americana de Enfermagem	
2019	Modeling the Customer Value Generation in the Industry's Supply Chain	INTERNATIONAL JOURNAL OF SYSTEM DYNAMICS APPLICATIONS	[doi:10.4018/ijsda.2019100101]
2018	Innovation system policy analysis through system		

Year	Title	Journal	DOI
dynamics modelling: a systematic review	Science and Public Policy		
2018	Diffusion of photovoltaic technology in Germany: A sustainable success or an illusion driven by guaranteed feed-in tariffs?	ENERGY	
2018	Solving the Job-Shop Scheduling Problem in the Industry 4.0 Era	Technologies	
2018	The impacts of modularity in Innovation Systems: a literature review	TEXTOS DE ECONOMIA	
2017	A functions approach to improve sectoral technology roadmaps	TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	
2017	The Bullwhip Effect in Reverse Logistics Networks: A System Dynamics Model	Produto e Produção	
2017	Bibliometric Analysis of the Scientific Production of the Information Architecture Related to Libraries	BIBLIOS (LIMA)	
2017	Intellectual Capital: How to be valued within organizations?	ESPACIOS (CARACAS)	
2017	Reducing lead times in the supplier relationship management process: A process-centric approach	ESPACIOS (CARACAS)	

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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