

# Curriculum Vitae

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## Frédérique CHERUY

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## Education and Professional Experience:

2018 : HDR (habilitation à diriger des recherches) , “ Modelling studies of the land surface – atmosphere interactions at global scale” defended Nov. 2018, Sorbonne University.

1992-2017: CNRS (National Center for Scientific Research) research scientist at LMD/IPSL, Paris.

1998-to date: EMC3 group (Study and Modelling of Climate and Climate Change)

1992-1997 Analyse of Atmospheric Radiation group

1989-1991: CNES (Centre National d’Etudes Spatiales) post-doctoral fellowship; Visiting scientist in the Climate and Radiation Branch of the NASA GSFC (Greenbelt, USA)

1987-1989: PhD, LMD and University Paris 7 (Paris 7, France): "Diurnal variations of the Earth radiation budget from satellite observations".

1987: Master 2 “Physical methods in remote sensing” (University Paris 7)

## Research Interests:

### Numerical modelling

- Physical parametrizations: Convection, radiation, land-surface, boundary and surface layer
- Diagnostics and evaluation methodologies (process oriented, biases, missing processes, assessment of the interactions between land-surface and atmosphere with satellite and in situ observations )
- Climate reconstruction for the 20<sup>th</sup> century

### Understanding physical processes and mechanisms

- Land-atmosphere coupling, surface energy budget, soil moisture related feedbacks
- Cloud radiation interactions
- Develop evaluation diagnostics from instrumented site observations (systematic comparisons, <http://observations.ipsl.fr/espri/cosydata/>, simulators : lidar, ISCCP ...)

### Understanding Climate change

- Gain confidence in climate projections
- Natural variability/Anthropogenic signal
- Regional climate (semi-arid regions, Europe)

### Extreme events

- Heat waves

## Research projects in which involved:

### *National:*

DEPHY2 (Développement et Evaluation PHYsiques des modèles atmosphériques): 2015-todate Land/atmosphere coupling (Steering committee) to become « groupement de Recherche » Labex IPSL (Scientific committee) and co-leader of the “Reconstructing and attributing climate variability since the early 20<sup>th</sup> century” project.

SEEN Scénarios climatiques Extrêmes et Energie Nucléaire .funded by ANR- Octobre 2013-Novembre 2016 ANR-11-RSNR-0021).

Member of the developing team of the IPSL-CM for CMIP6 (lead for the land surface atmospheric coupling).

MOSAI : Models and Observations for Surface-Atmosphere Interactions in preparation (oct. 2018) for ANR

Member of scientific council for LMDZ-CC

### *European:*

EMBRACE (FP7) 2011 – 2015 WP3: Land-surface climate interactions

EUCLIPSE (FP6) (European Union Cloud Intercomparison, Process Study & Evaluation Project): 2010 - 2014;

MODOBs: 2006 -2009: Atmospheric Boundary Layer modelling for climate, meteorology, energy and environment applications: exploring added value from new observation techniques.

HUMAN RESOURCES AND MOBILITY (HRM) ACTIVITY, MARIE CURIE ACTIONS (RTNs), “Interdisciplinary and Intersectorial” Call: FP6-2004-Mobility-1

### *International*

LS3MIP: Land Surface snow and soil moisture models intercomparison project (CMIP6)

Snow-MIP (CMIP6)

I-GEM Franco-Taiwanese project funded by ANR and MoST (2014 -2018)

CAUSES Clouds Above the United States and Errors at the Surface Global Atmospheric System Studies (GEWEX/WCRP)

GLACE-CMIP5 Global Land Atmosphere Coupling Experiment – Coupled Model Intercomparison Project, phase 5

CMUG (ESA, CCI+ phase 1 and 2)

Co-Convener for session « Heatwaves in Present and Future Climate » 8th GEWEX Science Conference: Extremes and Water on the Edge May 6 - 11, 2018 | Canmore, Alberta, Canada

