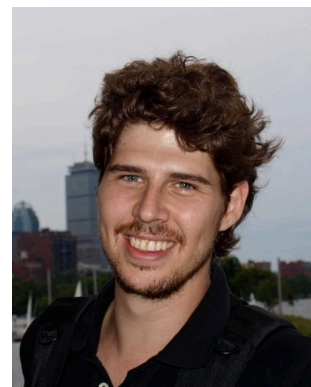


Aitor Atencia Ruiz de Gopegui

Postal address: 2548 Rue Saint Charles
H3K1E5, Montreal, QC
Telephone: +1 438 764 8572
E-mail: aitorrent@gmail.com
Date of birth: 27th May 1981
Nationality: Spanish



EDUCATION:

- | | |
|-----------|---|
| 2011-2015 | Postdoctoral fellowship in the Atmospheric and Oceanic Sciences department at McGill University under the supervision of Emeritus professor Isztar Zawadzki and professor Frédéric Fabry. |
| 2007-2011 | Ph.D. thesis in physics in the Astronomy and Meteorology department at Universitat de Barcelona. Defence on 14 th February 2011 (<i>cum laude</i>). |
| 2006-2007 | European Master's in Meteorology at Universitat de Barcelona (8.3/10). |
| 1999-2006 | Degree in Physics at the University of Barcelona (7/10). |

EMPLOYMENT HISTORY:

- | | |
|-----------------|--|
| 05/2015-05/2016 | Research associate in the Atmospheric and Oceanic Sciences department at McGill University under the supervision of Emeritus professor Isztar Zawadzki |
| 03/2009-05/2011 | Meteorology researcher in the Meteorological Service of Catalonia. |
| 01/2007-03/2009 | Predoctoral grant holder of Universitat de Barcelona in the European FLASH project (400799) in the Astronomy and Meteorology department of the Physics faculty. |
| 05/2006-01/2007 | Weather man on the Meteo channel of TVC Multimedia – SAM broadcasting corporation. |
| 09/2005-04/2006 | Grant holder at TVC Multimedia – SAM broadcasting corporation. Developed a Model Output Statistics for MASS and AVN. |
| 07/2005-09/2005 | Erasmus grant for studying at l'Università degli Studi della Calabria (Italy) in summer 2005. Carried out different techniques to detect possible trends in monthly rainfall series in Mediterranean Basins. |
| 09/2004-5/2005 | Grant holder at Meteorological Service of Catalonia in the applied research and modelling area. Validated mesoscale NWP models (MASS and MM5), developed a model to detect the possibility of hail and extracted information of weather soundings. |

PARTICIPACION IN RESEARCH PROJECTS

- | | |
|-----------|---|
| 2009-2012 | Seventh Framework Programme European Commission IMPRINTS project (n. 226555): <i>Improving Preparedness and risk management for flash floods and debris flow events</i> .
Main researcher: Eliseu Vilaclara. |
| 2007-2009 | Sixth Framework Programme European Commission FLASH project (n. 036852): <i>Observations, Analysis and Modeling of Lightning Activity in Thunderstorms, for use in Short Term Forecasting of Flash Floods</i> .
Main researcher: M ^a del Carmen Llasat Botija. |
| 2006-2008 | EDRINA (CCT05-06-00234): Creation of an internet portal for Education in Natural Hazards (<i>EDucació en RIsCOS NATurals</i>).
Main researcher: M ^a del Carmen Llasat Botija. |
| 2005-2008 | Agreement between Universitat de Barcelona and Centro de Estudios y Experimentación de Obras Públicas (CEDEX) for: <i>Propuesta de clasificación y parametrización de tormentas para su aplicación en el cálculo de caudales máximos en España</i> (Classification and parameterization of storms to estimate the maximum stream flow in Spain).
Main researcher: M ^a del Carmen Llasat Botija. |

SCIENTIFIC PUBLICATIONS

- Papers:

