

Maria del Carmen Llasat Botija
Short CV November 2014

Family names: Llasat Botija **Name:** Maria del Carmen
Date of birth: 16 June 1959 **DNI:** 38.170.199 **Civil state:** Married (2 children)
Address: Córcega, 697-699 **Postal code:** 08026 **City:** Barcelona
Country: Spain **Telephone:** 34-93-4460877

Institution: University of Barcelona
Faculty: Faculty of Physics
Department: Department of Astronomy and Meteorology
Address: Avda. Diagonal 647 **Postal code:** 08028 **City:** Barcelona
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Higher education: Licenciante in Physics, june 1983 (calification of "excellent" or "A")
Doctor in Physics, april 1987 (" cum laude")

ACADEMIC ACTIVITY

1987-... Lecturer in the Faculty of Physics and in the Faculty of Geography (University of Barcelona)
1998-1999 Coordinator of the Postgraduate course "Climatologia Aplicada" (University of Barcelona)
1999-... Coordinator of the Master "Applied Climatology" (University of Barcelona)
2011-... Coordinator of the Master "Applied Climatology and Media" (University of Barcelona)

RESEARCH FIELDS

- 1.- Hydrometeorological hazards, risk assessment and risk awareness, social impact and perception
 - 2.- Climate change, impact of climatic change on natural hazards, trends and anomalies, seasonal forecasting
 3. - Rate of rainfall, extreme rainfall events, floods and spates, applications of meteorological radar, convective precipitation, hydrometeorological applications and nowcasting.
 - 4- Agrometeorology, hydric balance, forest fires, droughts, meteorological networks, calibration, quality control, remote sensing
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RESEARCH ACTIVITY

International projects: 18

National projects: 26

National Research contracts: 41

Talks and courses: 46

Doctor's thesis directed: 11 + 3 (in prep)

Master's thesis directed: 18

Master course direction: 1

PUBLICATIONS:

Articles in peer review international journals: 95 (75 in Citation Index)

Articles in peer review national journals: 33

Published books: 5 (in Spanish or Catalan)

Co-editor of books : 11 (9 from UNESCO)

International reports: 1

Chapters of international books: 12

Chapters of national books: 28

Proceedings "in extenso", national congress: 9

Proceedings "in extenso" international congress: 57

Credited as full professor from the Catalan Evaluation Agency (AGAUR) as well as from the Spanish Evaluation Agency (ANECA)

Abstracts published in international journals: 104

Communications to international meetings: 211

Communications to national meetings: 49

Invited presentation, chairperson in international Congress: 48

Member of scientific committee, and organization: 58

Member of jury of PhD thesis: 24

4 "sexenios" of research

Credited as full professor from the Catalan Evaluation Agency (AGAUR) as well as from the Spanish Evaluation Agency (ANECA)

Director of the GAMA team (Group of Analysis of Meteorological Hazards) of UB

MAIN RESEARCH TEAMS IN WHICH HAS COLLABORATED OR IS COLLABORATING

Spanish or Catalan Government: Generalitat de Catalunya (Departments of: Agriculture, Environment, Civil Protection, Public Works) /Ministry of Environment. (Centro de Estudios Hidrográficos (CEDEX), Agencia Estatal de Meteorología (AEMET) / Consejo Superior de Investigaciones Científicas (CSIC) / Spanish Civil Protection

Universities: U. Barcelona / U.Politécnica de Catalunya / U.Politécnica de València/ U.Illes Balears/ U. Bristol (England) / U. Genova and U. Calabria (Italy)/ U. California, Davis (USA)/ U. Grenoble (France) / University of Montpellier (France) / U. Tel Aviv and TAU (Israel) /

Others: CIMA (Italy) / Électricité de France (France) / IRSTA (France) / Météo-France / CNRS (France) / Observatory of Athens (Greece)