### • **PhD and Post-doc Students:**

- F. Chevallier 1998: Modelling the radiative transfer for climate application : A new approach based on artificial neural networks. Paris-7 University Defended : June 1998
- A. Catarino : Construction d'un outils de diagnostic du comportement de la couche limite dans un modèle atmosphérique de climat (LMDZ) Paris 6 University/MODOBS (Marie Curie training network). Defended : Dec. 2009
- A, Campoy (2013) Influence de l'hydrologie souterraine sur la modélisation du climat à l'échelle régionale et globale Defended : June 2013 Paris 6
- S. Ait-Mesbah : La robustesse du couplage entre l'état hydrologique des sols et l'atmosphère dans les nouvelles simulations numériques du climat présent et d'un climat modifié. Defended April 2015, Paris 6 University
- F. Wang (EMBRACE, FP7 and I-GEM),
- Y. Zhao (Labex IPSL),

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- 12 master (1 and 2) students
- LMDZ training course (atmosphere surface interface- lesson and tutorial, <http://lmdz.lmd.jussieu.fr/le-projet-lmdz/formation/2017>)
- ORCHIDEE training course (Land atmosphere coupling - lesson)

## Publications:

**Citations**      **2657 (all)**      **1776 (since 2014)**

**h-index:** 22 (since beginning)    14 (since 2014)

**i10-index** 30 (since beginning)    19 (since 2014)

- [40] Al-Yaari A. , A. Ducharne, F. Cheruy , W.T. Crow, J.P. Wigneron, 2019 Satellite-based soil moisture provides missing link between summertime precipitation and surface temperature biases in CMIP5 simulations over conterminous United States. *Scientific Reports* 9, 1-12
- [39] Krinner, G., Derksen, C., Essery, R., Flanner, M., Hagemann, S., Clark, M., Hall, A., Rott, H., Brutel-Vuilmet, C., Kim, H., Ménard, C. B., Mudryk, L., Thackeray, C., Wang, L., Arduini, G., Balsamo, G., Bartlett, P., Boike, J., Boone, A., Chéruy, F., Colin, J., Cuntz, M., Dai, Y., Decharme, B., Derry, J., Ducharne, A., Dutra, E., Fang, X., Fierz, C., Ghattas, J., Gusev, Y., Haverd, V., Kontu, A., Lafaysse, M., Law, R., Lawrence, D., Li, W., Marke, T., Marks, D., Nasonova, O., Nitta, T., Niwano, M., Pomeroy, J., Raleigh, M. S., Schaedler, G., Semenov, V., Smirnova, T., Stacke, T., Strasser, U., Svenson, S., Turkov, D., Wang, T., Wever, N., Yuan, H., and Zhou, W.: *ESM-SnowMIP: Assessing models and quantifying snow-related climate feedbacks*, *Geosci. Model Dev. Discuss.*, <https://doi.org/10.5194/gmd-2018-153>, in review, 2018.
- [38] C. J. Morcrette<sup>1</sup>, K. Van Weverberg, H.-Y. Ma, M. Ahlgrimm, E. Bazile, L. K. Berg A., Cheng, F. Cheruy, J. Cole, R. Forbes , W. I. Gustafson Jr, M. Huang, W.-S. Lee, Y. Liu, L. Mellul, W. Merryfield, Y. Qian , R. Roehrig, Y.-C. Wang, S. Xie, C. Zhang, S. Klein, J. Petch: *Introduction to CAUSES: Description of weather and climate models and their near-surface temperature errors in 5-day hindcasts near the Southern Great Plains*, 2018 *Accepté JGR*.
- [37] K. Van Weverberg and C. J. Morcrette and J. Petch, S. A. Klein and H.-Y. Ma , C. Zhang , S. Xie, Q. Tang W. Gustafson, Y. Qian , L. Berg , M. Wang Y. Liu , M. Ahlgrimm and R. Forbes and E. Bazile, R. Roehrig , J. Cole ,W. Merryfield , W.-S. Le, F. Cheruy, L. Mellul , Y.-C.Wang and K. Johnson : *Attribution of Surface Radiation Errors near the Southern Great Plains in Numerical Weather Prediction and Climate Models*, 2018 (accepté JGR)
- [36] Ma, H.Y. and S. A. Klein and S. Xie and C. Zhang and S. Tang and Q. Tang and C. Morcrette and K. Van Weverberg and J. Petch and M. Ahlgrimm and L. Berg and F. Cheruy and J. Cole and R. Forbes and M. Huang and H.-H. Hsu and W. Gustafson Jr. and Y. Liu and W. Merryfield and Y. Qian and Y.-C.Wang, *CAUSES: On the role of surface energy budget errors to the warm surface air temperature error over the Central U.S.*, *accepté JGR Atmosphere* 2018.
- [35] Cheruy F. , J.L. Dufresne, S. Ait Mesbah, JY Grandpeix, F Wang. *Role of Soil Thermal Inertia in Surface Temperature and Soil Moisture-Temperature Feedback*, 2017, *JAMES*; 9,8, 2906,2919 doi = {10.1002/2017MS001036} **Editor’s highlight for the paper “Role of Soil Thermal Inertia in Surface Temperature and Soil Moisture-Temperature Feedback” (JAMES; 2017)**
- [34] Wang F, Ducharne A, Cheruy F, Lo MH, Grandpeix JL (2017). *Impact of a shallow groundwater table on the global water cycle in the IPSL land-atmosphere coupled model*, *Climate Dynamics*, doi:10.1007/s00382-017-3820-9
- [33] Vogel, M.M., R. Orth, F. Cheruy, S. Hagemann, R. Lorenz, B.J.J.M. Hurk, and S.I. Seneviratne, 2017: *Regional amplification of projected changes in extreme temperatures strongly controlled by soil moisture-temperature feedbacks*. *Geophysical Research Letters*, 44(3), 1511-1519.

