

Curriculum Vitae

Dr. François Diaz-Maurin

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Career Summary

François Diaz-Maurin received his B.S. (2004, with distinction) and M.S. (2007, with distinction) degrees in civil engineering from the University of Rennes 1, France, and his Ph.D. degree in environmental science and technology (2013, summa cum laude) from the Universitat Autònoma de Barcelona, Spain. Before joining academia, François gathered four years of professional experience as an engineer in the design of nuclear energy technologies in Paris, France (2007-2008) and in Boston, USA (2009-2010).

François is an internationally recognized expert in the integrated assessment of nuclear energy systems acting as member of several advisory boards, including the Advisory Board of the Nuclear Consulting Group (University College London) since 2015, and the Advisory Board of the HoNESt (History of Nuclear Energy and Society) H2020-Euratom research project (2015-2018).

During his 6 years spent in academia, François has focused on developing new analytical approaches and exploring new conceptualizations in the fields of Integrated Assessment and Science for Governance. His work provided several important contributions to the discussion over energy issues through the development of a new analytical framework for the quantitative integrated assessment of energy systems across scales and a new approach for the qualitative analysis of controversies over energy technologies.

These research lines led to a prolific publication record for an early researcher with 5 book chapters (at Routledge and Elsevier) and 4 articles in high-impact scientific journals (incl. Global Environmental Change, Environmental Science & Technology, Energy) since 2013. The relevance of this work is confirmed by a growing visibility. According to Google Scholar, his articles have collected 115 citations.

François serves in several scientific editorial boards and review panels, including the Editorial Board of Frontiers in Energy Systems and Policy (since 2013), as well as the Review Panel of the Science and Global Security journal of Princeton University (since 2014).

Current Position

Postdoctoral Research Fellow, Department of Humanities, Universitat Pompeu Fabra, Barcelona, Spain, 2016–

Previous Position

Postdoctoral Research Fellow, Institute of Environmental Science & Technology (ICTA), Universitat Autònoma de Barcelona (UAB), Spain, 2013–2016

Education

Ph.D. in Environmental Science and Technology (Summa Cum Laude), Universitat Autònoma de Barcelona (Spain), Institute of Environmental Science & Technology (ICTA), February 2011–October 2013

M.Sc. Degree in Civil Engineering (First class honors with Distinction), INSA Graduate School of Rennes (France), Department of Civil Engineering, September 2004–June 2007

B.Sc. Degree in Civil Engineering (First class honors with Distinction), University of Rennes 1 (France), Department of Civil Engineering, September 2002–June 2004

Fellowships, Grants and Awards

Postdoctoral Fellowship, Universitat Autònoma de Barcelona, 2013–2016

Received from the ACP-EU Co-operation Program in Higher Education EDULINK II, European Commission

ELEEP Fellow, Emerging Leaders in Environmental and Energy Policy (ELEEP) network, 2011–2014

Organized by the Atlantic Council (Washington DC, USA) and the Ecologic Institute (Berlin, Germany)

Ph.D. Research Fellowship, Universitat Autònoma de Barcelona, 2011–2013

Received from the National Research Agency (AGAUR) of the Catalan Government (2009-SGR-594)

Summer School Grant. Awarded by the UK Energy Research Centre (UKERC), 2012

"Synergy in Education" Award (shared with Mario Giampietro), 2011

Received from the Board of Trustees of the Universitat Autònoma de Barcelona

Research Experience

Project Manager and Researcher, "Participatory Integrated Assessment of Energy Systems to promote Energy Access and **Efficiency (PARTICIPIA)**", 2013–2016

Under the ACP-EU Co-operation Program in Higher Education (EDULINK II) funded by EuropAid. **PARTICIPIA establishes new Master's Programs in Southern African Countries (Botswana, Namibia and South Africa)**. Universitat Autònoma de Barcelona, Spain (**€497,499.09**; UAB is Coordinator). Contract Number: DCI/AFS/2013/320-333