MEMBERSHIP IN COMMITTEES AND RESEARCH GROUPS

- Past-Chairperson of the Natural Hazards Interdisciplinary Working Group in the European Geophysical Society/ Past-Managing Editor of NHESS/ Member of the

steering committee of the WCP-water of UNESCO/WMO- Member of the Spanish Hydrological Committee of IHP from UNESCO / Past-International coordinator of "Précipitations Extremes", projecte AMHY/FRIEND, UNESCO / Member of the group "Hydrological interpretation of global change predictions", UNESCO / Representative of the Catalan Government (Generalitat de Catalunya) in the postgraduate course "Weather Applications in Agricultural Project", University of California in Davis, USA./ Selected as expert in the RTD PROGRAMME Monitoring-Fourth framework programme, Environment and Climate, UE, 1997, 2009 / expert review of the third , fourth report of IPCC / Coordinator of the Societal Impact Research group of MEDEX and coordinator of the Impact Social Working Group of HYMEX/ Member of the steering committee of the Catalan Group of Experts on Climatic Change/ Expert adviser (extraordinary) of the ombudsman of Catalonia /Member of the Adviser Council of Catalan Government (Consellera del Consell Assessor del Desenvolupament Sostenible de la Generalitat de Catalunya, CADS) / Member of the scientific committee of *Comité de Basin Adour-Garonne* /Member of the scientific committee of *Observatoire Pyrénéen du Changement Climatique* / Member of the *Comité Scientifique et Technique de la Société Hydrotechnique Française* and of the Editorial Committee of *La Houille Blanche* / Member of the Water institute of the University of Barcelona / Member of the scientific committee of UNESCO Catalunya /President of the Plinius Medal Committee/ Member of different expert review committees from EU, CNRS (France), CICYT (Spain), AGAUR (Catalonia),.. She also acts a referee of numerous international and journals. Review of IPCC reports 2001, 2007, 2013.

MEMBERSHIP IN SCIENTIFIC SOCIETIES

European Geosciences Union / Royal Meteorological Society / Natural Hazards Society/ International Association of Hydrological Sciences
Asociación Española de Climatología / Associació Catalana de Meteorologia

MAIN RESEARCH PROGRAMMES

- Past climatic changes in Europe and the paleoclimatology of last glacial/interglacial cycle. C.E.E. (EV4C.0011.E). 1988-1990
- Past Climates and climatic change, climate processes and models. C.E.E. (EPOCH 0004). 1990-1992.
- STORM: Flood Hazard Control by Multisensor Storm Tracking in Mediterranean Areas. E.E.C. (Environment, EV5V-CT92-0167). 1992-1995.
- Aplicaciones hidrológicas del radar: optimización de la medida de lluvia por radar mediante sensores en tierra (proyecto coordinado con la Universidad Politécnica de Cataluña). CICYT. Programa Nacional de Medio Ambiente y Recursos Naturales. (AMB95-0671-C02-02). 1995-1998.
- FLOODAWARE: Applied researches on a transferable methodology, devoted to flood awareness and mitigation, helping the decision and negotiation proceses, adapted to a changing environment, and respecting the water resources. Unión Europea. Programa ENVIRONMENT (ENV4-CT96-0293(DG12-ESCY). 1996-1998.
- Aplicación de métodos hidrometeorológicos para la previsión de la precipitación diaria. Programa de Acciones Integradas de Investigación Científica y Técnica entre España y Francia (HF1995-0063). 1996-1997.
- ADVICE: Annual to decadal variability in climate in Europe, Unión Europea, ENVIRONMENT (ENV4-CT95-0129-PL951090), 1996-1997
- IMPROVE: Improved understanding of past climatic variability from early daily European Instrumental Sources. Unión Europea Environment and Climate (ENV4-