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- [32] van den Hurk, Kim, Krinner, Seneviratne, Derksen, Oki, Douville, Colin, Ducharne, Cheruy, Puma, Wada, Li, Jia, Alessandri, Lawrence, Weedon, Ellis, Hagemann, Mao, Flanner, Zampieri, Law (2016). The Land Surface, Snow and Soil moisture Model Intercomparison Program (LS3MIP): aims, set-up and expected outcome. *GMD*, 9, 2809-2832. <https://doi.org/10.5194/gmd-9-2809-2016>
- [31] Berg, Findell, Lintner, Giannini, Seneviratne, van den Hurk, Lorenz, Pitman, Hagemann, Meier, Cheruy, Ducharne, Malyshev, Milly (2016). Land-atmosphere feedbacks amplify aridity increase over land under global warming. *Nature Climate Change*, 6, 869–874, doi:10.1038/nclimate3029
- [30] **F. Wang**, F. Cheruy, J.L. Dufresne, F. Cheruy The improvement of the soil thermodynamics and its effects on the land surface meteorology in the IPSL-CM. . *Geoscientific Model Development Discussions, Copernicus Publ*, 2016, 9 (1), pp.363 - 381. <<http://www.geosci-model-dev.net/9/363/2016/>>. <10.5194/gmd-9-363-2016>. <hal-01384457>
- [29] Lorenz R., D. Argueso, M. G. Donat, A. J. Pitman, B. van den Hurk, A. Berg, D. M. Lawrence, F. Ch eruy, A. Ducharne, S. Hagemann, A. Meier, P. C. D. Milly, and S. I. Seneviratne: Influence of land-atmosphere feedbacks on climate extremes in the GLACE-CMIP5 ensemble *Journal of Geophysical Research: Atmospheres* 121 (2), 607-623 , 2016
- [28] S. Ait-Mesbah,, J.L. Dufresne F. cheruy, F. Hourdin, On the representation of surface temperature in semi-arid and arid regions. *Geophysical Research Letters*, 42:7572-7580, September 2015
- [27] May W, A. Meier, M Rummukainen, A. Berg, F. Ch eruy, S. Hagemann: Contributions of soil moisture interactions to climate change in the tropics in the GLACE–CMIP5 experiment, *Clim Dyn*, 2015 DOI 10.1007/s00382-015-2538-9
- [26] Berg A.; B Lintner; K Findell; S Seneviratne; B van den Hurk;A Ducharne; F Ch eruy; S Hagemann; D Lawrence; S Malyshev; A Meier; P Gentine, Interannual coupling between summertime surface temperature and precipitation over land: processes and implications for climate change . *J. Climate*, 28, 1308–1328. doi: <http://dx.doi.org/10.1175/JCLI-D-14-00324.1>
- [25] F. Cheruy, J. L. Dufresne, F. Hourdin, and A. Ducharne. Role of clouds and land-atmosphere coupling in midlatitude continental summer warm biases and climate change amplification in CMIP5 simulations. *Geophysical Research Letters*, 41:6493–6500, September 2014
- [24] **A. Campoy**, A. Ducharne, F. Cheruy, F. Hourdin, J. Polcher, and J. C. Dupont. Response of land surface fluxes and precipitation to different soil bottom hydrological conditions in a general circulation model. *Journal of Geophysical Research (Atmospheres)*, 118:10725, October 2013.
- [23] Seneviratne S. I., M. Wilhelm, T. Stanelle, B. Hurk, S. Hagemann, A. Berg, F. Cheruy, M. E. Higgins, A. Meier, V. Brovkin, M. Claussen, A. Ducharne, J.-L. Dufresne, K. L. Findell, J. Ghattas, D. M. Lawrence, S. Malyshev, M. Rummukainen, and B. Smith. Impact of soil moisture–climate feedbacks on CMIP5 projections: First results from the GLACE-CMIP5 experiment. *Geophysical Research Letters*, 40:5212–5217, October 2013
- [22] J.-L. Dufresne, M.-A. Foujols, S. Denvil, A. Caubel, O. Marti, O. Aumont, Y. Balkanski, S. Bekki, H. Bellenger, R. Benshila, S. Bony, L. Bopp, P. Braconnot, P. Brockmann, P. Cadule, F. Cheruy, F. Codron, A. Cozic, D. Cugnet, N. de Noblet, J.-P. Duvel, C. Eth , L. Fairhead, T. Fichefet, S. Flavoni, P. Friedlingstein, J.-Y. Grandpeix, L. Guez, E. Guilyardi, D. Hauglustaine, F. Hourdin, A. Idelkadi, J. Ghattas, S. Joussaume, M. Kageyama, G. Krinner, S. Labetoulle, A. Lahellec, M.-P. Lefebvre, F. Lefevre, C. Levy, Z. X. Li, J. Lloyd, F. Lott, G. Madec, M. Mancip, M. Marchand, S. Masson, Y. Meurdesoif, J. Mignot, I. Musat, S. Parouty, J. Polcher, C. Rio, M. Schulz, D. Swingedouw, S. Szopa, C. Talandier, P. Terray, N. Viovy, and N. Vuichard. Climate change projections using the IPSL-CM5 Earth System Model: from CMIP3 to CMIP5. *Climate Dynamics*, 40:2123–2165, May 2013.