Researcher, "**European-Brazilian Network on Energy Planning (NETEP)**", 2014–2016

Under the Marie Curie Action IRSES funded by the European Commission (FP7-PEOPLE-2013-IRSES). NETEP is an exchange program for interdisciplinary research and knowledge transfer on energy planning bringing together partners from Portugal, UK, Spain and Brazil. Universitat Autònoma de Barcelona, Spain (**€218,400.00**; UAB is Partner). Contract Number: PIRSES-GA-2013-612263

Researcher, German GIZ-funded Nexus Assessment project, 2012–2013

Application of MuSIASEM approach to three cases in the agrifood sector, commissioned by the Energy Team of the Climate, Energy and Tenure Division (NRC) of the UN Food and Agriculture Organization (FAO) and sponsored by the German Federal Enterprise for International Cooperation (GIZ). Liphe4 Scientific Society, Barcelona, Spain (**€72,760**). Contract Number: GCP/GLO/445/GER(GIZ)

Teaching Experience

Guest Lecturer, Department of Sociology, UAB, 2016–

Course "Environmental Sociology" (UAB 101129, Sociology). (50-55 undergraduate students)

Guest Lecturer, ICTA-UAB, 2015–

Module: Interdisciplinary Concepts on Environmental, Economic and Social Sustainability (43068-M1). (50-55 graduate students)

Guest Lecturer, Stellenbosch University (South Africa), Polytechnic of Namibia and University of Botswana, 2015/2016

Modules: Analysis of the Metabolic Pattern of Societies and Integrated Characterization of Energy Systems. Training Course taught to local lecturers.

Guest Lecturer, Universitat Politècnica de Catalunya – BarcelonaTech (Spain), 2014

Module: Integrated Assessment of Alternative Energy Sources (13 participants)

Guest Lecturer, Federal University of Rio de Janeiro (UFRJ) (Brazil), 2014

Module: Energy Toolkit on the Supply Side. Sponsored by the European-Brazilian Network on Energy **Planning (NETEP)**, Marie Curie Action "**International Research Staff Exchange Scheme**" (15 participants)

Training Course Staff, Universitat Autònoma de Barcelona (Spain), 2014

Tutor of the prospective studies on the energy and building sectors in Ecuador. Training Course in MuSIASEM to a team of experts from the Ecuadorian Ministry for Planning and Development (SENPLADES). Organized by the Liphe4 Scientific Society (Spain). (16 participants)

Guest Lecturer, Department of Sociology, UAB, 2013

Course "Environment and Society" (UAB 102805, Environmental Science). (27 undergraduate students)

Summer School Staff member, Universitat Autònoma de Barcelona (Spain), 2012–2016
Module: Integrated Assessment of Energy Systems. Annual Summer schools organized by Liphe4 Scientific Society (Spain). (20-30 participants)

Relevant Work Experience

Mechanical Engineer, AREVA Federal Services LLC (AFS), Boston, MA (USA), January–November 2010

Project: Hanford Vitrification Plant (Hanford Site, WA), **the world's largest radioactive waste treatment plant, used for vitrifying Hanford's tank waste for the U.S. Department of Energy (DOE)**

Structural Engineer, AREVA Inc. North America, Boston, MA, USA, January–December 2009

Project: Civil/structural engineering support to the Probabilistic Risk Assessment unit for the Design Certification Licensing of the US EPR™, **a generation III+ nuclear reactor, by the Nuclear Regulatory Commission (NRC)**

Structural Engineer and Assistant to the Project Director, SETEC Travaux Publics & Industriels (TPI), Paris (France), February 2007–December 2008

Project: Structural design for BOUYGUES Construction of the reactor buildings of the **EPR™ generation III+ nuclear power plant under construction in France (Flamanville3) for Electricité de France (EDF) (Taken part in the supervision team (5 pers.) to manage 150 pers., 5000 drawings, €11 million)**

Scientific and Administrative Services

Fund Raising

EU-funded research Marie Skłodowska-Curie Global Fellowship (H2020-MSCA-IF-2016-GF). Requested EU Contribution: €257,191.20 (Proposal No. 739850, Under Review)

Main author of the proposal, under supervision of Prof. Rodney C. Ewing, Frank Stanton Professor in Nuclear Security at CISAC and Dr. Jordi Bruno, CEO and Chairman of the Board of AMPHOS21 Consulting S.L. (Barcelona, Spain).

