

Curriculum vitae

María Fernanda SANCHEZ GOÑI

URL for web site: (<http://www.ephe-paleoclimat.com/>)

<http://scholar.google.fr/citations?user=PuGH0kkAAAAJ&hl=fr&oi=ao>

EDUCATION

- 1982 - Graduate in Biological Sciences at University of Navarra (Pamplona, Spain)
- 1986 - Master in Quaternary Geology, Museum Nationale d'Histoire Naturelle (MNHN), Paris, France
- 1991 - PhD in Quaternary Geology at MNHN, Paris, France)
- 2005 - HDR at University Bordeaux 1 (Talence, France)

CURRENT POSITION

- Since 2007 Full Professor at Ecole Pratique des Hautes Etudes (EPHE-PSL) and “Classe Exceptionnelle” since 2016 working at EPOC (Environnements et Paléoenvironnements Océaniques et Continentaux) research unit (<http://www.epoc.u-bordeaux.fr/>) based at University of Bordeaux (UBx).
- 2016-20 Responsible of the Paleoclimate Group at EPOC.

PREVIOUS POSITIONS

- 2000 – 07 Lecturer Section Sciences de la Vie et de la Terre, EPHE, Paris, France
- 2003 – 04 Invited Researcher, Inst. Georges Lemaître, Univ. catholique de Louvain, Belgium
- 1999 - 99 Research Associate, CNRS, EPOC, Université Bordeaux 1, France
- 1997 – 98 Research Associate, CSIC, Inst. de Ciencias de la Tierra “Jaume Almera”, Barcelona, Spain
- 1992 – 93 Research Assistant, Dept. of Plant Sciences, University of Cambridge, UK
- 1982 – 84 Assistant Lecturer, Department of Physics, Universidad de Navarra, Spain

FELLOWSHIPS AND AWARDS

- 2014 - 22 **PEDR** (Prime d'Encadrement Doctoral et recherche), Ecole Pratique des Hautes Etudes
- 2010 – 14 **PES** (*Prime d'Excellence Scientifique*), French Ministry Education&Research
- 07/2007 **European Science Foundation travel grant**
- 2006 – 10 **PEDR** (*Prime Encadrement Doctoral et Recherche*), French Ministry Education&Research
- 08/2001 **Quaternary Research Association Conference grant**
- 10/1995 **European Research Conference grant**
- 06/1994 **Natural Environment Research Council** (UK) funding for 14C dating
- 1993 - 95 **Spanish Ministry of Research fellow**, Dept. Plant Sciences, Univ. of Cambridge, UK
- 1991 - 92 **Basque Ministry of Research fellow**, Inst. Paléontologie Humaine, MNHN, Paris, France
- 1991 - 91 **CNRS funding**, Inst. Paléontologie Humaine, MNHN, Paris, France
- 1986 - 88 **Basque Ministry of Culture fellow**, Inst. Paléontologie Humaine, MNHN, Paris
- 1985 – 86 **Sociedad de Ciencias Aranzadi** grant, San Sebastian, Spain
- 1984 – 85 **San Sebastian Town Hall** grant, Spain

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2000 – 2015 18 Postdocs / 6 PhD / 22 Master Students at EPOC (UBx-CNRS-EPHE), France

Postdocs

- 2000 – 01 **Luisa Santos**, Funding U. A Coruña, Spain
- 2005 – 06 **William Fletcher**, Funding ESF-CNRS, France
- 2007 – 09 **Constancia López-Martínez**, Funding Generalitat de Catalunya, Spain
- 2005 – 09 **Filipa Naughton, W. Fletcher, Elena Ortu**, Funding ANR, France
- 2011 – 14 **Dunia Urrego, Anne-Laure Daniau, Marie-Noëlle Woillez**, Funding ERC, Europe
- 2005 – 17 **Verushka Valsecchi, Elsa Julien, Johan Etourneau, W. Fletcher, S. Desprat, A.-L., Daniau, D. Urrego, Mélanie Wary**, Funding EPHE, France
- 2015 – 17 **César Morales del Molino**, Funding IdEx Université de Bordeaux, France
- 2016 – 18 **Josué M. Polanco-Martinez**, Funding Gobierno Vasco, Spain
- 2018 - 18 **Jorge Alvarez-Solas**, Funding MOPGA, France
- 2019 – 20 **Sakari J. Salonen**, Funding Academy of Sciences of Finland, Finland

