

JORDI TUSET MESTRE

Barcelona, 18th. May 1974

PhD Student

Grup Rius/ Area of hydrology and soil conservation/Forest Technology Centre of Catalonia

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Jordi Tuset is a PhD student at the Forest Technology Centre of Catalonia. He was graduated as a Forestry Engineer in 2007 by the University of Lleida, obtained a Postgraduate degree in Forestry Systems and Products Research from the University of Lleida and a Master degree in Applied Climatology by the University of Barcelona. Before joining this group, Jordi worked for one year at Geobrugg Iberica, one other year at the Catalan Water Agency and three years at Tyspa, dealing mainly with river planning.

Jordi's research interests include monitoring and modelling fluvial dynamics, especially on sediment transport and associated hydrologic and geomorphic processes. He is also interested the planning in natural hazards planning and management and research on the hydrological origin and the processes responsible. He started working with the RIUS group in 2010 researching the fluvial dynamics in intercommunity basins Segre-Ebro in Catalonia (within an agreement between the Catalan Water Agency and the Forest Technology Centre of Catalonia).

PUBLICATIONS:

INTERNATIONAL SCI PAPERS

Balasch J. C., Ruiz-Bellet J. L., Tuset J., Martín de Oliva J. (2010). Reconstruction of the 1874 Santa Tecla's rainstorm in Western Catalonia (NE Spain) from flood marks and historical accounts. *Nat. Hazards Earth Syst. Sci.*, 10, 2317-2325.

Balasch J. C., Ruiz-Bellet J. L., Tuset J. (2011). Historical flash floods retromodelling in the Ondara River in Tàrraga (NE Iberian Peninsula). *Nat. Hazards Earth Syst. Sci.*, 11, 3359-3371.

Barriendos, M., Ruiz-Bellet, J.L., Tuset, J., Mazón, J., Balasch, J.C., Pino D., Ayala, J.L. (2014). The "Prediflood" database of historical floods in Catalonia (NE Iberian Peninsula) AD1035–2013, and its potential applications in flood analysis. *Hydrol. Earth Syst. Sci.*, 18, 4807–4823.

Tuset, J., Vericat, D., Batalla, R.J. (2015). Rainfall, runoff and sediment transport in a Mediterranean mountainous catchment. *Science of The Total Environment*. doi:10.1016/j.scitotenv.2015.07.075.

Buendia, C., Bussi, G., Tuset, J., Vericat, D., Sabater, S., Palau, A., Batalla, R.J. (2015). Effects of afforestation on runoff and sediment load in an upland Mediterranean catchment. *Science of the Total Environment*. doi: 10.1016/j.scitotenv.2015.07.005.

Ruiz-Bellet, J.L., Balasch, J.C., Tuset, J., Barriendos M., Mazon, J. Pino, D. (2015). Historical, hydraulic, hydrological and meteorological reconstruction of 1874 Santa Tecla flash floods in Catalonia (NE Iberian Peninsula). *Journal of Hydrology*, Volume 524, 279–295.

OTHER PEER REVIEWED PAPERS

Balasch J. C., Tuset J., Ruiz-Bellet J. L. (2010). Reconstructing the 1874 Santa Tecla flash flood in the Ondara River (Ebro Basin, NE Spain). *Adv. Geosci.*, 26, 45-48.

Tuset, J., Balasch, J.C., Batalla, R.J. (2010). Reconstrucción del Flash-Flood de Santa Tecla (1874) en el rio Ondara (Tàrraga, NE depresión del Ebro). Úbeda, X., Vericat, D., Batalla R.J.(eds.): *Avances de la geomorfología en España 2008-2010*. Centre Tecnològic Forestal de Catalunya, Solsona. 528 p. ISBN: 978-84-693-4551-1. DL: B-61.451-2010

Tuset J., Cangros A., Batalla R.J., Vericat D. (2012). Dinámica Morfo-Sedimentaria del Tramo Medio del Río Segre: Evolución Histórica y Efectos Antrópicos. *Avances de la geomorfología en España 2010-2012: actas de la XII Reunión Nacional de Geomorfología*: Santander, 17-20 septiembre de 2012 / coordinador, A. González Díez; editores, A. González Díez... [et al.]. — Santander: Publican, Ediciones de la Universidad de Cantabria, 690 p. ISBN 978-84-86116-54-5.

Tuset, J., Vericat, D., Batalla, R.J. (2014). Patrones de histéresis de sedimentos en suspensión en una cuenca mediterránea de montaña. Editores: Susanne Schnabel y Álvaro Gómez Gutiérrez. *Avances de la Geomorfología en España 2012-2014*. XIII Reunión Nacional de Geomorfología, Cáceres, 9-12 setiembre.

Tuset, J., Vericat, D., Batalla, R.J. (2015). Evolución morfo-sedimentaria del tramo medio del río Segre. *Cuadernos de Investigación Geográfica*, 41, 23-62.

ACADEMIC PUBLICATIONS

Tuset J., Vericat D., Batalla R.J. (2012). Metodologia per al Diagnòstic Hidrològic i Morfosedimentari de Cursos Fluvials. L'exemple del Riu Segre. Volum 39 de Quaderns DMACS. Paperkite. Lleida. 110 p. ISBN: 84-616-2527-7

CHAPTERS IN BOOKS

Balasch, J.C.; Pascual, M. i Tuset, J. (2006): Les aigües superficials i subterrànies. A F. Riba i R. Vallejo (eds.): *Història Natural de la Segarra*. Pagès ed. Lleida.

Balasch J. C., Remacha R., Sánchez A., Tuset J. (2008). Aspectes Hidrològics i Geomorfològics de les Riuades més Importants del Segle XX. Les riuades del segle XX al Pallars Sobirà: 1907, 1937 i 1982. Arxius i societat: Quaderns de divulgació històrica nº 2. Publicació de la Generalitat de Catalunya.