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- [21] F. Hourdin, J.-Y. Grandpeix, C. Rio, S. Bony, A. Jam, F. Cheruy, N. Rochetin, L. Fairhead, A. Idelkadi, I. Musat, J.-L. Dufresne, A. Lahellec, M.-P. Lefebvre, and R. Roehrig. LMDZ5B: the atmospheric component of the IPSL climate model with revisited parameterizations for clouds and convection. *Climate Dynamics*, 40:2193--2222, May 2013.
- [20] F. Cheruy, **A. Campoy**, J.-C. Dupont, A. Ducharne, F. Hourdin, M. Haeffelin, M. Chiriaco, and A. Idelkadi. Combined influence of atmospheric physics and soil hydrology on the simulated meteorology at the SIRTa atmospheric observatory. *Climate Dynamics*, 40:2251--2269, May 2013.
- [19] J.-Y. Grandpeix, J.-P. Lafore, and F. Cheruy. A Density Current Parameterization Coupled with Emanuel's Convection Scheme. Part II: 1D Simulations. *Journal of Atmospheric Sciences*, 67:898-922, April 2010.
- [18] Cheruy F., F. Aires, 2009. "Cluster analysis of cloud properties over the Southern Europe Mediterranean area in observations and a model" *Monthly Weather Review* Vol. 137, No. 10. pages 3161–3176.
- [17] GL Liberti, F Ch eruy, 2006 Tropospheric dryness and clouds over tropical Indian Ocean Atmospheric research 82 (1-2), 276-293
- [16] Ch eruy F., A. Speranza, A. Sutera and N. Tartaglione, 2004 Surface winds in the Euro-Mediterranean area: the real resolution of numerical grids. *Annales Geophysicae*, 22, 2044-2048.
- [15] Liberti G.L, F. Cheruy, M. Desbois, 2001: Land effect on the diurnal cycle of clouds over the TOGA-COARE area as observed from GMS IR data. *Month. Wea. Rev.*, 129, 6, 1500-1517
- [14] Ch eruy, F.; **Chevallier, F.**, 2000 Regional and Seasonal Variations of the Clear Sky Atmospheric Longwave Cooling over Tropical Oceans. *Journal of Climate*, vol. 13, Issue 16, pp.2863-2875
- [13] **Chevallier, F.**; Ch eruy, F.; Armante, R.; Stubenrauch, C. J.; Scott, N. A. 2000 Retrieving the Clear-Sky Vertical Longwave Radiative Budget from TOVS: Comparison of a Neural Network-Based Retrieval and a Method Using Geophysical Parameters. *Journal of Applied Meteorology*, vol. 39, Issue 9, pp.1527-1543
- [12] **F. Chevallier**, J.-J. Morcrette, A. Ch edin, and F. Cheruy. TIGR-like atmospheric-profile databases for accurate radiative-flux computation. *Quarterly Journal of the Royal Meteorological Society*, 126:777-785, January 2000.
- [11] J Otterman, D Starr, T Brakke, R Davies, H Jacobowitz, A Mehta, F Cheruy et al. : Modeling zenith-angle dependence of outgoing longwave radiation: Implication for flux measurements ,Remote sensing of environment 62 (1), 90-100
- [10] N. A. Scott, A. Ch edin, R. Armante, J. Francis, C. Stubenrauch, J.-P. Chaboureau, **F. Chevallier**, C. Claud, and F. Cheruy. Characteristics of the TOVS Pathfinder Path-B Dataset. *Bulletin of the American Meteorological Society*, 80:2679-2702, December 1999.
- [9] C. J. Stubenrauch, W. B. Rossow, F. Ch eruy, A. Ch edin, and N. A. Scott. Clouds as Seen by Satellite Sounders (3I) and Imagers (ISCCP). Part I: Evaluation of Cloud Parameters. *Journal of Climate*, 12:2189-2213, August 1999
- [8] Chevallier, F., F. Ch eruy, N. A. Scott, and A. Ch edin. 1998. A neural network approach for a fast and accurate computation of longwave radiative budget. *J. Appl. Meteor* 37:1385–1397.
- [7] F Ch eruy, F Chevallier, JJ Morcrette, NA Scott, A Ch edin: A fast method using neural networks for computing the vertical distribution of the thermal component of the Earth radiative budget *Comptes Rendus de l'Acad mie des Sciences de Paris* 322, 665-672 , 1996
- [6] Cheruy, F.; Scott, N. A.; Armante, R.; Tournier, B.; Chedin, A., 1995 Contribution to the development of radiative transfer models for high spectral resolution observations in the infrared. *Journal of Quantitative Spectroscopy and Radiative Transfer*, vol. 53, issue 6, pp. 597-611