ACP-EU Co-operation Program in Higher Education (EDULINK II) funded by EuropAid. EU Grant: **€497,499.09**

Main author of the awarded proposal, under supervision of ICREA Research Prof. Mario Giampietro, Universitat Autònoma de Barcelona (Spain)

Services to international journals

Editorial Board member, *Frontiers in Energy Systems and Policy*, 2013–

Referee/Reviewer: *Energy*, *Energy Policy*, *Frontiers in Energy Systems and Policy*, *Environmental Innovation and Societal Transitions*, *Energy Research and Social Science*, *Ecological Indicators*, *Science and Global Security* (Princeton University)

Supervision of Graduate Students

Daria Malyutina, *Energy Financing*, Universitat Autònoma de Barcelona, 2014/2015

Master thesis dissertation: Offshore wind energy financing schemes: the perspectives for international development of offshore wind as a renewable energy source

Co-supervised with Commerzbank AG Hamburg and Technische Universität Hamburg-Harburg (TUHH), Germany.

Minhea C. Dinu, *Energy Engineering*, Universitat Autònoma de Barcelona, 2013/2014

Master thesis dissertation: Simulation of controlling domestic water heaters for demand response
Co-supervised with Technische Universität Hamburg-Harburg (TUHH), Germany.

Gabriel Sprenger, *Data Visualization*, Universitat Autònoma de Barcelona, 2013/2014

Master thesis dissertation: The Sustainability Sudoku: Design, development and deployment of a web application based on Ruby-on-Rails

Co-supervised with Université de Technologie de Troyes (UTT), France.

Organization of Scientific Meetings

Symposium, The challenges of promoting sustainable energy access in Southern Africa. Local organizing staff. Universitat Autònoma de Barcelona (Spain), 30 September 2015

Symposium, The Complexity Revolution in Sustainability Science and Governance. Local organizing staff. Universitat Autònoma de Barcelona (Spain), 30 May 2013

Annual Summer schools organized by Liphe4 Scientific Society (Spain). Local organizing staff. Universitat Autònoma de Barcelona (Spain), 2012–

Public Seminar, Nuclear accidents of Fukushima, organized by ICTA-UAB. Event co-organizer. Universitat Autònoma de Barcelona (Spain), 21 March 2011

Publications

Work in progress

- Diaz-Maurin, F., Z. Chiguvare, and G. Gope. The energy metabolism of Namibia: Current status and scenario assessment (2000–2030). Submitted to Energy Policy
- Kiravu, C., F. Diaz-Maurin, and L. Magole. Scarcity in abundance: The challenge of promoting sustainable energy access in isolated rural village communities in Botswana, Southern Africa. Submitted to Environment, Development and Sustainability
- Kiravu, C., F. Diaz-Maurin, et al. **Proposing a Master's Programme** on Participatory Integrated Assessment of Energy Systems to Promote Energy Access and Energy Efficiency in Southern Africa. Submitted to International Journal of Sustainability in Higher Education
- Diaz-Maurin, F., (in preparation). The sustainability of nuclear power: an integrated assessment **framework. Invited contribution to Special Issue “Sustainability and Nuclear Power” in Sustainability**
- Diaz-Maurin, F., R. Velasco-Fernández, and M. Giampietro (in preparation). A simplified integrated assessment tool to explore the complexity of the energy-food-land nexus: The Sustainability Sudoku. To be submitted to Environmental Modelling & Software