- **Atencia, A.**, and Zawadzki, I.: Analogues in the context of Data Assimilation. In preparation, 2015.
- **Atencia, A.**, Zawadzki, I., Berenguer, M. and Fabry, F.; Scale characterization and correction of diurnal cycle errors in MAPLE. Submitted to Monthly Weather Review, 2015.
- **Atencia, A.**, Zawadzki, I., and Fabry, F.; Analogs on the Lorenz attractor and ensemble spread. Minor reviews in Monthly Weather Review, 2015.
- **Atencia, A.**, and Zawadzki, I.: A comparison of two techniques for generating nowcasting ensembles. Part II: Analogs selection and comparison of techniques. Mon. Wea. Rev., 143, 2890–2908, 2015.
- **Atencia, A.**, and Zawadzki, I.: A comparison of two techniques for generating nowcasting ensembles. Part I: Lagrangian ensemble technique. Mon. Wea. Rev., 142, 4036–4052, 2014.
- **Atencia, A.**, Llasat, M. C., Garrote, L. and Mediero, L.; Flash-flood detection through the combined use of blended QPF and a probabilistic hydrological model. Proceedings of the Mediterranean Meeting on "Monitoring, modelling and early warning of extreme events triggered by heavy rainfall", 139-146, 2014.

- **Atencia, A.**, Llasat, M. C., Garrote, L. and Mediero, L.; Effect of radar rainfall time resolution on the predictive capability of a distributed hydrologic model. *Hydrology and earth system sciences*, 7 (5), 7995–8043, 2011.
 - Altava-Ortiz, V., Llasat, M.C., Ferrari, E., **Atencia, A.** and Sirangelo, E.; Monthly rainfall changes in Central and Western Mediterranean basins, at the end of the 20th and beginning of the 21st centuries. *International Journal of Climatology* 31 (13), 1943-1958, 2011.
 - **Atencia, A.**, Rigo, T., Sairouni, A., Moré, J., Bech, J., Vilaclara, E., Cunillera, J., Llasat, M. C. and Garrote, L.; Improving QPF by blending techniques at the Meteorological Service of Catalonia. *Natural Hazards and Earth System Sciences*, Vol. 10, p. 1443-1455, 2010.
 - Llasat, M. C., **Atencia, A.**, Garrote, L. and Mediero, L.; La prévision hydrométéorologique en Espagne dans le contexte du projet européen FLASH. *Houille blanche*, 66-71, 2009.
 - Barnolas, M., **Atencia, A.**, Llasat, M.C., Rigo, T.; Characterization of a Mediterranean flash flood event using rain gauges, radar, GIS and lightning data, *Advances in Geosciences* (ISSN: 1680-7340), 17, 35-41. 2008.
- **Congress contribution:**
- **Atencia, A.**, Puigdomenech, B. and Zawadzki, I.; Toward an Attractor of Radar Precipitation Data. Poster presentation. *37th Conference on Radar Meteorology*. Norman, OK (USA). 13-18th September 2015
 - **Atencia, A.**, Zawadzki, I., Berenguer, M. and Fabry, F.; Scale characterization and correction of diurnal cycle errors in MAPLE. Oral presentation. *8th European Conference on Radar in Meteorology and Hydrology (ERAD)*. Garmisch-Partenkirchen (Germany). 1-5th September 2014
 - Zawadzki, I., and **Atencia, A.**; - Empirical studies of precipitation predictability. Keynote speaker. *2nd Heuristic Probabilistic Forecasting Workshop*. Munich (Germany). 30–31st August 2014.
 - Zawadzki, I., Surcel, M. and **Atencia, A.**; - Empirical studies of predictability at convective scales. Keynote speaker. *World Weather Open Science Conference 2014*. Montreal (Canada). 16 – 21st August 2014.
 - **Atencia, A.**; Llasat, M. C.; Mediero, L.; Garrote, L.; Flash flood detection through the combined use of blended QPF and a probabilistic hydrological model. **Invited keynote speaker**. *Conference on Modelling, monitoring and early warning of extreme events triggered by heavy rainfalls*. University of Calabria. Arcavacata di Rende (Italy). 26-28th June 2014.
 - **Atencia, A.**, Zawadzki, I. and Fabry, F.; Rainfall attractors and predictability. Oral presentation. *36th Conference on Radar Meteorology*. Breckenridge, CO (USA). 16-20th September 2013.
 - **Atencia, A.** and Zawadzki, I.; A comparison of two ensemble-generation nowcasting techniques. Oral presentation. *46th CMOS Congress, 25th Conference on Weather Analysis and Forecasting, 21st Conference on Numerical Weather Prediction*. Montreal (Canada). 29th May – 1st June 2012.