CT97-511). 1997-1998

- SPHERE: Systematic, Palaeoflood and Historical data for the improvEment of flood Risk Estimation, Unión Europea Environment and Climate (DGXII), 2000-2002.
 - FLASH: Observations, analysis and modeling of lightning activity in thunderstorms, for use in short term forecasting of flash floods. Unión Europea. Sixth Framework Programme. FP6-2005-Global-4 (n. 036852). 2006-2010
 - HYDRADMET: Desarrollo de técnicas hidrometeorológicas operativas para la previsión de inundaciones basadas en el radar meteorológico. Diseño de una herramienta inteligente para el soporte a la toma de decisiones y aplicación a la cuenca del río Besós. (REN2000-1755-CO3-02/CLI). Ministerio de Ciencia y Tecnología. Dirección General de Investigación, 2000-2003.
 - RAMSHES: evolución de los extremos hídricos en la península ibérica en los últimos 500 años: recopilación de proxy-data y modelización regional en el litoral Mediterráneo. Ministerio de Ciencia y Tecnología. REN2002-04584-C04-03, 2002-2005
 - RINAMED : Elaboration et mise en place d'une strategie commune entre acteurs locaux des regions de l'arc mediterraneen occidental en matiere d'information et de sensibilisation des populations face aux risques naturels. Interreg IIIB MEDOCC (UE). 2002-01-4.3-E- 027, 2002-2004
 - HYDROPTIMET : Optimisation des outils de prevision hydrometeorologique. Interreg IIIB MEDOCC (UE) 2002-02-4.3-I-079, 2002-2004.
 - MEDEX: Mediterranean cyclogenesis and severe weather. WMO. 2001-
 - AMPHORE: Application des methodologies de prevision hydrometeorologiques orientees aux risques environnementaux. Interreg IIIB MEDOCC (UE), 2003-03-4.3-I-079, 2004- 2006.
 - MONEGRO: análisis meteorológico de las situaciones con precipitación de granizo mediante radar y modelización mesoescalar. Ministerio de Ciencia y Tecnología (REN2003-09617-C02-02), 2003-2006
 - RED TEMÁTICA CLIVAR. Ministerio de Educación y Ciencia. Plan Nacional de I+D. (Programa Acción Especial) (REN2002-12207-E/CLI), 2003-2004.
 - FLASH: observations, analysis and modeling of lightning activity in thunderstorms, for use in short term forecasting of flash floods. UE, Sixth Framework Programme. FP6-2005-Global-4 (n. 036852), 2006-2009.
 - EDRINA-06: Creación de un portal de internet de educación en riesgos naturales. Ministerio de Educación y Ciencia. Plan Nacional de I+D+I . Programa Nacional de Fomento de la Cultura Científica y Tecnológica (CCT005-06-00234), 2006-2007.
 - HYMEX HYdrological cycle in the Mediterranean Experiment. 2007-
 - SEVERUS: Observaciones, análisis y modelización de las situaciones de granizo y lluvias intensas sobre el NE español para la mejora de la predicción a corto plazo. Integración sobre un S.I.G. (proyecto coordinado con la Universidad de León). Ministerio de Educación y Ciencia. Plan Nacional de I+D+I 2004-2007, 2006-2009
 - SOSTAQUA: Desarrollos tecnológicos hacia el ciclo urbano del agua autosostenible. Programa CENIT del CDTI (CENIT 2007-1039), 2008-2009
 - ESTCENA: Programa coordinado para generación de escenarios regionalizados de cambio climático: regionalización estadística. Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica, 2008-2011
 - DRIHM (Distributed Research Infrastructure for Hydro-Meteorology). Grant agreement n°283568. Seventh Framework Programme of the European Union for Research, Technological Development and Demonstration Activities
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PAPERS IN JOURNALS INCLUDED IN SCI