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- [5] A. Chedin, N. A. Scott, C. Claud, B. Bonnet, J. Escobar, S. Dardaillon, F. Cheruy, and N. Husson. Global scale observation of the earth for climate studies. *Advances in Space Research*, 14:155-159, January 1994.
- [4] J ESCOBARMUNOZ, A Chedin, F Cheruy, N Scott MULTILAYER NEURAL NETWORKS FOR THE RETRIEVAL OF ATMOSPHERIC VARIABLES FROM SATELLITE-BORNE VERTICAL SOUNDING, *COMPTES RENDUS DE L ACADEMIE DES SCIENCES SERIE II* 317 (7), 911-918 1993
- [3] F. Cheruy, R. S. Kandel, and J. P. Duvel. Outgoing longwave radiation and its diurnal variations from combined Earth Radiation Budget Experiment and Meteosat observations :2. Using Meteosat data to determine the longwave diurnal cycle. *Journal of Geophysical Research*, 96:22623, December 1991
- [2] F. Cheruy, R. S. Kandel, and J. P. Duvel. Outgoing longwave radiation and its diurnal variation from combined ERBE and Meteosat observations: 1. Estimating OLR from Meteosat data. *Journal of Geophysical Research*, 96:22611, December 1991.
- [1] F. Cheruy and R. S. Kandel. Use of meteosat data for validation of the diurnal variation of the outgoing longwave radiation produced by ERBE. *Dynamics of Atmospheres and Oceans*, 16:73-84, October 1991