CONFERENCES

Tuset, J., Ruiz-Bellett, J.L., Balasch, J.C. (2010). Reconstructing 1874 Santa Tecla's Flash Flood in the Sió River (Catalonia, NE Iberian Peninsula). 1st SCARCE Annual Conference. Girona. PARTICIPATION: Poster

Tuset J., Cangros A., Batalla R.J., Vericat D. 2012. Dinámica Morfo-Sedimentaria Del Tramo Medio Del Río Segre: Evolución Histórica y Efectos Antrópicos.. XII REUNIÓN NACIONAL DE GEOMORFOLOGÍA. Universidad de Cantabria, Santander, 17 – 20 setiembre, 2012. PARTICIPATION: Oral presentation done by JT

Ruiz-Bellet J.L., Balasch J.C., Tuset J., Barriendos M., Mazón J., Pino D.. (2012). Flash floods reconstruction from historical data in the ungauged Ondara River basin at Tàrraga (NE Iberian Peninsula). Geophysical Research Abstracts, Vol. 15, EGU2012-11180, EGU General Assembly 2013. PARTICIPATION: Poster

Ruiz-Bellet, J.L., Balasch, J.C., Tuset, J., Barriendos, M., Mazón, J., Pino, D. (2013). Multidisciplinary approach to study of historical flood events. Possibilities of the PREDIFLOOD database (Catalonia, AD 1033-2010). Deciphering River Flood Change: Historical Floods. Vienna, 5-6 September. PARTICIPACIÓ: Oral presentat per Ruiz-Bellet.

Barriendos M., Ruiz-Bellet J.L., Balasch J.C., Tuset J., Mazón J., Pino D. (2014). Climatic characteristics of floods from the PREDIFLOOD Project Database, Catalonia (NE Iberian Peninsula), AD1035-2013. 14th EMS Annual Meeting & 10th European Conference on Applied Climatology (ECAC), Prague, Czech Republic, 6–10 October 2014. DOI: 10.13140/2.1.3441.6649. PARTICIPACIÓ: Poster.

Tuset, J., Vericat, D., Batalla, R.J. (2014). Patrones de histéresis de sedimentos en suspensión en una cuenca mediterránea de montaña. XIII Reunión Nacional de Geomorfología, Cáceres, 9-12 setiembre. PARTICIPACIÓ: Oral presentat per JT.

Balasch, J.C, Ruiz-Bellet, J.L, Tuset, J., Astudillo, C., Sánchez, A., Castelltort, X. Barriendos, M., Mazón, J., Pino, D. (2014). Improvement of flood frequency analysis from historical floods in different-sized basins. Hydrological extreme events in historic and prehistoric times (HEX), At Bonn, Germany. 9-15 juny. PARTICIPACIÓ: Poster.

Ruiz-Bellet, J.L., Balasch, J.C., Tuset, J., Barriendos, M., Mazón, J., Pino, D. (2014). Spatial extension of the reconstruction of 1874 Santa Tecla's flash floods in Catalonia (NE Iberian Peninsula). EGU General Assembly 2014. Vol. 16, EGU2014-8076, EGU General Assembly 2014. Viena. 27 April – 02 May 2014. PARTICIPACIÓ: Poster.

Pino, D., Romero-León, L., Mazón, J., Tuset, J., Barriendos, M., Balasch, J.C., Ruiz-Bellet, J.L. (2015) Meteorological reconstruction of four major flash floods in NE Iberian Peninsula since 1874. EGU General Assembly 2015. Vol. 17, EGU2015-2623, Vienna. 12-17 April 2015. PARTICIPACIÓ: Poster.

PARTICIPATION AND COLLABORATION IN RESEARCH CONTRACTS

TITLE OF THE CONTRACT: Conveni ACA-CTFC per a l'estudi de la dinàmica fluvial a les conques intercomunitàries del Segre-Ebre a Catalunya

FOUNDING COMPANY: Agencia Catalana de l'Aigua

DURATION, SINCE: 2008 TO: 2011

PRINCIPAL INVESTIGATOR: Dr. Ramon J. Batalla (University of Lleida)

TITLE OF THE CONTRACT: CONSOLIDER-INGENIO 2010 (SCARCE) - Assessing and predicting effects on water quantity and quality in Iberian rivers caused by Global Change

FOUNDING COMPANY: Ministerio de Economía y Competitividad

DURATION, SINCE: 2009 TO: 2014

PRINCIPAL INVESTIGATOR: Dr. Ramon J. Batalla (University of Lleida)

TITLE OF THE CONTRACT: Reconstrucción y clasificación multivariable de los flash floods más destacados del noreste de España (Prediflood) - CGL2012-35071

FOUNDING COMPANY: Ministerio de Economía y Competitividad

DURATION, SINCE: 2012 TO: 2015

PRINCIPAL INVESTIGATOR: Dr. J. Carles Balasch (University of Lleida)

TEACHING

Subject: Reconstrucció hidrològica i meteorològica d'un aiguat històric amb l'ajut de limnimarques i cròniques contemporànies (Course for PhD Students)

Dates: 2007

Place: School of Agronomic and Forest Engineering, University of Lleida.

Collaboration: lectures (4 hours)

Subject: Models hidràulics (Course for postdegree Students – Master in Soil and Water Management).

Dates: 2010 (21st July), 2012 (8th May), 2013 (8th Oct), 2014 (2nd Oct) and 2015 (6th Oct).

Place: School of Agronomic and Forest Engineering, University of Lleida.

Collaboration: lectures (10 hours).