1. Puigcerver, M., Alonso, S., Lorente, J., Llasat, M.C., Redaño, A., Burgeño, A.,

- Vilar, E., 1986. Preliminary aspects on rainfall rates in the north east of Spain. *Theoretical and Applied Climatology* 37, 97-109. (Ed. Springer-Verlag). ISSN: 0177-798X. Wien, Austria.
2. Marqués, M.A., Solé, A., Mora, E., Llasat, M.C., 1990 . Frost action features as a consequence of a fire devegetation in a montane mediterranean environment *Catena*, 17, nº2, 163-174. ISSN: 0341-8162. Cremlingen-Destedt, Alemania.
 3. Llasat, M.C., Puigcerver, M., 1990. Cold air pools over Europe. *Meteorology and Atmospheric Physics*, 42, 171-177. (Ed. WienNewYork: Springer-Verlag). ISSN: 0177-7971. Wien, Austria..
 4. Llasat, M.C., Rodríguez, R., 1992. Extreme rainfall events in Catalonia: the case of 12 November. *Natural Hazards*, 5, 133-151. (Ed. Kluwer Academic Publishers). ISSN:0921-030X. Dordrecht, Holanda.
 5. Llasat, M.C., Puigcerver, M., 1994. Meteorological factors associated with floods in the north-eastern part of the Iberian Peninsula. *Natural Hazards*, 9, 81-93. (Ed. Kluwer Academic Publishers). ISSN: 0921-030X. Dordrecht, Holanda.
 6. Rodriguez, R., Llasat, M.C., Rojas, E., 1994. Evaluation of climate change through harmonic analysis. *Natural Hazards*, 9, 5-16. (Ed. Kluwer Academic Publishers). ISSN: 0921-030X. Dordrecht, Holanda.
 7. Ramis, C., Llasat, M.C., Genovés, A., Jansà, A., 1994. The october-87 floods in Catalonia. synoptic and mesoscale mechanisms. *Meteorological Applications* 1, 337-350. (Ed. Royal Meteorological Society). ISSN: 1350-4827. Berkshire, Gran Bretaña.
 8. Ramis, C., Alonso, S., Llasat, M.C., 1995. A comparative study between two cases of extreme rainfall events in Catalonia. *Surveys in Geophysics Journal*. 16, 141-161. (Ed. Dordrecht: D. Reidel Publ. Co., 1986). ISSN: 0169-3298. Dordrecht, Holanda.
 9. Llasat, M.C., Ramis, C., Barrantes, J., 1996. The meteorology of high-intensity rainfall events over the west Mediterranean Region. *Remote Sensing Reviews*, 14, 51-90. (Ed. Becker). ISSN: 0275-7257. ISBN: 3-7186-5056-8. Berkshire, Gran Bretaña.
 10. Roth, G., Barrett, E., Giuli, D., Goddard, J., Llasat, M.C., Minciardi, R., Mugnai, A., Scarchilli, G., Siccardi, F., 1996. The storm project: aims, objectives and organisation. *Remote Sensing Reviews*, 14, 23-50. (Ed. Becker). ISSN: 0275-7257. ISBN: 3-7186-5056-8. Berkshire, Gran Bretaña.
 11. Llasat, M.C., Barrantes, J., 1996. Catastrophic rainfalls in the west Mediterranean area. *Meccanica*, 31, 397-406. ISSN: 0025-6455. Dordrecht, Holanda.
 12. Cunillera, J., Llasat, M.C., 1997. Application of remote sensing and multivariate analysis to the agroclimatic. Characterization of a Mediterranean region. *Theoretical and Applied Climatology*, 57, 197-208. (Ed. Springer-Verlag). ISSN: 0177-798X. Wien, Austria.
 13. Llasat, M.C., Puigcerver, M., 1997. Total rainfall and convective rainfall in Catalonia, Spain. *International Journal of Climatology*, 17, 1683-1695. (Ed. Wiley & Sons). ISSN: 0899-8418. Chichester, Gran Bretaña.
 14. Llasat, M.C., Snyder, R. L., 1998. Data error effects on net radiation and evapotranspiration estimation. *Agricultural and Forest Meteorology*, 91, 209-221. (Ed. Elsevier). ISSN: 0168-1923. Amsterdam, Holanda
 15. Rodriguez, R., Llasat, M.C., Wheeler, D., 1999. Analysis of the Barcelona precipitation series. *International Journal of Climatology*, 19, 787-801 (Ed. Wiley & Sons). ISSN: 0899-8418. Chichester (Sussex).
 16. Llasat, M.C., Ramis, C., Lanza, L., 1999. Storm tracking and monitoring using objective synoptic diagnosis and cluster identification from infrared meteosat imagery: a case study. *Meteorology and Atmospheric Physics*, 71, 139-155. ISSN: 0177-7971. Wien, Austria.
 17. Llasat, M.C., 2001. An objective classification of rainfall events on the basis of