## **Proceedings avec comité de lecture**

Liberti G.L., D. Dionisi, F. Cheruy, C.Risi. 2018. [Feasibility study to measure HDO/H2O atmospheric profiles through a Raman lidar](https://doi.org/10.1051/epjconf/201817605032). *ILRC28 EPJ Web of Conferences* **176**, 05032. 4 pp  
<https://doi.org/10.1051/epjconf/201817605032>

## **Proceedings sans comité de lecture**

F.Chéry and G.L. Liberti, Cloud space and time scale in the mediterranean area: climate model and observations, 2004,  
14th International conference on clouds and precipitation, Proceedings, volume 3, Bologna  
Italy, 19-23 July, 2004, pp 1789—1792

AM Sempreviva, B Furevik, F Cheruy, RJ Barthelemie, B Jimenez,, Claudio Transerici.. 2006 (oral)  
Proceedings of Offshore Wind Energy in Mediterranean and Other European Seas

Ionisi D. , G.Liberti, F. Cheruy, F. Congeduti: 2010: Multi-sensor Investigations of atmosphere water vapour probability distribution function in the free troposphere for a Mediterranean coastal site. Proc. of 25s International Laser Radar Conf., St. Petersburg, Russia. July 2010. 4 pp.

## **Communications à des congrès:**

Ducharme, A, T. Verbeke, A. Jost, A. Tootchi, J. Ghattas, F. Cheruy, J. Colin, B. Decharme Groundwater - soil moisture interactions in the IPSL Earth system model - Preliminary results, EGU general Assembly Apr. 2019, Poster

Verbeke, T. , A- Ducharme, A. Tootchi, A. Jost, J. Ghattas, f. Cheruy, Subgrid-scale parametrization of groundwater - soil moisture interactions in the ORCHIDEE land surface model First results at global scale. EGU General Assembly Apr. 2019  
Poster

Peylin P et le groupe ORCHIDEE. Recent developments of the ORCHIDEE land surface model for CMIP6 and upcoming new features. 2èmes Journées de modélisation du fonctionnement des surfaces continentales, 13-14 novembre 2017, Montpellier. ORAL.

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F Cheruy, JL Dufresne, S Ait Mesbah, JY Grandpeix, F Wang, 2017 Role of the Soil Thermal Inertia in the short term variability of the surface temperature and consequences for the soil-moisture temperature feedback EGU General Assembly Conference Abstracts 19, 17983, Oral

F Wang, A Ducharne, F Cheruy, MH Lo, 2017 Impact of a prescribed groundwater table on the global water cycle in the IPSL land-atmosphere coupled model EGU General Assembly Conference (Poster)

E Vignon, F Hourdin, C Genthon, JB Madeleine, F Cheruy, H Gallée, E Bazile, M.P. Lefebvre, Bas JH Van de Wiel The Ability of a General Circulation Model to represent the Atmospheric Boundary Layer over the Antarctic Plateau. EGU General Assembly Conference 2017 (Oral)

Wang, Ducharne, Cheruy. Evaluation of two initialization methods in a coupled land-atmosphere model. AOGS 13th Annual Meeting, August 1-5 2016 (Beijing, China).