Peer-reviewed publications

- [23] Diaz-Maurin, F. (2016). Power capacity: A key element in sustainability assessment. *Ecological Indicators* 66(C), 467–480.
- [22] Diaz-Maurin, F. and Z. Kovacic (2015). The unresolved controversy over nuclear power: a new approach from complexity theory. *Global Environmental Change* 31(C), 207–216.
- [21] Diaz-Maurin, F. (2014). Going beyond the nuclear controversy. *Environmental Science & Technology* 48(1): 25–26.
- [20] Diaz-Maurin, F. and **M. Giampietro (2013) A “grammar” for assessing the performance of power-supply systems: comparing nuclear energy to fossil energy. Energy** 49: 162–177.

Book chapters

- [19] Giampietro, M., & F. Diaz-Maurin (2014). Chapter 8. The Energy Grammar (*)
- [18] Serrano-Tovar T., J. Cadillo Benalcazar, F. Diaz-Maurin, Z. Kovacic, C. Madrid, M. Giampietro, R.J. Aspinall, J. Ramos-Martin, & S. Bukkens (2014). Chapter 12. The Republic of Mauritius (*)
- [17] Madrid-Lopez, C., J. Cadillo-Benalcazar, F. Diaz-Maurin, Z. Kovacic, T. Serrano-Tovar, T. Gomiero, M. Giampietro, R.J. Aspinall, J. Ramos-Martin, & S. Bukkens (2014). Chapter 13. Punjab State (*)
- [16] Diaz-Maurin, F., J. Cadillo Benalcazar, Z. Kovacic, C. Madrid, T. Serrano-Tovar, M. Giampietro, R.J. Aspinall, & J. Ramos-Martin (2014). Chapter 14. The Republic of South Africa (*)
- (*) Previous chapters in: Giampietro, M., Aspinall, R.J., Ramos-Martín, J., & Bukkens, S.G.F. (Eds.) (2014). *Resource Accounting for Sustainability: The Nexus between Energy, Food, Water and Land Use*. London: Routledge, 250 pp
- [15] Diaz-Maurin, F., & M. Giampietro (2013). *Complex Systems and Energy*. In Reference Module in Earth Systems and Environmental Sciences. Elsevier

Working papers and technical reports

- [14] Cadillo Benalcazar, J.J., et al. (2015). Potencial de la gramática del MuSIASEM en la representación del análisis de la sostenibilidad. CEPROEC Documento de Trabajo 2015_01. Instituto de Altos Estudios Nacionales, Centro de Prospectiva Estratégica, Quito, Ecuador
- [13] Giampietro, M., R.J. Aspinall, S.G.F. Bukkens, J. Cadillo Benalcazar, F. Diaz-Maurin, A. Flammini, T. Gomiero, Z. Kovacic, C. Madrid, J. Ramos-Martín, & T. Serrano-Tovar (October 2013). An Innovative Accounting Framework for the Food-Energy-Water Nexus: Application of the MuSIASEM approach to three case studies. Environment and Natural Resources Working Paper No. 56. Food and Agriculture Organization of the United Nations (FAO), Rome, 81 pp
- [12] Diaz-Maurin, F. (2012). Assessing the viability of power-supply systems: a tentative protocol, Reports on Environmental Sciences. Universitat Autònoma de Barcelona, 17 Sep. 2012
- [11] Diaz-Maurin, F. (2012). Biophysical requirements of power-supply systems: nuclear energy and fossil energy, Reports on Environmental Sciences. Universitat Autònoma de Barcelona
- [10] Diaz-Maurin, F. (2011). The Problem of the Competitiveness of Nuclear Energy: A Biophysical Explanation, Working Papers on Environmental Sciences. Universitat Autònoma de Barcelona