- their convective features. Application to rainfall intensity in the north-east of Spain. *International Journal of Climatology*, Vol. 21, nº11, 1385-1400. ISSN: 0899-8418. Chichester (Sussex).
18. Llasat, M.C., Barriendos, M., Rigo, T., 2002. L'analyse de la fréquence et de l'occurrence temporelle des fortes précipitations d'origine méditerranéenne causes des crues rares en Espagne et dans le sud de la France. *La Houille Blanche*, nº 6-7, 139-144 (Ed. AIRH). ISSN: 0018-6368. Francia
 19. Barriendos, M., Llasat, M.C., 2003. The case of the "Maldá" anomaly in the western Mediterranean basin (ad 1760–1800): an example of a strong climatic variability. *Climatic Change*, vol. 61, Núm. 1-2, pp. 191-216. (Ed. Kluwer Academic Publishers) ISSN Climatic: 0165-0009. Holanda.
 20. Llasat, M.C., Rigo, T., Barriendos, M., 2003. The "Montserrat-2000" flash-flood event: a comparison with the floods that have occurred in the north-eastern Iberian peninsula since the 14th century. *International Journal of Climatology*, 23, 453-469. (Ed. Wiley & Sons). ISSN: 0899-8418. Chichester, Gran Bretaña.
 21. Barriendos, M., Coeur, D., Lang, M., Llasat, M.C., Naulet, R., Lemaitre, F., Barrera, A., 2003. Stationarity analysis of historical flood series in France and Spain (14th-20th centuries). *Natural Hazards and Earth System Sciences*, 3, 583-592 (Ed. Copernicus GmbH, European Geosciences Union) ISSN: 1561-8633. Katlenburg-Lindau, Alemania.
 22. Benito, G., Lang, M., Barriendos, M., Llasat, M.C., Francés, F., Ouarda, T., Thorndycraft, V., Enzel, Y., Bardossy, A., Coeur, D., Bobée B., 2004. Use of systematic, palaeoflood and historical data for the improvement of flood risk estimation. Review of scientific methods. *Natural Hazards* 31: 623-643. (Ed. Kluwer Academic Publishers) ISSN: 0921-030X. Dordrecht, Holanda.
 23. Llasat, M., Quintas, L., 2004. Stationarity of monthly rainfall series, since the middle of the sixteenth century. application to the case of peninsular Spain. *Natural Hazards* 31: 613-622 (Ed. Kluwer Academic Publishers) ISSN: 0921-030X. Dordrecht, Holanda
 24. Rigo, T., Llasat, M.C., 2004. A methodology for the classification of convective structures using meteorological radar: application to heavy rainfall events on the Mediterranean coast of the Iberian Peninsula. *Natural Hazards and Earth System Sciences*, 4, 59-68 (Ed. Copernicus GmbH, European Geosciences Union). ISSN: 1561-8633. Katlenburg-Lindau, Alemania. [http://www.copernicus.org/EGU/nhess/published_papers.html]
 25. Llasat, M.C., 2004. Les crues méditerranéennes récentes et historiques (Espagne, France, Italie), conséquences-enseignements-projets crues extrêmes régionales en Europe. *La Houille Blanche*, 6, 37-41. (Ed. SHF). Paris, Francia. ISSN: 0018-6368
 26. Llasat, M.C., 2004. La vulnérabilité en Catalogne et la perception sociale. *La Houille Blanche*, 6, 71-75. (Ed. SHF). Paris, Francia. ISSN: 0018-6368
 27. Llasat, M.C., M. Barriendos, Barrera, A., and Rigo, T., 2005: Floods in Catalonia (NE Spain) since the 14th century. Climatological and meteorological aspects from historical documentary sources and old instrumental records. *Journal of Hydrology. Applications of palaeoflood hydrology and historical data in flood risk analysis*, 313, 32-47.
 28. Rigo, T. and M.C. Llasat, 2005: Radar analysis of the life cycle of mesoscale convective systems during the 10 June 2000 event. *Natural Hazards and Earth System Sciences*, 5, 1-12.
 29. Milelli, M., M.C. Llasat and V. Ducroq, 2006: The cases of June 2000, November 2002 and September 2002 as examples of Mediterranean floods. *Natural Hazards and Earth System Sciences*, 6, 271-284.
 30. Barrera, A., M.C. Llasat and M. Barriendos, 2006: Estimation of the extreme flash flood evolution in Barcelona county from 1351 to 2005. *Natural Hazards and Earth System Sciences*, 6, 505-518

