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French, 34 years old

**Robin
WALDMAN**



EDUCATION

- 2013 / 2016 **PhD degree – Science of the Universe, Environment and Space**
Université Paul Sabatier (UPS), Toulouse, France
- 2011 / 2013 **Engineering degree on Environmental Sciences and Specialized Master on Public Policies for Sustainable Development.**
Civil and Environmental Corps of Engineers – École des Ponts Paristech, France
- 2009 / 2011 **M. Sc Ocean, Atmosphere, Climate, Remote Sensing (OACOS)**
Université Pierre et Marie Curie (UPMC) – École normale supérieure (ENS), France
- 2008 / 2009 **B. Sc Earth Sciences**
Université Paris Sud – École normale supérieure, France

RESEARCH EXPERIENCE

• RESEARCH POSITIONS

- 2016 / ongoing **Researcher at Centre National de Recherches Météorologiques (CNRM)**
Research topics: understanding the drivers of the thermohaline/overturning circulation, role of mesoscale in ocean mean state and variability, the ocean as a regulator of climate.
- 2013 / 2016 **PhD, Centre National de Recherches Météorologiques (CNRM), Université Paul Sabatier, Toulouse, France (supervision: Samuel Somot, Marine Herrmann)**
« Multi-scale study of ocean deep convection in the Mediterranean sea: from observations to climate modelling. »

• PEER-REVIEWED PUBLICATIONS

- JAMES, in revision Robin Waldman and Hervé Giordani, **Ocean barotropic vorticity balances: theory and application to numerical models**
- PiO, in revision Nicolas Gonzalez, Robin Waldman, Gianmaria Sannino, Samuel Somot and Hervé Giordani, **Understanding tidal mixing at the Strait of Gibraltar: a high-resolution model approach**
- GMD 2021 Aurore Voldoire, Romain Roehrig, Hervé Giordani, Robin Waldman, Yunyan Zhang, Shaocheng Xie, Marie-Noëlle Bouin, **Assessment of the sea surface temperature diurnal cycle in CNRM-CM6-1 based on its 1D coupled configuration**
- JPO 2020 Robin Waldman, Joël Hirschi, Aurore Voldoire, Christophe Cassou, Rym Msadek, **Clarifying the relation between AMOC and thermal wind: application to the centennial variability in a coupled climate model**
- JAMES 2019 Séférian et al, **Evaluation of CNRM Earth-System model, CNRM-ESM2-1: role of Earth system processes in present-day and future climate**

- JAMES 2019 Voldoire et al, **Evaluation of CMIP6 DECK experiments with CNRM-CM6-1**
- OM 2018 Natalija Dunić, Thomas Arsouze, Pierre Nabat, Robin Waldman, Ivica Vilibic, Jadranka Sepic, Robert Precali, Romain Pennel, Hrvoje Mihanovic, Samuel Somot, Gabriel Jorda, Florence Sevault, **Performance of multi-decadal ocean simulations in the Adriatic Sea.**
- GRL 2018b Robin Waldman, Nils Brüggemann, Anthony Bosse, Michael Spall, Samuel Somot and Florence Sevault, **Overtuning the Mediterranean Thermohaline Circulation.**
- Scientific Reports 2018 M. Peharda, I. Vilibić, B.A. Black, K. Markulin, N. Dunić, T. Džoić, H. Mihanović, M. Gačić, S. Puljas, R. Waldman, **Using bivalve chronologies for quantifying environmental drivers in a semi-enclosed temperate sea.**
- GRL 2018a Robin Waldman, Samuel Somot, Marine Herrmann, Florence Sevault and Pal Erik Isachsen, **On the chaotic variability of deep convection in the Mediterranean Sea.**
- JGR-O 2018 Testor et al, **Multi-scale observations of deep convection in the northwestern Mediterranean Sea during winter 2012-2013 from a multi-platform approach.**
- JGR-O 2017b Robin Waldman, Marine Herrmann, Samuel Somot, Thomas Arsouze, Rachid Benshila, Anthony Bosse, Jerome Chanut, Herve Giordani, Florence Sevault and Pierre Testor, **How does mesoscale impact dense water formation? Answers from an ensemble simulation of the intense 2012-2013 event in the Northwestern Mediterranean Sea.**
- JGR-O 2017a Robin Waldman, Samuel Somot, Marine Herrmann, Anthony Bosse, Guy Caniaux, Claude Estournel, Loic Houpert, Louis Prieur, Florence Sevault and Pierre Testor, **Modeling the intense 2012–2013 dense water formation event in the northwestern Mediterranean Sea: Evaluation with an ensemble simulation approach**
- JGR-O 2016 Waldman, R., S. Somot, M. Herrmann, F. Sevault, P. Testor, C. Estournel, L. Prieur, D. Dausse, L. Coppola, L. Mortier, A. Bosse, **An uncertainty framework to estimate dense water formation rates: case study in the Northwestern Mediterranean, Journal of Geophysical Research.**
- Climate Dynamics 2016 Samuel Somot, Loic Houpert, Florence Sevault, Pierre Testor, Anthony Bosse, Isabelle Taupier-Letage, Marie-Noelle Bouin, Robin Waldman, Christophe Cassou, Emilia Sanchez-Gomez, Xavier Durrieu de Madron, Fanny Adloff, Pierre Nabat, Marine Herrmann, **Characterizing, modelling and understanding the climate variability of the deep water formation in the North-Western Mediterranean Sea**
- **REVIEW**
- 2017 / ongoing Reviewer for the journals Ocean Science, Scientific Reports, Remote Sensing, Journal of Geophysical Research, Geophysical Research Letters, Journal of Advances in Modelling the Earth System and Geoscientific Model Development.
- **CONFERENCES**
- 2018-2020 **DRAKKAR workshops – Grenoble, France**
- 2018 **Ocean Sciences conference – Portland, USA**

2015-2021 **EGU Meetings – Vienna, Austria**

2015-2018 **SIMED Workshops**

2014-2018 **HyMeX workshops**

2014-2019 **MedCordex Workshops**

- **PROJECTS**

International **Med-Cordex**: *Mediterranean region of the International CORDEX programme (modelling of all the components of the regional climate system, 12 km RCM, fully coupled RCSM). Med-CORDEX is currently the regional climate modelling task of HyMeX (former HyMeX-TTM3) on-going*

ESM2025: *European project aiming at developing the next generation of Earth System Models*

National **MISTRALS-Simed4**: French coordination for an improved modelling of the Mediterranean Sea using in particular the NEMOMED configurations.

ANR-PopNCo: Evaluate future trends in Gorgonian connectivity in climate scenarios of the Mediterranean Sea

- **TEACHING - SUPERVISION**

2018 Lectures of physical oceanography (Master's degree) and tutorials of bibliography and ocean/climate modelling at UNAM, Mexico

2019 / ongoing Supervisor of Nicolas Gonzalez' PhD thesis: "On the role of exchanges at the Strait of Gibraltar as a regulator of the Mediterranean climate."

2021 / ongoing Supervisor of Romain Torres' PhD thesis: "Energetic approach to ocean mesoscale eddies in Earth System Models"

OTHER SKILLS

- **LANGUAGES**

Fluently **French** (mother tongue), **Spanish** (bilingual), **English** (fluent, TOEIC 985/990 in 2012), **Portuguese** (fluent), **Italian** (good notions)

Some notions **German, Thai**

- **COMPUTER SCIENCES**

Numerical modelling **NEMO**

Programming **Python, Matlab, Fortran, Shell, NCO/CDO, git**

Office **Latex, Open Office**

