# Fleur Couvreux

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6434349/publications.pdf

Version: 2024-02-01

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|---|---|---|---|
| 54 papers | 2,697 citations | 236833 25 h-index | 189801 50 g-index |
| 61 all docs | 61 docs citations | 61 times ranked | 3247 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Controls on precipitation and cloudiness in simulations of trade-wind cumulus as observed during RICO. Journal of Advances in Modeling Earth Systems, 2011, 3, n/a-n/a. | 1.3 | 249 |
| 2 | Frequency of Sahelian storm initiation enhanced over mesoscale soil-moisture patterns. Nature Geoscience, 2011, 4, 430-433. | 5.4 | 240 |
| 3 | A Parameterization of Dry Thermals and Shallow Cumuli for Mesoscale Numerical Weather Prediction. Boundary-Layer Meteorology, 2009, 132, 83-106. | 1.2 | 225 |
| 4 | Overview of the Meso-NH model version 5.4 and its applications. Geoscientific Model Development, 2018, 11, 1929-1969. | 1.3 | 194 |
| 5 | A Diagnostic for Evaluating the Representation of Turbulence in Atmospheric Models at the Kilometric Scale. Journals of the Atmospheric Sciences, 2011, 68, 3112-3131. | 0.6 | 163 |
| 6 | The BLLAST field experiment: Boundary-Layer Late Afternoon and Sunset Turbulence. Atmospheric Chemistry and Physics, 2014, 14, 10931-10960. | 1.9 | 151 |
| 7 | Six hundred years of South American tree rings reveal an increase in severe hydroclimatic events since mid-20th century. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16816-16823. | 3.3 | 119 |
| 8 | Parameterization of the Dry Convective Boundary Layer Based on a Mass Flux Representation of Thermals. Journals of the Atmospheric Sciences, 2002, 59, 1105-1123. | 0.6 | 98 |
| 9 | Understanding the Daily Cycle of Evapotranspiration: A Method to Quantify the Influence of Forcings and Feedbacks. Journal of Hydrometeorology, 2010, 11, 1405-1422. | 0.7 | 89 |
| 10 | Resolved Versus Parametrized Boundary-Layer Plumes. Part I: A Parametrization-Oriented Conditional Sampling in Large-Eddy Simulations. Boundary-Layer Meteorology, 2010, 134, 441-458. | 1.2 | 81 |
| 11 | Water-vapour variability within a convective boundary-layer assessed by large-eddy simulations and IHOP_2002 observations. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 2665-2693. | 1.0 | 64 |
| 12 | Resolved Versus Parametrized Boundary-Layer Plumes. Part II: Continuous Formulations of Mixing Rates for Mass-Flux Schemes. Boundary-Layer Meteorology, 2010, 135, 469-483. | 1.2 | 64 |
| 13 | Control of deep convection by sub-cloud lifting processes: the ALP closure in the LMDZ5B general circulation model. Climate Dynamics, 2013, 40, 2271-2292. | 1.7 | 59 |
| 14 | Diurnal and Seasonal Cycles of Cloud Occurrences, Types, and Radiative Impact over West Africa. Journal of Applied Meteorology and Climatology, 2012, 51, 534-553. | 0.6 | 53 |
| 15 | Synoptic variability of the monsoon flux over West Africa prior to the onset. Quarterly Journal of the Royal Meteorological Society, 2010, 136, 159-173. | 1.0 | 45 |
| 16 | Atmospheric transport and chemistry of trace gases in LMDz5B: evaluation and implications for inverse modelling. Geoscientific Model Development, 2015, 8, 129-150. | 1.3 | 44 |
| 17 | Life Cycle of a Mesoscale Circular Gust Front Observed by a C-Band Doppler Radar in West Africa. Monthly Weather Review, 2011, 139, 1370-1388. | 0.5 | 43 |
| 18 | Negative water vapour skewness and dry tongues in the convective boundary layer: observations and large-eddy simulation budget analysis. Boundary-Layer Meteorology, 2007, 123, 269-294. | 1.2 | 40 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Deep Convection Triggering by Boundary Layer Thermals. Part I: LES Analysis and Stochastic Triggering Formulation. Journals of the Atmospheric Sciences, 2014, 71, 496-514. | 0.6 | 35 |
| 20 | Initiation of daytime local convection in a semiâ€arid region analysed with highâ€resolution simulations and AMMA observations. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 56-71. | 1.0 | 34 |
| 21 | Deep Convection Triggering by Boundary Layer Thermals. Part II: Stochastic Triggering Parameterization for the LMDZ GCM. Journals of the Atmospheric Sciences, 2014, 71, 515-538. | 0.6 | 34 |
| 22 | Sampling the Structure of Convective Turbulence and Implications for Grey-Zone Parametrizations. Boundary-Layer Meteorology, 2016, 160, 133-156. | 1.2 | 34 |
| 23 | A short review of numerical cloud-resolving models. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 69, 1373578. | 0.8 | 34 |
| 24 | A Pathâ€Tracing Monte Carlo Library for 3â€Ð Radiative Transfer in Highly Resolved Cloudy Atmospheres. Journal of Advances in Modeling Earth Systems, 2019, 11, 2449-2473. | 1.3 | 33 |
| 25 | Processâ€Based Climate Model Development Harnessing Machine Learning: I. A Calibration Tool for Parameterization Improvement. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002217. | 1.3 | 32 |
| 26 | Detection of Intraseasonal Large-Scale Heat Waves: Characteristics and Historical Trends during the Sahelian Spring. Journal of Climate, 2018, 31, 61-80. | 1.2 | 29 |
| 27 | Objectâ€Oriented Identification of Coherent Structures in Large Eddy Simulations: Importance of Downdrafts in Stratocumulus. Geophysical Research Letters, 2019, 46, 2854-2864. | 1.5 | 28 |
| 28 | Intercomparison of Large-Eddy Simulations of the Antarctic Boundary Layer for Very Stable Stratification. Boundary-Layer Meteorology, 2020, 176, 369-400. | 1.2 | 28 |
| 29 | Observations of Diurnal Cycles Over a West African Meridional Transect: Pre-Monsoon and Full-Monsoon Seasons. Boundary-Layer Meteorology, 2012, 144, 329-357. | 1.2 | 27 |
| 30 | Resolved Versus Parametrized Boundary-Layer Plumes. Part III: Derivation of a Statistical Scheme for Cumulus Clouds. Boundary-Layer Meteorology, 2013, 147, 421-441. | 1.2 | 27 |
| 31 | Phenomenology of Sahelian convection observed in Niamey during the early monsoon. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 500-516. | 1.0 | 25 |
| 32 | Representation of daytime moist convection over the semiâ€arid Tropics by parametrizations used in climate and meteorological models. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 2220-2236. | 1.0 | 23 |
| 33 | Morphology of breeze circulations induced by surface flux heterogeneities and their impact on convection initiation. Quarterly Journal of the Royal Meteorological Society, 2017, 143, 463-478. | 1.0 | 23 |
| 34 | Internal processes within the African Easterly Wave system. Quarterly Journal of the Royal Meteorological Society, 2015, 141, 1121-1136. | 1.0 | 21 |
| 35 | Impact of coherent eddies on airborne measurements of vertical turbulent fluxes. Boundary-Layer Meteorology, 2007, 124, 425-447. | 1.2 | 20 |
| 36 | Evaluation of Statistical Distributions for the Parametrization of Subgrid Boundary-Layer Clouds. Boundary-Layer Meteorology, 2011, 140, 263-294. | 1.2 | 20 |