F Cheruy, S Ait Mesbah, J Dufresne, 2016 A Conceptual Framework to Better Understand the Processes which Control the Surface Temperature Variability from the Soil Thermal Inertia to the Boundary Layer. AGU Fall meeting 2016 (Poster)

F Wang, F Cheruy, N Vuichard, A Sima, F Hourdin 2016 The impacts of thermal roughness length on land surface climate in IPSL-CM. EGU (Poster)  
EGU General Assembly Conference

A Ducharne, MH Lo, B Decharme, F Wang, F Cheruy, J Ghattas, Rong-You Chien, Jeanne Colin, Sophie Tyteca. 2016 Groundwater-soil moisture-climate interactions: lessons from idealized model experiments with forced water table depth EGU General Assembly Conference Abstracts 18, 8541 (Oral)

Cheruy, Dufresne, Hourdin, Wang, Ducharne, Rio. Improvement foreseen for CMIP6 on the role of clouds and land-atmosphere coupling in mid-latitude continental summer warm biases and climate change amplification. EMBRACE-CMIP meeting, 19-21 October 2015, Dubrovnik (Croatia). POSTER.

Wang F, Dufresne JL, Cheruy F, Ducharne A. The effects of soil vertical discretization, soil thermal properties, and soil heat convection by liquid water transfer on the water and energy cycles in a coupled land-atmosphere model. EGU General Assembly 2015, CL4.6, April 2015 (Vienna, Austria). POSTER.

Liberti, G.L. C. Risi, F. Cheruy, D. Dionisi, F. Congeduti. 2015 Feasibility study for a Raman Lidar Based estimation of HDO/H<sub>2</sub>O Atmospheric profiles: preliminary results. EO for Water Cycle Science Conference. ESA-ESRIN, Frascati, Italy.  
<http://www.eo4water2015.info/>

F. Ch eruy et al. Evaluation of the various physics of LMDZ model at instrumented sites. Joint Euclips/CFMIP meeting Exeter, 6-10 June 2011

M Chiriaco, JC Dupont, L Klenov, M Haeffelin, P Siebesma, HK Baltink, P Siebesma, H Klein Baltink, E O'Connor, F Cheruy 2011 Synthesis of ground-based atmospheric measurements from 3 European observatories CFMIP/GCSS/EUCLIPSE Meeting on Cloud Processes and Climate Feedbacks

Catarino A., F. Ch eruy, F. Hourdin, 2009 Confronting LES and 1D simulations of marine boundary layer clouds in a 3D GCM framework GCSS/CFMIP meeting, June 2009-Vancouver.

F. Ch eruy, J.C. Dupont, F. Hourdin, M. Haeffelin, 2010: Analyse du couplage atmosph ere-surface   l'aide des mesures du SIRTA et d'un mod ele de climat zoom e et guid e. Journ ee scientifique SIRTA. 29 Avril 2010, Palaiseau.

Catarino, A. F. Cheruy., F. Hourdin: Large Eddy simulations for the evaluation of the planetary boundary layer using forcing from a GCM.

4th PAN-GCSS meeting on ADVANCES IN MODELING AND OBSERVING CLOUDS AND CONVECTION, 2-6 June 2008 at M et e-France Conference Centre (Toulouse, France)

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Liberti G.L. and F. Chéruy: Satellite based analysis of the capability of a climate model to reproduce short time scale cloud variability over the Mediterranean area. Preliminary results: summer 2000  
Third International Workshop on Verification Methods  
ECMWF, Operations Department, Shinfield Park, Reading, England 29 January - 2 February 2007

Liberti G.L., F. Chéruy,, C. Iorio, C. Accadia, 2002: Analysis of the diurnal variation of the humidity vertical structure over the mediterranean area. EGS-Nice

Tailleux R., J-Y Grandpeix, A Lahellec, F. Chéruy, 2001: Role of convective inhibition in deep convection triggering: A GCM study. 4th International Scientific Conference on the Global Energy and Water Cycle" 11-14 September 2001, College de France, Paris

F. Cheruy, G.L. Liberti, A. Mugnai, 2000 : Characterization of dry layers obsesrved with TMI and VIRS in cloudy zones over the Indian Ocean during Indoex. EGS,2001

**Chapitre dans un livre:**

Liberti G.L., F.Cheruy , In 'Remote Sensing of Atmosphere and Ocean from Space: Models, Instruments and Techniques'. Kluwer Ed., NL. ISBN 978-1-4020-0943-3 Pp.145-163.