31. Llasat, M.C., M. Ceperuelo and T. Rigo, 2007: Rainfall regionalization on the basis of the precipitation convective features using a raingauge network and weather radar observations. *Atmospheric Research*, 83, 415-426.
32. Rigo, T., M.C.Llasat, 2007: Analysis of mesoscale convective systems in Catalonia (NE of Spain) using radar for the period 1996-2000. *Atmospheric Research*, 83, 458-472.
33. Llasat, M.C., F. Martín and A. Barrera, 2007: From the concept of "kaltlufttropfen" (cold air pool) to the cut-off low. The case of September 1971 in Spain as an example of their role in heavy rainfalls. *Meteorology and Atmospheric Physics*, 96, 43-60.
34. Martín, A., R. Romero, V. Homar, A. de Luque, S. Alonso, T. Rigo and M.C. Llasat, 2007: Sensitivities of a flash flood event over Catalonia: a numerical analysis. *Monthly Weather Review*, vol. 135, 651-669.
35. Barnolas, M. and M.C. Llasat, 2007: A flood geodatabase and its climatological applications: the case of Catalonia for the last century. *Natural Hazards and Earth System Sciences*, 7, 271-281.
36. Llasat, M.C., 2007: L'alea météorologique dans les situations d'inondations extraordinaires a échelle régionale au sud de l'Europe: de la période 1840-1870 jusqu'à l'événement de 1999. *La Houille Blanche*, 2, 38-43.
37. Llasat, M.C., 2007: Book review of "Fractal analysis for natural hazards". *Natural Hazards and Earth System Sciences*, 7, 343-344.
38. Gibergans-Bàguena, J. and M.C. Llasat, 2007: Improvement of the analog forecasting method by using local thermodynamic data. Application to autumn precipitation in Catalonia. *Atmospheric Research*, 86, 173-193.
39. Llasat, M.C., M. Ceperuelo, T. Rigo, 2007: Rainfall regionalization on the basis of the precipitation convective features using a raingauge network and weather radar observations. *Atmospheric Research*, 83, 415-426.
40. Ceperuelo, M., T. Rigo, M.C. Llasat and J.L. Sánchez, 2009: Improving hail identification in the Ebro valley region using radar observations: probability equations and warning thresholds. *Atmospheric Research*, 93, 474-482, 2009
41. Llasat, M.C., M. Llasat-Botija, M. Barnolas, L. López, and V. Altava-Ortiz, 2009. An analysis of the evolution of hydrometeorological extremes in newspapers: the case of Catalonia, 1982-2006. *Nat. Hazards Earth Syst. Sci.*, 9, 1201-1212, 2009
42. Llasat, M.C., A. Atencia, L. Garrote, L. Mediero, 2009. The hydrometeorological forecasting in the framework of the european project FLASH. *La Houille Blanche*, nº 6, 66-71. DOI 10.1051/lhb/2009080
43. Llasat, M.C., M. Llasat-Botija and L. López, 2009. A press database on natural risks and its application in the study of floods in northeastern Spain. *Nat. Hazards Earth Syst. Sci.*, 9, 2049-2061, www.nat-hazards-earth-syst-sci.net/9/2049/2009/
44. Barnolas, M., T. Rigo y M.C. Llasat, 2010. Characteristics of 2d convective structures in catalonia (NE Spain): an analysis using radar data and GIS. *Hydrol. Earth Syst. Sci.*, 14, 129-139.
45. Yair, Y., B. Lynn, C. Price, V. Kotroni, K. Lagouvardos, E. Morin, A. Mugnai, and M. del C. Llasat (2010), Predicting the potential for lightning activity in Mediterranean storms based on the Weather Research and Forecasting (WRF) model dynamic and microphysical fields, *J. Geophys. Res.*, 115, D04205, doi:10.1029/2008JD010868.
46. Llasat, M.C. y F. Siccardi, 2010. A reflection about the social and technological aspects in flood risk management – the case of the Italian Civil Protection. *Nat. Hazards Earth Syst. Sci.*, 10, 109-119, 2010, www.nat-hazards-earth-syst-sci.net/10/109/2010/.
47. Llasat, M.C., Zaragoza, A, Cabot, J. Aznar, B, 2010. An approximation to seasonal forecasting of low flows and droughts in Catalonia. *La Houille*