- Panziera, L., Mandapaka, P., **Atencia, A.**, Hering, A., Germann, U., Gabella, M. and Buzzi, M.; Evaluation of precipitation nowcasting techniques for the Alpine region. Oral presentation. 10th EMS Annual Meeting, 10th *European Conference on Applications of Meteorology (ECAM)*. Zurich (Switzerland) 13th -17th September 2010.
- **Atencia, A.**, Bech, J., Rigo, T., Sairouni, A., Moré, J., Vilaclara, E., Panziera, L., Mandapaka, P., Germann, U., Llasat, M.C. and Garrote, L.; Blending NWP corrected forecasts and radar-based nowcasts. Oral presentation. *6th European Conference on Radar in Meteorology and Hydrology*. Sibiu (Romania). 6th – 10th September 2010.
- **Atencia, A.**, Rigo, T., Sairouni, A., Moré, J., Bech, J., Vilaclara, E., Cunillera, J., Llasat, M. C. and Garrote, L.; Improving QPF by blending techniques at the Meteorological Service of Catalonia. Oral presentation. *11th EGU Plinius Conference on Mediterranean Storms*. Barcelona (Spain), 7th – 11th September 2009.
- **Atencia, A.**; Llasat, M. C.; Mediero, L.; Garrote, L.; Mejora de la estima temporal y espacial de la precipitación a partir del radar meteorológico y su aplicación a un modelo hidrológico distribuido. Oral presentation. *Primeres Jornades de Meteorologia i Climatologia de la Mediterrània Occidental*. Barcelona. 28th November 2008.
- **Atencia, A.**; Llasat, M. C.; Mediero, L.; Garrote, L.; Sensitivity of probabilistic calibration to radar rainfall estimation time resolution. Poster presentation. *European Geoscience Union award for an outstanding presentation*. 10th *EGU Plinius Conference on Mediterranean Storms*. Nicosia (Cyprus), 22nd – 24th September 2008.
- **Atencia, A.**; Ceperuelo, M.; Llasat, M.C.; Vilaclara, E.; A new non power-law Z/R relation in western Mediterranean area for flash-flood events. Poster presentation. Proceedings of the *Fifth European Conference on Radar in Meteorology and Hydrology (ERAD)*, Helsinki (Finland), 30th June – 4th July 2008 , CD-Rom, sec 14, num 7. ISSN 978-951-697-676-4.
- **Atencia, A.**; Llasat, M.C.; Mediero, L.; Garrote, L.; Ceperuelo, M.; Barnolas, M., A preliminary approach for coupling radar rainfall data into a distributed hydrological model. Poster presentation. *European Geosciences Union (EGU), General Assembly*. Vienna (Austria), 14th – 18th April 2008. Geophysical Research Abstracts (ISSN: 1029-7006), Vol. 10, A-06119.
- Barnolas, M.; **Atencia, A.**; Llasat, M.C.; Rigo, T.; Characterization of a Mediterranean flash flood event using raingauges, radar, GIS and lightning data. Poster presentation. *9th Plinius Conference on Mediterranean Storms*. Varenna, Italy, 10th – 13th September 2007.
- Llasat, M.C.; Garrote, L.; Barrera, A.; **Atencia, A.**; Barnolas, M.; Llasat-Botija, M.; Rigo, T.; Prat, M.A.; Altava-Ortiz, V.; Mediero, L.; Cabot, J.; The analysis of flash floods in Catalonia in the framework of the European project FLASH. Poster presentation. *European Geosciences Union (EGU) General Assembly*. Vienna (Austria), 15th – 20th April 2007. Geophysical Research Abstracts (ISSN: 1029-7006), Vol. 9, 04099.

- **Dissertation in Meteorology (DEA):**

- **Atencia, A.**; Estudio de las precipitaciones para la mejora en la estima de los caudales máximos. Aplicación a un caso de estudio (Study of precipitation to improve the computing of maximum stream flows. Application to a case study). Physics Faculty at Universitat de Barcelona, 2007.