PhD

- 2000 – 04 **Ana-Cristina Roc** UBx, France and Univ. Zaragoza, Spain, Funding EC
- 2001 – 08 **Stéphanie Desprat, Anne-Laure Daniau**, UBx, France: Funding French Ministry Education&Research and CNRS, respectively
- 2003 – 07 **Filipa Naughton**, UBx, France – U. Lisboa, Portugal
- 2013 – 16 **Dulce Oliveira**, UBx, France: Funding FCT, Portugal
- 2018 – 21 Tiffanie Fourcade, UBx, Funding UB Montaigne, France

Master Students

- 2001 – 02 **1** Department of Geology / Univ. Lisboa / Portugal
- 2009 – 16 **4** EPHE / Life and Earth Sciences / France
- 2000 – 14 **11** EPOC / University of Bordeaux-CNRS-EPHE / France
- 2017 – 18 **1** Northern Arizona University (USA) and **1** Université Bordeaux 3 Montaigne
- 2018 – 19 **1** Université Bretagne Occidentale
- 2019 – 20 **1** Université Bretagne Occidentale, **1** EPHE
- 2020 – 21 **1** Ecole Normale Supérieure (ENS Paris-PSL), **1** Université de Bordeaux

TEACHING ACTIVITIES

- 2021 – Present Responsible of the Module Paleoclimatology in the Master Geosciences at ENS-PSL.
- 2007 – Present Full Professor EPHE/Palynology, Anthracology, Paleoclimatology, Paleoecology and Climate changes-Human evolution/ Univ. Bordeaux, Univ. Bordeaux 3, EPHE /Paleoclimatology/Master Mundus (Univ. of the Basque Country, Univ. Southampton, UBx)
- 2000 – 07 Lecturer EPHE/Palynology, Anthracology, Paleoclimatology, Paleoecology and Climate changes-Human evolution/ Univ. Bordeaux, Univ. Bordeaux 3, EPHE, Collège de France

INSTITUTIONAL RESPONSIBILITIES

- 2018 – 22 Elected member of the Administrative Council, EPHE, France
- 2010 - 18 Elected member of the Scientific Council, EPHE, France
- 2010 - 14 Responsible of the EPHE research network « Environments and Societies », France
- 2006 - 10 Elected member of the Scientific Committee of Earth and Life Department at EPHE

COMMISSIONS OF TRUST

- 2018 – Present Reviewer for the bilateral **Israel-USA Foundation**
- 2005 – Present Reviewer for the French National Agency (**ANR blanc projects**).
- 2005 – Present Reviewer, **NSERC**, Fonds québécois de la recherche, Canada
- 2013 – Present Reviewer, **FNRS**, Belgium
- 2012 Reviewer, **Swedish Nuclear Fuel and Waste Management Company (SKB)**,

- 2005 – 2012 Sweden
Member of the **European Science Foundation** pool of reviewers
- 2005 - Present Reviewer, CNRS-INSU (PALEO2, ECLIPSE, EVE, IMAGO), France
- 2008-09 Reviewer, **NSF**, USA
- 2005 Reviewer, QUEST, **NERC**, UK
- 2002 Evaluation of PhD co-supervisor, U. Lyon 1 (France)-U. Granada (Spain)

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

- 2020 – 22 Elected President of the French Association of Quaternarists (AFEQ-CNF INQUA)
- 2010 - 18 Elected President of the French Association of Palynologists (l'APLF), France
- 2012 - 18 Elected member of the administrative committee of AFEQ-CNF INQUA, France

MAJOR COLLABORATIONS (excluding those with former postdocs)

Last Interglacial: N.J. Shackleton, U. Cambridge, UK; M.F. Loutre & M. Crucifix, U. catholique de Louvain, Belgium; R. Drysdale, U. Melbourne, Australia; A.E. Carlson, U. Wisconsin-Madison, USA; H. Renssen, Vrije University, The Netherlands; **Older interglacials:** J. McManus, WHOI, USA, D. Hodell, U. Cambridge, UK, Q. Yin, U. catholique de Louvain, Belgium, N. Bouttes, LSCE, France; **Millennial-scale climate variability:** I. Cacho, U. Barcelona, F.J. Sierro, U. Salamanca & J.O. Grimalt, CSIC, Spain; A. Landais, LSCE, France; S.P. Harrison, U. of Reading, UK; **Fire regime and climate:** L. Beaufort, CEREGE, France; **Millennial-scale climatic variability and human evolution,** M. Kageyama, G. Ramstein, P. Sepulchre, LSCE, France, F. d'Errico & W. Banks, University of Bordeaux-CNRS, France; **Last entering in glaciation:** E. Bard, Collège de France