Conference proceedings

- [9] Diaz-Maurin, F. (2011). Tentative Ideas to Explore the Viability of the Nuclear Option. In: Ramos-Martin J, Giampietro M, Ulgiati S, Bukkens, SGF (Eds.) (2011). Can We Break the Addiction to Fossil Energy? Proceedings of the 7th Biennial International Workshop, Advances in Energy Studies, 19–21 October 2010, Barcelona, Spain. Universitat Autònoma de Barcelona. pp. 579-589

Book reviews

- [8] Diaz-Maurin, F. (2013). Review of “Towards an Integrated Paradigm in Heterodox Economics: Alternative Approaches to the Current Eco-social Crises”, Julien-François Gerber, Rolf Steppacher (Eds.). Palgrave Macmillan, London (2012). Ecological Economics 88c: 178-179
- [7] Diaz-Maurin, F. (2010). Review of “Farewell to Growth” by Serge Latouche, Polity Press, 2010, 180pp, ISBN: 0745646174. Sustainability: Science, Practice, & Policy 6(2): 77-78

Other publications

- [6] Diaz-Maurin, F. (2013). Decreixement sostenible i Eficiència Energètica. Documents de *Treball Medi Ambient, Vol. 7 “Eficiència Energètica”*. Diputació de Barcelona, Servei de Medi Ambient (Catalan)
- [5] Diaz-Maurin, F. (2012). L'incertitude comme limite à la maîtrise des risques. Interface 113: 20-21 (French)
- [4] Diaz-Maurin, F. (2012). Fukushima : limites anthropologiques à la complexité et risque d'effondrement sociétal. Entropia 12: 99-108 (French)
- [3] Diaz-Maurin, F. (2011). Sobre la viabilidad de la energía nuclear: Implicaciones de los accidentes de Fukushima-Daiichi. Ecología Política 41: 106–111. July, 2011 (Spanish)
- [2] Diaz-Maurin, F. (2011). Fukushima: Consequences of Systemic Problems in Nuclear Plant Design. Economic & Political Weekly (Mumbai) 46(13): 10–12. 26 March, 2011 – Invited author
- [1] Diaz-Maurin, F. (2011). *Eléments de réflexion sur la question de l'énergie*. Interface 109: 45–47 (French)

Conferences, Workshops and Invited Lectures (selected)

African, Caribbean and Pacific Group of States (ACP) House (Brussels, Belgium), Annual Joint Stakeholders Conference of the EU-ACP collaborative programmes, Plenary, July 2016

Universidade Nova de Lisboa (Portugal), 22nd Annual Conference of the International Sustainable Development Research Society (ISDRS), July 2016

CISAC, Stanford University (USA), Reset of U.S. Nuclear Waste Management Strategy and Policy Meeting 3: Consent-Based Siting, Invited by Rod Ewing, March 2016

University of Minho (Portugal), 2nd International Conference on Energy and Environment, June 2015

Humboldt University (Berlin, Germany), Global Land Project Open Science Meeting, March 2014

Ecologic Institute (Berlin, Germany), Invited talk, March 2014

Ecuadorian Ministry of Planning and Development (SENPLADES) (Quito, Ecuador), Invited Expert, Workshop presenting the MuSIASEM methodology, February 2014

Parthenope University (Naples, Italy), 3rd Annual European Postgraduate Sustainable Development Symposium, February 2013

University of Warwick (UK), UKERC Summer School 2012, June 2012

European Organization for Nuclear Research (CERN) (Geneva, Switzerland), Invited talk, April 2012

Universitat Autònoma de Barcelona (Spain), Keynote Speaker, Seminar on the nuclear accidents of Fukushima, March 2011

Universitat Autònoma de Barcelona (Spain), 7th Biennial International Workshop Advances in Energy Studies, October 2010

Professional Associations

ELEEP Alumni, Emerging Leaders in Environmental and Energy Policy (ELEEP) network, organized by Atlantic Council (Washington, D.C.) and the Ecologic Institute (Germany), 2015–

Member of the Executive Board, Liphe4 Scientific Association (Barcelona, Spain), 2012–2016

References (available upon request)

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