- **Technical reports:**

- **Atencia, A.**, Rigo, T., Vilaclara, Hernández, O., Berenguer, M., Sempere-Torres, D., Sánchez-Diezma, E. R., Panziera, L., Mandapaka, P., Germann, U. and Hering, A.; Merging NWP and radar ensembles: From deterministic to probabilistic approach. IMPRINTS Project Deliverable report, 36 pp. 2010.
- Barnolas, M., Llasat, M.C., Rigo, T., **Atencia, A.** and Ceperuelo, M.; Obtención de un modelo de tormentas para su aplicación en el cálculo de caudales máximos en España. Desarrollo y aplicación de un modelo sobre diferentes cuencas piloto (CIC y Tajo). Technical report for Centro de Estudios y Experimentación de Obras Públicas (CEDEX), 209 pp. 2006.

COURSES AND SEMINARS

- **Teaching:**

- Subject: Hydrometeorology and meteorological hazards. Meteorology Master's at Universitat de Barcelona. 1.5 hours on 19th October 2010. Physics Faculty.
- Subject: Hydrometeorology and meteorological hazards. Meteorology Master's at Universitat de Barcelona. 1.5 hours on 3rd December 2009. Physics Faculty.
- Subject: Hydrometeorology and meteorological hazards. Meteorology Master's at Universitat de Barcelona. 1.5 hours on 18th November 2008. Physics Faculty.
- Subject: Mesoscale numerical weather prediction models. Climatology Master's at Universitat de Barcelona. 2 hours on 10th April 2008. Geography Faculty.
- Subject: Hydrometeorology and meteorological hazards. Meteorology Master's at Universitat de Barcelona. 3 hours on 4th and 9th October 2007. Physics Faculty.
- Subject: ATOC 551: Statistical Methods in Atmospheric Sciences. Assistant professor at McGill University. Fall term 2015. Atmospheric and Oceanic Sciences Department.

- **Attendance:**

- Internal workshop on nowcasting: MAPLE, attractors and predictability. McGill University with MeteoSwiss and Environment Canada. Montreal (Canada). 16-18th December 2014.
- Workshop on Heuristic Probabilistic Forecasting by WMO. Only by invitation. Munich (Germany). 30-31st August 2014.
- Intensive Programme 2008. Environmental Risk due to Natural Hazards. Florence (Italy), 25th May – 2nd June 2008.

- Summer School on Distributed hydrological modelling: Use of Geospatial Data and Tools for Watershed Studies. Università degli studi di Cagliari, Sardinia, Italy, 2nd – 5th July 2007.
- WCRP Workshop on Seasonal Prediction, Barcelona, 4th - 7th June 2007.
- European Lightning Detection Workshop 2007, Barcelona (Spain), 21st – 22nd May 2007.
- 4rt Meeting of “Red Ibérica para la investigación y desarrollo de aplicaciones en base al modelo atmosférico MM5”. Universidade de Aveiro, Aveiro (Portugal), 26th – 27th April 2007.
- River Engineering: Technical and Environmental issues. Universidad Politecnica de Catalunya, Barcelona. 16th – 20th April 2007.
- **Advising experience:**
 - Supervision of graduate students in the J.S. Marshall Radar Observatory group at McGill University (2012-present).
 - Supervised one graduated student and a master project at University of Barcelona (2008).

LANGUAGES:

- **Catalan:** C Level.
- **Spanish:** Mother tongue language.
- **English:** Certificate in Advanced English level. 4 years working at McGill.
- **French:** B2 TEFaQ certificate.
- **Italian:** Working knowledge / Upper-intermediate.

COMPUTER SKILLS:

- Certificate on Word Office package at Centre d’Estudis Logos (Spain). 1994.
- Certificate on C/C++ language at Centre d’Estudis Logos (Spain). Basics in 1995 and intermediate in 1996.
- Advanced programming skills in FORTRAN 77 and 90.
- Knowledge of different weather plotting platforms: GrADS, Surfer, Vis5D, ArcView.
- Advanced programming skills in LINUX/UNIX and related languages: *awk* i *perl*.
- Knowledge of different meteorological, hydrologic and Air quality models (MM5, WRF, HEC-HMS, RIBS, CMAQ).
- Advanced programming skills in MatLab and IDL.

OTHER ISSUES:

- **Stay at other institutions:**
 - Short-Term Scientific Mission: Improving PQPF by probabilistic blending techniques. MeteoSwiss. Locarno-Monti (Switzerland). 10th – 31st March 2010.
 - Civil engineering faculty. Department of Hydraulic and Energy Engineering, Technical University of Madrid. Madrid. 2nd - 7th February 2008.