FUNDED PROJECTS DURING THE LAST 10 YEARS

<i>Project Title</i>	<i>Funding source</i>	<i>Amount (Euros)</i>	<i>Period</i>	<i>Role of the PI</i>
NEANDROOTS	ANR	17,5 k€	2020-2024	Task leader
Interglacials	IODP France	9,2 k€	2018-2019	PI
MOWCA	INSU-CNRS	19 k€	2018-2021	Participant
MEDKO	PHC Star France-Corée	18 k€	2015-2017	French PI
PuLSE	INSU-CNRS	6 k€	2015-2016	Participant
CHOCOLATE	Marie Curie	175 k€	2015-2017	Co-supervisor
WarmClim	INSU-CNRS	33 k€	2013-2016	PI
MONOPOL	ANR – French Ministry of Education&Research	65 k€	2012-2016	Co-PI
TRACSYMBOLS	ERC	2.5 M€	2011-2015	Participant

TEN REPRESENTATIVE PUBLICATIONS

Sánchez Goñi, M.F. Regional impacts of climate change and its relevance to human evolution **Evolutionary Human Sciences**, 2020, doi:10.1017/ehs.2020.56

Sánchez Goñi, M.F., Rodrigues, T., Hodell, D.A., Polanco-Martinez, J.M., Alonso-Garcia, M., Hernandez-Almeida, I., Desprat, S., Ferretti, P. (2016) Tropically-driven climate shifts in

southwestern Europe during MIS 19, a low excentricity interglacial. **Earth and Planetary Science Letters** 448, 81-93.

- Sánchez-Goñi, M.F., Bard, E., Landais, A., Rossignol, L., d'Errico, F. (2013).** Air-sea temperature decoupling in Western Europe during the last interglacial/glacial transition. **Nature Geoscience**, DOI : 10.1038/ngeo1924.
- Daniau, A.L., **Sánchez Goñi, M.F.**, Martinez, P., Urrego, D.H., Bout-Roumazelles, V., Desprat, S., Marlon, J.R. (2013). Orbital-scale climate forcing of grassland burning in southern Africa. **PNAS**, doi:0.1073/pnas.1214292110.
- Sánchez Goñi, M.F.**, Bakker, P., Desprat, S., Carlson, A.E., Van Meerbeeck, C.J., Peyron, O., Naughton, F., Fletcher W.J., Eynaud F., Rossignol L., Renssen H. (2012). European climate optimum and enhanced Greenland melt during the Last Interglacial, **Geology**, 40, 627-630.
- Sánchez Goñi, M.F.**, Harrison, S.P. (2010). Millennial-scale climate variability and vegetation changes during the last glacial: concepts and terminology. **Quaternary Science Reviews** 29, 2823-2827.
- Sánchez Goñi, M.F.**, Landais, A., Fletcher, W.J., Naughton F., Desprat, S., Duprat, J. (2008). Contrasting impacts of Dansgaard-Oeschger events over a western European latitudinal transect modulated by orbital parameters, **Quaternary Science Reviews**, 27, 1136-1151.
- Sánchez Goñi, M.F.**, Loutre, M.F., Crucifix M., Peyron, O., Santos, L., Duprat, J., Malaizé, B., Turon, J.-L., Peypouquet, J.-P. (2005). Increasing vegetation and climate gradient in Western Europe over the Last Glacial Inception (122-110 ka): data-model comparison. **Earth and Planetary Science Letters** 231, 111-130.
- Sánchez Goñi, M.F.**, Cacho, I., Turon, J.-L., Guiot, J., Sierro, F.J. , Peypouquet, J.-P. , Grimalt, J. & Shackleton, N.J. (2002). Synchronicity between marine and terrestrial responses to millennial scale climatic variability during the last glacial period in the Mediterranean region. **Climate Dynamics** 19: 95-105
- Sánchez Goñi, M.F.**, Eynaud, F., Turon, J.-L. & Shackleton, N.J. 1999. High resolution palynological record off the Iberian margin: direct land-sea correlation for the Last Interglacial complex. **Earth and Planetary Science Letters** 171: 123-137.

INVITED PRESENTATIONS

Participation in more than **150** national and international congresses, **22** as invited speaker (see below).

