# Frederic Hourdin

## List of Publications by Citations



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|---|---|---|---|
| 31 papers | 2,483 citations | 18 h-index | 34 g-index |
| 34 ext. papers | 2,945 ext. citations | 5.9 avg, IF | 4.54 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 31 | The LMDZ4 general circulation model: climate performance and sensitivity to parametrized physics with emphasis on tropical convection. *Climate Dynamics*, **2006**, 27, 787-813 | 4.2 | 709 |
| 30 | The Art and Science of Climate Model Tuning. *Bulletin of the American Meteorological Society*, **2017**, 98, 589-602 | 6.1 | 250 |
| 29 | LMDZ5B: the atmospheric component of the IPSL climate model with revisited parameterizations for clouds and convection. *Climate Dynamics*, **2013**, 40, 2193-2222 | 4.2 | 212 |
| 28 | Impact of the LMDZ atmospheric grid configuration on the climate and sensitivity of the IPSL-CM5A coupled model. *Climate Dynamics*, **2013**, 40, 2167-2192 | 4.2 | 210 |
| 27 | Presentation and Evaluation of the IPSL-CM6A-LR Climate Model. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS002010 | 7.1 | 188 |
| 26 | The Present and Future of the West African Monsoon: A Process-Oriented Assessment of CMIP5 Simulations along the AMMA Transect. *Journal of Climate*, **2013**, 26, 6471-6505 | 4.4 | 166 |
| 25 | The Use of Finite-Volume Methods for Atmospheric Advection of Trace Species. Part I: Test of Various Formulations in a General Circulation Model. *Monthly Weather Review*, **1999**, 127, 822-837 | 2.4 | 155 |
| 24 | Parameterization of the Dry Convective Boundary Layer Based on a Mass Flux Representation of Thermals. *Journals of the Atmospheric Sciences*, **2002**, 59, 1105-1123 | 2.1 | 87 |
| 23 | A Thermal Plume Model for the Convective Boundary Layer: Representation of Cumulus Clouds. *Journals of the Atmospheric Sciences*, **2008**, 65, 407-425 | 2.1 | 84 |
| 22 | High resolution simulation of the South Asian monsoon using a variable resolution global climate model. *Climate Dynamics*, **2013**, 41, 173-194 | 4.2 | 69 |
| 21 | The stratospheric version of LMDz: dynamical climatologies, arctic oscillation, and impact on the surface climate. *Climate Dynamics*, **2005**, 25, 851-868 | 4.2 | 50 |
| 20 | Control of deep convection by sub-cloud lifting processes: the ALP closure in the LMDZ5B general circulation model. *Climate Dynamics*, **2013**, 40, 2271-2292 | 4.2 | 45 |
| 19 | LMDZ6A: The Atmospheric Component of the IPSL Climate Model With Improved and Better Tuned Physics. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS001892 | 7.1 | 42 |
| 18 | Air moisture control on ocean surface temperature, hidden key to the warm bias enigma. *Geophysical Research Letters*, **2015**, 42, 10,885-10,893 | 4.9 | 35 |
| 17 | Modeling the Dynamics of the Atmospheric Boundary Layer Over the Antarctic Plateau With a General Circulation Model. *Journal of Advances in Modeling Earth Systems*, **2018**, 10, 98-125 | 7.1 | 28 |
| 16 | Ongoing Breakthroughs in Convective Parameterization. *Current Climate Change Reports*, **2019**, 5, 95-111 | 9 | 24 |
| 15 | IPSL-CM5A2 an Earth system model designed for multi-millennial climate simulations. *Geoscientific Model Development*, **2020**, 13, 3011-3053 | 6.3 | 22 |

# List of Publications

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|---|---|---|---|
| 14 | Antarctic boundary layer parametrization in a general circulation model: 1-D simulations facing summer observations at Dome C. *Journal of Geophysical Research D: Atmospheres*, **2017**, 122, 6818-6843 | 4.4 | 19 |
| 13 | Unified Parameterization of Convective Boundary Layer Transport and Clouds With the Thermal Plume Model. *Journal of Advances in Modeling Earth Systems*, **2019**, 11, 2910-2933 | 7.1 | 15 |
| 12 | Improved Near-Surface Continental Climate in IPSL-CM6A-LR by Combined Evolutions of Atmospheric and Land Surface Physics. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS002005 | 7.1 | 14 |
| 11 | Convective Boundary Layer Control of the Sea Surface Temperature in the Tropics. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2019MS001988 | 7.1 | 10 |
| 10 | Improved Representation of Clouds in the Atmospheric Component LMDZ6A of the IPSL-CM6A Earth System Model. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2020MS002046 | 7.1 | 10 |
| 9 | Process-Based Climate Model Development Harnessing Machine Learning: I. A Calibration Tool for Parameterization Improvement. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2020MS002217 | 7.1 | 10 |
| 8 | Omens of coupled model biases in the CMIP5 AMIP simulations. *Climate Dynamics*, **2018**, 51, 2927-2941 | 4.2 | 9 |
| 7 | Process-Based Climate Model Development Harnessing Machine Learning: II. Model Calibration From Single Column to Global. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2020MS002225 | 7.1 | 6 |
| 6 | Increased risk of near term global warming due to a recent AMOC weakening. *Nature Communications*, **2021**, 12, 6108 | 17.4 | 4 |
| 5 | Alleviation of an Arctic Sea Ice Bias in a Coupled Model Through Modifications in the Subgrid-Scale Orographic Parameterization. *Journal of Advances in Modeling Earth Systems*, **2020**, 12, e2020MS002111 | 7.1 | 2 |
| 4 | The Tuning Strategy of IPSL-CM6A-LR. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2020MS002340 | 7.1 | 2 |
| 3 | Presentation and Evaluation of the IPSL-CM6A-LR Ensemble of Extended Historical Simulations. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2021MS002565 | 7.1 | 2 |
| 2 | Competition Between Atmospheric and Surface Parameterizations for the Control of Air-Sea Latent Heat Fluxes in Two Single-Column Models. *Geophysical Research Letters*, **2019**, 46, 7780-7789 | 4.9 | 1 |
| 1 | Process-Based Climate Model Development Harnessing Machine Learning: III. The Representation of Cumulus Geometry and Their 3D Radiative Effects. *Journal of Advances in Modeling Earth Systems*, **2021**, 13, e2020MS002423 | 7.1 | 1 |