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Fields of expertise

Hydrology – Watershed Management – Water Resources – Hydrological Modelling – Floods
– Low-flows – Forest Hydrology

Degrees

- | | |
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| 2005 | Habilitation à Diriger les Recherches, Université Pierre et Marie Curie , Paris |
| 2002 | PhD in Hydrology, Université Pierre et Marie Curie , Paris |
| 1992 | Ingénieur du Génie Rural, des Eaux et des Forêts, ENGREF , Paris |
| 1992 | Master of Sciences, Watershed Management, University of Arizona , Tucson |
| 1990 | Agricultural Engineer, Institut National Agronomique , Paris |

Languages

French, English & Armenian	fluent
German	almost fluent
Russian	notions

Publications in Scientific Journals [by themes]

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H-index according to the WOS: 38

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1. 'GR' Models

- Ficchì, A., C. Perrin and **V. Andréassian**. 2019. Hydrological modelling at multiple sub-daily time steps: model improvement via flux-matching. *Journal of Hydrology*, 575, 1308-1327, [doi: 10.1016/j.jhydrol.2019.05.084](https://doi.org/10.1016/j.jhydrol.2019.05.084).
- Coron, L., Thirel, G., Delaigue, O., Perrin, C. and **Andréassian, V.** 2017. The Suite of Lumped GR Hydrological Models in an R Package. *Environmental Modelling and Software*, 94, 166–171. [doi: 10.1016/j.envsoft.2017.05.002](https://doi.org/10.1016/j.envsoft.2017.05.002).
- Pushpalatha, R., Perrin, C., Le Moine, N., Mathevet, T. and **Andréassian, V.** 2011. A downward structural sensitivity analysis of hydrological models to improve low-flow simulation. *Journal of Hydrology*, 411(1-2): 66-76, [doi:10.1016/j.jhydrol.2011.09.034](https://doi.org/10.1016/j.jhydrol.2011.09.034).
- Mouelhi, S., Michel, C., Perrin, C. & **Andréassian, V.** 2006. Linking stream flow to rainfall at the annual time step: the Manabe bucket model revisited. *J. Hydrol.* 328, 283-296, [doi:10.1016/j.jhydrol.2005.12.022](https://doi.org/10.1016/j.jhydrol.2005.12.022).
- Mouelhi, S., Michel, C., Perrin, C. & **Andréassian, V.** 2006. Stepwise development of a two-parameter monthly water balance model. *Journal of Hydrology*, 318(1-4), 200-214, [doi:10.1016/j.jhydrol.2005.06.014](https://doi.org/10.1016/j.jhydrol.2005.06.014).
- Perrin, C., Michel, C. and **Andréassian, V.** 2003. Improvement of a parsimonious model for streamflow simulation. *Journal of Hydrology*, 279: 275-289, doi: [10.1016/S0022-1694\(03\)00225-7](https://doi.org/10.1016/S0022-1694(03)00225-7).

2. Turc-Mezentsev Formula & Turc-Budyko nondimensional graph

- Andréassian, V.** and Sari, T. 2019. Technical Note: On the puzzling similarity of two water balance formulas – Turc-Mezentsev vs Tixeront-Fu. *Hydrology and Earth System Sciences*, 23: 2339-2350. [doi: 10.5194/hess-23-2339-2019](https://doi.org/10.5194/hess-23-2339-2019).
- De Lavenne, A. & **V. Andréassian**. 2018. Impact of climate seasonality on catchment yield: a parameterization for commonly-used water balance formulas. *Journal of Hydrology*, 558, 266–274, [doi: 10.1016/j.jhydrol.2018.01.009](https://doi.org/10.1016/j.jhydrol.2018.01.009).
- Andréassian, V.**, Ü. Mander & T. Pae. 2016. The Budyko hypothesis before Budyko: The hydrological legacy of Evald Oldekop. *Journal of Hydrology*, 535: 386–391. [doi:10.1016/j.jhydrol.2016.02.002](https://doi.org/10.1016/j.jhydrol.2016.02.002).
- Andréassian, V.**, L. Coron, J. Lerat, and N. Le Moine. 2016. Climate elasticity of streamflow revisited – an elasticity index based on long-term hydrometeorological records. *Hydrology and Earth System Sciences*, 20, 4503–4524, [doi:10.5194/hess-20-4503-2016](https://doi.org/10.5194/hess-20-4503-2016)
- Coron L., **V. Andréassian**, C. Perrin, N. Le Moine. 2015. Graphical tools based on Turc-Budyko plots to detect changes in catchment behaviour. *Hydrological Sciences Journal*, 60(7-8): 1394-1407. [doi: 10.1080/02626667.2014.964245](https://doi.org/10.1080/02626667.2014.964245).
- Lebecherel, L., **V. Andréassian** & C. Perrin. 2013. On regionalizing the Turc-Mezentsev water balance formula. *Water Resources Research*, 49, [doi: 10.1002/2013WR013575](https://doi.org/10.1002/2013WR013575).