- Blanche, nº 4, 60-66. DOI 10.1051/LHB/2010042
48. Atencia, A., T. Rigo, A. Sairouni, J. Moré, J. Bech, E. Vilaclara, J. Cunillera, M. C. Llasat, L. Garrote, 2010. Improving QPF by blending techniques at the meteorological service of catalonia. *Natural Hazards Earth System Sciences*, 10, 1443–1455, 2010, DOI: 10.5194/nhess-10-1443-2010
 49. Loukas, A., M.C. Llasat, U. Ulbrich, 2010. Extreme events induced by weather and climate change: evaluation, forecasting and proactive planning. *Natural Hazards and Earth System Sciences*, 10, 1895-1897, 2010 (Preface), DOI: 10.5194/nhess-10-1895-2010
 50. Amaro, J., M. Gayà, M. Aran, M.C. Llasat, 2010. Preliminary results of the Social Impact Research group of MEDEX: the request database (2000-2002) of two meteorological services. *Natural Hazards and Earth System Sciences*, 10, 2643-2652, 2010, DOI: 10.5194/NHESS-10-2643-2010
 51. Altava-Ortiz, V., M.C. Llasat, E. Ferrari, A. Atencia, B. Sirangelo, 2010. 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*, vol 31, num 13, 1943-1958, Ed. Wiley & Sons. (ISSN: 0899-8418). Chichester, Gran Bretaña. 2010, (DOI: 10.1002/joc.2204)
 52. Price, C., Y. Yair, A. Mugnai, K. Lagouvardos, M.C. Llasat, S. Michaelides, S. Dietrich, E. Galanti, L. Garrote, D. Katsanos, V. Kotroni, M. Llasat-Botija, L. Mediero, E. Morin, K. Nicolaides, K. Savvidou, B. Ziv, 2011. The FLASH project: using lightning data to better understand and predict flash floods. *Special Edition of Environmental Science & Policy "Climate Change and Water"*, 898-911.
 53. Gayà, M., M.C. Llasat and J. Arús: Tornadoes and waterspouts in Catalonia (1950-2009). *Nat. Hazards Earth Syst. Sci.*, 11, 1875–1883, 2011
 54. Price, C., Y. Yair, A. Mugnai, K. Lagouvardos, M. C. Llasat, S. Michaelides, U. Dayan, S. Dietrich, F. Di Paola, E. Galanti, L. Garrote, N. Harats, D. Katsanos, M. Kohn, V. Kotroni, M. Llasat-Botija, B. Lynn, L. Mediero, E. Morin, K. Nicolaides, S. Rozalis, K. Savvidou, B. Ziv, 2011. Using Lightning Data to Better Understand and Predict Flash Floods in the Mediterranean. *Surv Geophys* 32:733–751, DOI 10.1007/s10712-011-9146-y.
 55. Turco, M., P. Quintana Seguí, M. C. Llasat, S. Herrera, and J. M. Gutiérrez. Testing MOS precipitation downscaling for ENSEMBLES regional climate models over Spain. *Journal of Geophysical Research*, 116, D18109, doi:10.1029/2011JD016166, 2011.
 56. Turco, M. y M. C. Llasat, 2011. Trends in indices of daily precipitation extremes in Catalonia (NE Spain), 1951–2003. *Nat. Hazards Earth Syst. Sci.*, 11, 3213–3226, doi:10.5194/nhess-11-3213-2011.
 57. Atencia, A., L. Mediero, M. C. Llasat, and L. Garrote, 2011. Effect of radar rainfall time resolution on the predictive capability of a distributed hydrologic model. *Hydrol. Earth Syst. Sci.*, 15, 3809–3827, doi:10.5194/hess-15-3809-2011
 58. Barredo, J.I., D. Saurí, and M. C. Llasat, 2012. Assessing trends in insured losses from floods in Spain 1971–2008. *Nat. Hazards Earth Syst. Sci.*, 12, 1723–1729, 2012. www.nat-hazards-earth-syst-sci.net/12/1723/2012/ doi:10.5194/nhess-12-1723-2012
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