- 2021 **Paleo-forum meeting**, IPMA and Universidad do Algarve, Portugal , “Air-sea-ice interactions at orbital and millennial timescales: the examples of the Mid-Pleistocene Transition and Heinrich events”.
- 2020 **CICA-INIBIC Conferences**, Universidad de A Coruña, Spain, “La historia del clima contada por los fondos marinos”.
- 2019 **The 2019 QRA ADM Wiley Annual Lecture**, Chester, UK, “Air-sea-ice interactions at orbital and millennial timescales: the puzzle of the Ice Ages”.
- 2018 **Centro de Investigaciones Biológicas**, Madrid, Spain. Charlas de divulgación científica M3-MICB. “La mar nos cuenta la historia del clima”.
- 2017 **GEOTOP Congress**, Université de Quebec, Forêt de Montmorency, Canada. Interactions between millennial and orbital climate variability: the missing piece of the Ice Age puzzle?
- 2016 **Journées Scientifiques 2016 IODP France**, Paris, France. Overview of the French scientific community contributions to the Mediterranean Outflow IODP Exp 339.
- 2016 **European Pollen Data meeting**, Aix-en-Provence, France.
- 2016 **Donosti 2016 Capital Europea de la Cultura**, San Sebastián-Donostia, Spain. “La mar nos cuenta la historia del clima”.
- 2015 **Colloquium in Plant Sciences**, Oeschger Institute, University of Bern, Bern, Switzerland. Vegetation responses to strong climatic variability during the Glacial-Interglacial Cycles and Dansgaard-Oeschger events
- 2015 **Campus Condorcet, “Banlieu Savante”**, Paris. 150 000 ans d’histoire du climat. <http://plus.franceculture.fr/150-000-ans-de-l-histoire-du-climat>
- 2015 Seminar at the **Department of marine science and convergence technology**

(MSCT), Hanyang University, South Korea. Past global climate changes and their regional impact.

- 2015 Seminar at the **Basque Center for Climate Change**, Bilbao, Spain
- 2014 **Journée Société Géologique de France/AFEQ-CNF INQUA**, Paris, France
- 2014 **The Velocity of Climate Change workshop**, AXA chair, University of Reading, UK
- 2014 **EGU General Assembly**, session “Geochemical and micropaleontological data”, Vienna, Austria
- 2013 **5th Interdisciplinary course on Science & Past**, U. Zaragoza, Spain
- 2013 **Journées Scientifiques, Ecole Pratique des Hautes Etudes**, Paris, France
- 2013 **AGU Meeting of Americas**, session “Perspectives in Paleoclimatology”, Cancun, Mexico
- 2012 **LaACER, INQUA-PAGES workshop**, Universidad de los Andes, Bogota, Colombia
- 2012 **From Genes to Geosciences**, University of Macquarie, Sidney, Australia
- 2012 **INTIMATE, COST initiative**, De Lutte, The Netherlands
- 2011 **CIFAR Human–Environment Interaction Workshop #3**, Vancouver, Canada
- 2009 **Colloque Des climats et des hommes**, Cité des Sciences et de l’Industrie La Villette, Paris, Novembre 2009. <http://www.inrap.fr/les-changements-climatiques-rapides-de-la-derniere-periode-glaciaire-et-la-fin-9043>
- 2009 **London Quaternary Lectures** (n° 84), Royal Holloway, UK
- 2009 **IMAGES workshop** on Paleoclimate Records in Evaporative Basins, Tübingen, Germany
- 2009 **QUEST “Quantifying and Understanding the Earth System”**, Swindon, UK
- 2009 **EGU General Assembly**, session “Past Mediterranean Climate”, Vienna, Austria
- 2007 **Friday Seminar at the Department of Geophysics**, University of Chicago, USA
- 2005 **ESF conference** on Eco-Cultural Niche Modelling, Les Eyzies, France
- 2004 **8th International Conference on Palaeoceanography**, Biarritz, France. September
- 2004 **Seminar at the Institut Georges Lemaître**, Université catholique de Louvain, Louvain-La-Neuve, Belgium

MAJOR CONTRIBUTION TO THE EARLY CAREERS OF EXCELLENT RESEARCHERS

Awards given to PhD supervised students:

- 2005 **PhD Award to S. Desprat from APLF** (Association des Palynologues de Langue Française), Paris, France
- 2007 **Poster Award to F. Naughton** at the *International Congress on Palaeoceanography*, Shanghai (China) **Naughton, F.**, Sanchez Goñi, M. F. et al. « Wet to dry climatic trend in North-western Iberia within Heinrich events”.
- 2009 **PhD Award to A.-L. Daniau from APLF**, Lille, France
- 2017 **Oral communication Award to D. Oliveira** at the **MedPalyno Congress**, Barcelona (Spain) **Oliveira, D.**...Sanchez Goñi, M.F. “Unraveling the forcings controlling the vegetation and climate of the best orbital analogues for the present interglacial in SW Europe”.
- 2018 **Dulce Oliveira** has been awarded with one of the **L’Oréal Medals of Honor**, Young Woman Scientists, Portugal.