- Andréassian, V.**, & C. Perrin. 2012. On the ambiguous interpretation of the Turc-Budyko nondimensional graph. *Water Resources Research*, 48, W10601, [doi: 10.1029/2012WR012532](https://doi.org/10.1029/2012WR012532).
- Oudin, L., **Andréassian, V.**, Lerat, J., Michel, C. 2008. Has land cover a significant impact on mean annual streamflow? An international assessment using 1508 catchments. *Journal of Hydrology*, 357(3-4), 303-316. [DOI: 10.1016/j.jhydrol.2008.05.021](https://doi.org/10.1016/j.jhydrol.2008.05.021)
- Le Moine, N., **Andréassian, V.**, Perrin, C. & Michel, C. 2007. How can rainfall-runoff models handle intercatchment groundwater flows? Theoretical study based on 1040 French catchments. *Water Resources Research* 43(6), W06428, [doi: 10.1029/2006WR005608](https://doi.org/10.1029/2006WR005608).
- Mouelhi, S., Michel, C., Perrin, C. & **Andréassian, V.** 2006. Linking stream flow to rainfall at the annual time step: the Manabe bucket model revisited. *Journal of Hydrology*, 328, 283-296, [doi:10.1016/j.jhydrol.2005.12.022](https://doi.org/10.1016/j.jhydrol.2005.12.022).

3. Philosophical Issues in Hydrology

- Blöschl, G., ..., **V. Andréassian**, ..., C. Perrin, ..., M.-H. Ramos, ..., G. Thirel, ... et al. (2019) Twenty-three Unsolved Problems in Hydrology (UPH) – a community perspective, *Hydrological Sciences Journal*, [doi: 10.1080/02626667.2019.1620507](https://doi.org/10.1080/02626667.2019.1620507)
- Andréassian, V.**, J. Margat, G. Thirel & P. Hubert. 2015. What part of natural flow can be considered a 'water resource'? In: Cudennec, C; Demuth, S; Mishra, A; editors. Proceedings of the 11th Kovacs Colloquium on Hydrological Sciences and Water Security: Past, Present and Future. IAHS Publ. 366, p. 86-92, [doi:10.5194/piahs-366-86-2015](https://doi.org/10.5194/piahs-366-86-2015).
- Thirel G., **V. Andréassian**, C. Perrin. 2015. Editorial: On the need to test hydrological models under changing conditions, *Hydrological Sciences Journal*, 60(7-8): 1165-1173, [doi: 10.1080/02626667.2015.1050027](https://doi.org/10.1080/02626667.2015.1050027).
- Andréassian, V.**, F. Bourgin, L. Oudin, T. Mathevet, C. Perrin, J. Lerat, L. Coron, L. Berthet. 2014. Seeking genericity in the selection of parameter sets: impact on hydrological model efficiency. *Water Resources Research*, 50(10): 8356-8366, [doi: 10.1002/2013WR014761](https://doi.org/10.1002/2013WR014761).
- Gupta, H.V., C. Perrin, R. Kumar, G. Blöschl, M. Clark, A. Montanari, and **V. Andréassian**. 2014. Large-sample hydrology: a need to balance depth with breadth. *Hydrology and Earth System Sciences*, 18, 463–477, [doi: 10.5194/hess-18-463-2014](https://doi.org/10.5194/hess-18-463-2014).
- Bennett, N., B. Croke, G. Guariso, J. Guillaume, S. Hamilton, A. Jakeman., S. Marsili-Libelli, L. Newhama, J. Norton, C. Perrin, S. Pierce, B. Robson, R. Seppelt, A. Voinov, B. Fath, **V. Andréassian**. 2013. Characterising performance of environmental models. *Environmental Modelling and Software*, 40: 1-20, [doi:10.1016/j.envsoft.2012.09.011](https://doi.org/10.1016/j.envsoft.2012.09.011).
- Andréassian, V.**, Le Moine, N., Perrin, C., Ramos, M.H., Oudin, L., Mathevet, T., Lerat, J., Berthet, L. 2012. All that glitters is not gold: the case of calibrating hydrological models. *Hydrological Processes*, vol. 26, p. 2206 – 2210. [doi:10.1002/hyp.9264](https://doi.org/10.1002/hyp.9264).
- Andréassian, V.**, Perrin, C., Parent, E. and Bardossy, A., 2010. Editorial – The Court of Miracles of Hydrology: can failure stories contribute to hydrological science? *Hydrological Sciences Journal*, 55(6): 849-856, [DOI: 10.1080/02626667.2010.506050](https://doi.org/10.1080/02626667.2010.506050).

