Guillaume **THIREL**

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34 years old.
ORCID number: 0000-0002-1444-1830
Scopus publications: 26533302300

Research scientist, hydrological modeller

PROFESSIONAL EXPERIENCE

Since 2016	**Convener of the mountain hydrology session at EGU.**
Since 2015	**Associate editor for the Hydrological Sciences Journal.**
Since 2014	**Lecturer (EIVP, University Paris XI – Orsay).** Rainfall-runoff modelling, impact of climate change.
Since October 2012	**Researcher at Irstea, Antony, France.** Hydrological modelling and climate change, snow modelling, streamflow forecasting, uncertainties, changing catchment hydrology, data assimilation, R package. 4 PhD students, 1 Postdoc and 8 interns (co-)supervised.
Dec. 2009 – Sept. 2012	**Post doctorate at the Joint Research Centre, Ispra, Italy.** - Snow cover data assimilation (MODIS satellite) in the LISFLOOD distributed hydrological model. - Comparison of the impact on streamflows of two data assimilation methods. - Evaluation of a real-time MODIS snow cover data product.
Oct. 2006 – Nov. 2009	***Doctorate. Topic: Amelioration of ensemble streamflow forecasts on France with SAFRAN-ISBA-MODCOU.*** **Météo-France, Toulouse, France.** - Statistical comparison of two ensemble streamflow forecast systems for the short range. - Implementation of a streamflow data assimilation system in a distributed hydrometeorological model over France. - Validation of the assimilated streamflow. - Estimation of the impact of the data assimilation on ensemble streamflow forecasts at a short and medium range.
Feb. - June 2006	**Internship at CESBIO, Toulouse, France.** Hydrological modelling of the Auradé catchment with SEVE V0.
June – August 2005	**Internship at INRIA FUTURS, Bordeaux, France.** Flow for fluid simulations interface.

TRAINING

Sept. 2006 – Nov. 2009	Doctorate en Hydrometeorology. CNRM/GAME - Météo-France/CNRS. Toulouse (France).
2005-2006	MASTER 2 Research in Mathematical Engineering (University Bordeaux1).
2003-2006	MATMECA engineering school diploma, mathematical and mechanical modelling.
2000-2003	Preparatory classes for Grandes Ecoles (MPSI / MP).
2000	Scientific bachelor (with honors).

MISCELLANEOUS

Computing skills:
Operating systems: Windows, Linux.
Programming languages: Fortran, R, shiny, postgreSQL, python, shell, DOS, PCRaster, notions in PV-WAVE, Caml, Maple, C, gmt, gnuplot.
Use of a dynamic coupler: OpenPALM (Cerfacs).
Heavy calculations on the Météo-France super-computer, use of the archiving system, use of the cluster of Clermont (Irstea).
Miscellaneous: Word, Excel, LaTeX, Powerpoint, Metview, GRIB data and netcdf.

Languages: French (mother tongue), English, Italian.

Coordinator of two Agence de l'Eau Rhin-Meuse funded projects, **participant** in the H2020 IMPREX project.

AWARDS

- **International hydrological 2016 Tison award** for the article :
  G. Thirel, V. Andréassian, C. Perrin, J.-N. Audouy, L. Berthet, P. Edwards, N. Folton, C. Furusho, A. Kuentz, J. Lerat, G. Lindström, E. Martin, T. Mathevet, R. Merz, J. Parajka, D. Ruelland & J. Vaze (2015) Hydrology under change: an evaluation protocol to investigate how hydrological models deal with changing catchments, Hydrological Sciences Journal, 60:7-8, 1184-1199, DOI: 10.1080/02626667.2014.967248.
- IES Excellence Award for 'Support to EU Policy' for 2011

SCIENTIFIC PRODUCTION

Below is a list of my most significant publications. For a complete list, visit ORCID number 0000-0002-1444-1830.

Coron, L., **Thirel, G.**, Delaigue, O., Perrin, C., Andréassian, V., 2017: The Suite of Lumped GR Hydrological Models in an R package, *Environmental Modelling & Software*, 94, 166-171, DOI: 10.1016/j.envsoft.2017.05.002.

Thirel, G., V. Andréassian, C. Perrin, J.-N. Audouy, L. Berthet, P. J. Edwards, N. Folton, C. Furusho, A. Kuentz, J. Lerat, G. Lindström, E. Martin, T. Mathevet, R. Merz, J. Parajka, D. Ruelland and J. Vaze. Hydrology under change. An evaluation protocol to investigate how hydrological models deal with changing catchments. *Hydrological Sciences Journal*, 60:7-8, pages 1184-1199, DOI: 10.1080/02626667.2014.967248, 2015 - Article. **2016 Tison Award.**

Thirel G., P. Salamon, P. Burek and M. Kalas: Assimilation of MODIS Snow Cover Area data in a distributed hydrological model using the particle filter, *Remote Sensing*, 5, no. 11: 5825-5850, DOI: 10.3390/rs5115825, 2013 - Article.

Thirel G., E. Martin, J.-F. Mahfouf, S. Massart, S. Ricci, F. Habets: A past discharges assimilation system for ensemble streamflow forecasts over France – Part 1: Description and validation of the assimilation system, *Hydrol. Earth Syst. Sci.,* 14, 1623-1637, doi:10.5194/hess-14-1623-2010, 2010 - Article.

Thirel G., E. Martin, J.-F. Mahfouf, S. Massart, S. Ricci, F. Regimbeau, F. Habets: A past discharge assimilation system for ensemble streamflow forecasts over France – Part 2: Impact on the ensemble streamflow forecasts, *Hydrol. Earth Syst. Sci.,* 14, 1639-1653, doi:10.5194/hess-14-1639-2010, 2010 - Article.

Thirel G., F. Rousset-Regimbeau, E. Martin, and F. Habets: On the Impact of Short-Range Meteorological Forecasts for Ensemble Streamflow Predictions, *Journal of HydroMeteorology*, 9, 1301–1317, DOI: 10.1175/2008JHM959.1, 2008 - Article.

Reviewer for more than 20 international peer-reviewed journals.

Online CV, projects, publications, interns and PhD students supervising: http://www.irstea.fr/en/thirel-0