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My supervised postdocs have been hired in:

- Academia: L. Santos (University of A Coruña, Spain); S. Desprat (Ecole Pratique de Hautes Etudes, France); W. Fletcher (University of Manchester, UK); D. Urrego (University of Exeter, UK)
- Research Centers: A.-L. Daniau (CNRS, France); F. Naughton (IPMA, Portugal)
- High Public School: E. Ortu (Académie de Franche-Comté, France)

- Environmental Consulting Offices: E. Julien
- TOTAL Oil Company: M.-N. Woillez

RESEARCH EXPEDITIONS

- Co-Leader* **Botanical and pollen surface sampling in the Tajo Basin (Spain)**, IdEx UBx, 7-14/11/2016
- Leader* **Botanical and pollen surface sampling in SW Africa**, TRACSYMBOLS ERC, 12-22/02/2011
- Co-Proponent* **IODP Mediterranean Outflow Expedition**, Exp. n°339, *Joides Resolution*, 17/11/2011-17/01/2012
- Participant* **Oceanographic cruise IMAGES GEOSCIENCES** inboard of the R/V Marion Dufresne II, 1/9/2001-1/10/2001
- Participant* **Oceanographic cruise IMAGES ALIENOR** inboard of the R/V Marion Dufresne II, 23/7/2004-6/8/2004
- Leader* **Botanical, coring and pollen surface sampling in the Iberian Range (Spain)**, Spanish Ministry of Research, 11-21/11/1993

ORGANISATIONS OF INTERNATIONAL CONFERENCES

More than 150 presentations (oral and posters) to international (ICP, AGU, EGU, INQUA, IPC, Goldsmith...) and national congress, symposia and workshops. Organisation of the following 15 international and national congress/workshops:

- 2019 **XX INQUA Congress**, member of the scientific committee and organization of Session “Orbital and millennial scale climate changes in ice, ocean and land: observations and model simulations”, Dublin (Ireland), July.
- 2017 **2nd MedPalyno Congress**, APLE-GPPSBI-I’APLF, Barcelona (Spain), September.
- 2016 **Colloque Q10, AFEQ CNF-INQUA**, Paléoclimats et environnements quaternaires. Quoi de neuf sous le soleil ? Bordeaux (France), Février.
- 2015 **XIX INQUA Congress** (Quaternary perspectives on Climate Change, Natural Hazards and Civilization), Session ACER IFG, Nagoya (Japan), July-August.
- 2013 **Symposium APLE-I’APLF**, (pollen biotechnology, diversity and function in a changing environment), Madrid (Spain), September.
- 2012 **ACER-INTIMATE 2nd joint workshop** (Harmonisation of Database Chronologies), Talence (France), December.
- 2011 **ACER-INTIMATE 1st joint workshop** (Abrupt climate Changes and Sea Surface Temperature Responses), Talence (France), October.
- 2011 **XVIII INQUA Congress**, “Abrupt climate changes: Climatic and biogeochemical consequences” with Amaelle Landais, Bern (Switzerland), July.
- 2010 **INQUA IFG ACER** (Abrupt Climate Changes and Environmental Responses) workshop on “Biomisation”, Talence (France), October.
- 2009 **American Geophysical Union Fall meeting**, symposium on “Holocene climate variability” with Gianluca Marino. San Francisco (USA), 12-19 Décembre.
- 2009 **QUEST-DESIRE writing workshop** on « Abrupt climate changes and vegetation response », Talence (France), March 2009.
- 2008 **4th workshop RESOLuTION**, ESF, Talence (France), Octobre.
- 2008 **QUEST-DESIRE, 1st workshop**, “High resolution pollen records and reconstruction of vegetation changes during Dansgaard-Oeschger events.”, Talence (France), June.
- 2005 **1st workshop RESOLuTION** (with Barbara Wohlfarth, Stockholm University), Les Eyzies (France), 28 Septembre-1 Octobre.
- 2004 **8th International Conference on Palaeoceanography**, Biarritz (France), 6-10 Septembre.
- 2004 **11th International Palynological Congress**. Symposium (with P.C. Tzedakis) : Timing and nature of vegetation response to abrupt climate changes. Granada (Espagne), 4-9 Juillet.
- 2003 **18ème Symposium Association des Palynologues de Langue Française**, Bordeaux (France), 1-4 Septembre.