

## Stephanie Leroux : Curriculum Vitae

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Born October 1st, 1982, Lorient, France. French citizenship.

✉ Address:

CNRM-GAME

(GMGEC, VDR)

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### Research interests

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- Dynamics of African easterly waves and the West-African monsoon.
- Intraseasonal modulation of tropical convectively coupled wave activity.
- Evaluation of tropical intraseasonal variability in general circulation models.
- Tropics-midlatitudes interactions on intraseasonal timescales.

### Research Experience

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- POSTDOC: Janv. 2013 – Dec. 2014:  
Centre National de Recherches Météorologiques, Toulouse, France.  
Postdoc, collaboration with Gilles Bellon, as part of the FP7 european project EMBRACE ( Earth system Model Bias Reduction and assessing Abrupt Climate changEs): *Tropical intraseasonal variability in CMIP5 general circulation models and aquaplanet simulations*
- POSTDOC: Jan 2012 – Dec. 2013  
SUNY, University at Albany, NY, Dep. of Atmospheric and Environmental Sciences.  
Postdoc Research Assistant.  
In collaboration with Chris Thorncroft: *Intraseasonal variability in the African monsoon.*
- POSTDOC: Dec 2009 – Dec.2011:  
Earth System Research Laboratory, NOAA, Boulder, Colorado.  
2-year National Research Council (NRC) fellowship.  
In collaboration with George Kiladis: *Intraseasonal modulation of tropical convectively coupled wave activity.*
- PHD: 2006 – 2009 :  
LTHE, UJF Grenoble, supervisor Nicholas Hall.  
*On the dynamics of African easterly waves: origin, propagation and interaction with the environment.*
- UNDERGRADUATE RESEARCH PROJECTS:
  - M2R (Fev-Jun 2006): LTHE, UJF, Grenoble, supervisor Nicholas Hall.  
*African easterly waves in the regional model MAR.*
  - M1 (jun-aug 2004): JETO, Papeete University of French Polynesia. Supervisor K. Maamaatuaiahutapu.  
*Evolution of the sea temperature in Polynesia from XBT data.*
  - L3 (jun-jul 2003): IPG, Université Paris VII. Supervisor S. Sing and C. Romevaux.  
*Gravimetric study along the trace of La Réunion hotspot volcano.*

## Education

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- 2009 PhD in Atmospheric sciences, Université J. Fourier Grenoble, France.
- 2006 M2R (Master's thesis) in Atmospheric sciences, UJF Grenoble, France.
- 2005 Preparation class for a competitive examination ("*agregation SVT*") in Earth sciences and biology to be entitled to teach in French High-schools - passed in july 2005, ENS-Lyon.
- 2003–2004 Undergraduate in Earth system sciences. Ecole Normale Supérieure, Lyon, France.
- 2001–2002 Preparation class for the Ecole Normale Supérieure de Lyon (university with competitive entrance exam), Lycée Malherbe, Caen, France.
- 2000 "Baccalaurat S" (Science). Lyce Leverrier, Saint-Lo, France.

## Teaching Experience

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- Teaching assistant (2006-2009) in Observatoire des Sciences de l'Univers de Grenoble (OSUG), Université de Grenoble, France. 192 hours (undergraduate level): Introduction to scientific computing; Introduction to Earth System sciences.
- Advisor and co-advisor for several undergraduate research projects in LTHE (2006-2009).

## Awards & Grants

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- 2009–2011: 2-year postdoctoral fellowship from the National Research Council (USA).
- 2009: Thesis prize 2009 from Université J. Fourier, Grenoble.
- 2006–2009: 3-year PhD fellowship from the French Ministry of Education and Research.
- 2002–2005: 4-year grant from Ecole Normale Supérieure de Lyon (allocated to the undergraduate students who pass the competitive entrance exam).

## Miscellaneous

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- Reviews for:
  - Quarterly Journal of the Royal Meteorological Society,
  - Geophysical Research Letters,
  - Journal of Climate.
- Co-organization of the monthly ASP group discussion, LTHE, 2008-2009
- Language skills:
  - French (mother-tongue)
  - English (good speaking-writing-reading)
- Programming and software:  
Fortran, bash scripts, Scilab, Matlab, NCL (NCAR Command Language), GMT (Generic Mapping Tools), L<sup>A</sup>T<sub>E</sub>X
- General Circulation Model user:
  - IGCN (idealized GCM from, Hoskins & Simmons 1977, Reading, UK),
  - CNRM-CM5 in "aquaplanet" version (CNRM-GAME, Toulouse)