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|---|---|---|---|
| 37 | Observations and Large-Eddy Simulations of Entrainment in the Sheared Sahelian Boundary Layer. Boundary-Layer Meteorology, 2012, 142, 79-101. | 1.2 | 19 |
| 38 | 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. | 1.3 | 19 |
| 39 | Processâ€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. | 1.3 | 18 |
| 40 | Evaluation of a Buoyancy and Shear Based Mixing Length for a Turbulence Scheme. Frontiers in Earth Science, 2017, 5, . | 0.8 | 16 |
| 41 | Nature of the Mesoscale Boundary Layer Height and Water Vapor Variability Observed 14 June 2002 during the IHOP_2002 Campaign. Monthly Weather Review, 2009, 137, 414-432. | 0.5 | 15 |
| 42 | Modelling of the Thermodynamical Diurnal Cycle in the Lower Atmosphere: A Joint Evaluation of Four Contrasted Regimes in the Tropics Over Land. Boundary-Layer Meteorology, 2014, 150, 185-214. | 1.2 | 12 |
| 43 | The April 2010 North African heatwave: when the water vapor greenhouse effect drives nighttime temperatures. Climate Dynamics, 2020, 54, 3879-3905. | 1.7 | 10 |
| 44 | Processâ€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. | 1.3 | 8 |
| 45 | Accounting for Vertical Subgridâ€Scale Heterogeneity in Lowâ€Level Cloud Fraction Parameterizations. Journal of Advances in Modeling Earth Systems, 2018, 10, 2686-2705. | 1.3 | 7 |
| 46 | A caseâ€study of the coupled oceanâ€“atmosphere response to an oceanic diurnal warm layer. Quarterly Journal of the Royal Meteorological Society, 2021, 147, 2008-2032. | 1.0 | 5 |
| 47 | LES study of the impact of moist thermals on the oxidative capacity of the atmosphere in southern West Africa. Atmospheric Chemistry and Physics, 2018, 18, 6601-6624. | 1.9 | 4 |
| 48 | Modeling the GABLS4 Stronglyâ€Stable Boundary Layer With a GCM Turbulence Parameterization: Parametric Sensitivity or Intrinsic Limits?. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002269. | 1.3 | 4 |
| 49 | Processâ€oriented stochastic perturbations applied to the parametrization of turbulence and shallow convection for ensemble prediction. Quarterly Journal of the Royal Meteorological Society, 2022, 148, 981-1000. | 1.0 | 3 |
| 50 | Sahelian Heat Wave Characterization From Observational Data Sets. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034465. | 1.2 | 2 |
| 51 | La campagne IHOP 2002 - Une campagne de mesure de la vapeur d'eau dans la couche limite. La MÃ©tÃ©orologie, 2003, 8, 38. | 0.5 | 2 |
| 52 | Uncertainty of SW Cloud Radiative Effect in Atmospheric Models Due to the Parameterization of Liquid Cloud Optical Properties. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002742. | 1.3 | 2 |
| 53 | A new downscaling method for sub-grid turbulence modeling. Atmospheric Chemistry and Physics, 2017, 17, 6531-6546. | 1.9 | 1 |
| 54 | Use of large-eddy simulations to design an adaptive sampling strategy to assess cumulus cloud heterogeneities by remotely piloted aircraft. Atmospheric Measurement Techniques, 2022, 15, 335-352. | 1.2 | 1 |