## Referees:

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- Nick Hall (PhD advisor), Professor at Université Paul Sabatier, LEGOS, Toulouse, France  
✉Email: Nick.Hall@legos.obs-mip.fr.  
☎Tel: (+33) 5 61 33 29 19
- George Kiladis (Postdoc advisor):  
Federal Research Scientist at NOAA, (ESRL, PSD1), Boulder, Colorado  
✉Email: George.Kiladis@noaa.gov.  
☎Tel: (+1) 303 497 3892

## Stephanie Leroux: Scientific publications and communications:

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### ARTICLES:

- **2013**, Dias J., **Leroux S.**, Kiladis G., Tulisch S., GRL, **40**: 1420-1425.  
*How systematic is organized tropical convection within the MJO?*
- **2012**, Lafore, J-P, N. Asencio, D. Bouniol, F. Couvreux, C. Flammant, F. Guichard, N. Hall, S. Janicot, C. Kocha, C. Lavaysse, S. **Leroux**, E. Poan, P. Peyrille, R. Roca, R. Roehrig, F. Roux, F. Said.  
La Météorologie (edition speciale AMMA) **8**, 11-16.  
*Evolution de notre compréhension du système de mousson ouest-africain.*
- **2011**, **Leroux S.**, Hall N. and Kiladis G., J. Climate, **24**: 5378-5396.  
*Intermittent African Easterly Wave activity in a dry atmospheric model: influence of the extratropics.*
- **2011**, Liebmann B., Bladé I., Kiladis G., Carvalho L., Senay G., Allured D., **Leroux S.**, Funk C., J. Climate, (Accepted, in press). *Seasonality of African Precipitation from 1996-2009.*
- **2011**, Janicot S., Caniaux G., Chauvin F., de Cötlogon G., Fontaine B., Hall N., Kiladis G., Lafore J. P., Lavaysse C., Lavender S. L., **Leroux S.**, Marteau R., Mounier F., Philippon N., Roehrig R., Sultan B., Taylor C. M. Atmosph. Sci. Lett., **12**: 58-66. *Intraseasonal variability of the West African monsoon.*
- **2010**, **Leroux S.**, Hall N. and Kiladis G. QJRM, **136**, 397-410.  
*A climatological study of transient-mean flow interactions over West Africa.*
- **2009**, **Leroux S.** and Hall N., J. Atmos. Sci., **66**, 2303-2316.  
*On the relationship between African easterly waves and the African easterly jet.*
- **2009**, Janicot S., Mounier F., Hall N., **Leroux S.**, Sultan B., Kiladis G., J. Climate, **22**, 1541-1565  
*The dynamics of the West African monsoon. Part IV: Analysis of 25-90-day variability of convection and the role of the Indian monsoon.*
- **2007**, Vanvyve E., Hall N., Messenger C., **Leroux S.**, van Ypersele J.-P., Climate Dyn., **30**, 191-202.  
*Internal variability in a regional climate model over West Africa.*

### INTERNATIONAL CONFERENCES, WORKSHOPS, SUMMER SCHOOLS:

- Oral: General assembly, FP7 EMBRACE, Exeter, UK, Juin 2013.
- Oral: 4th AMMA conference, Toulouse, France, 2-6 Juillet, 2012.
- Oral: 30th AMS conference on Hurricanes and Tropical Meteorology, Florida, Avril, 2012.
- Poster: WCRP Conference, Denver, CO, 24-28 Octobre, 2011.
- Oral & poster: AMS conference on Atmosphere and Ocean Fluid Dynamics, Spokane, WA, 13-17 Juin, 2011.
- Poster: AGU conference, San Francisco, CA, 13-15 Decembre, 2010.
- Waves and Multiscale Processes in the Tropics workshop, AIM, Palo Alto, USA, 6-10 Decembre 2010.
- Oral: 29th AMS conference on Hurricanes and Tropical Meteorology, Tucson, AZ, 10-14 Mai, 2010.
- Oral: 3rd AMMA conference, Ouagadougou, Burkina Faso, 20-25 Juillet, 2009.
- Oral: AMMA WP2.1 meeting, Toulouse, France, 13-15 Octobre, 2008.
- Ewem Nimdie summer school on tropical meteorology and climate sciences, Ghana. 2 semaines, Juillet 2008.
- Oral: 2nd AMMA conference, Karlsruhe, Allemagne, 26-30 Novembre, 2007.
- Poster: EGU conference, Vienne, Autriche 15-20 Avril, 2007.
- Poster: ERCA (European Research Courses on Atmospheres), Grenoble, France. 5 semaines, Jan-Fev 2007.

### OTHER INVITED SEMINARS:

- CSU, Fort-Collins, CO, July 2011.
- CNRM/Météo-France, Toulouse, October 2010.
- ESRL/NOAA, Boulder, CO, January 2010.