- Oudin, L., A. Kay, **V. Andréassian**, and C. Perrin. 2010. Are seemingly physically similar catchments truly hydrologically similar? *Water Resources Research*, 46, W11558, [doi:10.1029/2009WR008887](https://doi.org/10.1029/2009WR008887)
- Andréassian, V.**, Perrin, C., Berthet, L., Le Moine, N., Lerat, J., Loumagne, C., Oudin, L., Mathevet, T., Ramos, M.H., Valéry, A. 2009. Crash tests for a standardized evaluation of hydrological models. *Hydrol. Earth. Syst. Sci.* 13, 1757-1764, [doi:10.5194/hess-13-1757-2009](https://doi.org/10.5194/hess-13-1757-2009).
- Andréassian, V.**, Le Moine, N., Mathevet, T., Lerat, J., Berthet, L., Perrin, C. 2009. The hunting of the hydrological snark. *Hydrological Processes* 23(4), 651-654. [doi: 10.1002/hyp.7217](https://doi.org/10.1002/hyp.7217).
- Andréassian, V.**, J. Lerat, C. Loumagne, T. Mathevet, C. Michel, L. Oudin, and C. Perrin. 2007. What is really undermining hydrologic science today?, *Hydrol. Processes*, 21, 2819-2822, [DOI: 10.1002/hyp.6854](https://doi.org/10.1002/hyp.6854).
- Andréassian, V.**, Hall, A., Chahinian, N. & Schaake, J., 2006. [Introduction and Synthesis: Why should hydrologists work on a large number of basin data sets?](#) IAHS Publication n°307, pp. 1-5.
- Michel, C., Perrin, C., **Andréassian, V.**, Oudin, L. & Mathevet, T., 2006. [Has basin scale modelling advanced far beyond empiricism ?](#), IAHS Publication n°307, pp. 108-116.
- Andréassian, V.**, Oddos, A., Michel, C., Anctil, F. and Perrin, C. 2004. Impact of spatial aggregation of inputs and parameters on the efficiency of rainfall-runoff models: a theoretical study using chimera watersheds. *Water Resources Research*, 40(5), W05209, [doi : 10.1029/2003WR002854](https://doi.org/10.1029/2003WR002854).
- Perrin, C., C. Michel et **V. Andréassian**, 2001. Does a large number of parameters enhance model performance? Comparative assessment of common catchment model structures on 429 catchments. *Journal of Hydrology*, 242 (3-4): 275-301, [doi: 10.1016/S0022-1694\(00\)00393-0](https://doi.org/10.1016/S0022-1694(00)00393-0).

4. Hydrology of Ungauged Basins

- Brigode, P., D. Lilas, **V. Andréassian**, P. Nicolle, N. Le Moine, C. Perrin, S. Gremminger et B. Augéard. 2019. Une cartographie de l'écoulement des rivières de Corse. *La Houille Blanche*, n°1, p. 68-77. [doi: 10.1051/lhb/2019009](https://doi.org/10.1051/lhb/2019009).
- De Lavenne, A. & **V. Andréassian**. 2018. Impact of climate seasonality on catchment yield: a parameterization for commonly-used water balance formulas. *Journal of Hydrology*, 558, 266–274, [doi: 10.1016/j.jhydrol.2018.01.009](https://doi.org/10.1016/j.jhydrol.2018.01.009).
- Poncelet, C., **V. Andréassian**, L. Oudin & C. Perrin. 2017. The Quantile Solidarity approach for the parsimonious regionalization of flow duration curves. *Hydrological Sciences Journal*, 62(9): 1364-1380, [doi: 10.1080/02626667.2017.1335399](https://doi.org/10.1080/02626667.2017.1335399).
- Rojas-Serna, C., L. Lebecherel, C. Perrin, **V. Andréassian** & L. Oudin. 2016. How should a rainfall-runoff model be parameterized in an almost ungauged catchment? A methodology tested on 609 catchments. *Water Resources Research*, 52(6): 4765-4784, [doi: 10.1002/2015WR018549](https://doi.org/10.1002/2015WR018549).

- Lebecherel, L., **V. Andréassian** & C. Perrin. 2016. On evaluating the robustness of spatial-proximity-based regionalization methods. *Journal of Hydrology*, 539: 196-203, [doi:10.1016/j.jhydrol.2016.05.031](https://doi.org/10.1016/j.jhydrol.2016.05.031).
- Bourgin, F., **V. Andréassian**, C. Perrin, and L. Oudin. 2015. Transferring model uncertainty estimates from gauged to ungauged catchments. *Hydrology and Earth System Sciences*, 19: 2535-2546, [doi:10.5194/hess-19-2535-2015](https://doi.org/10.5194/hess-19-2535-2015).
- Lebecherel, L., **V. Andréassian** & C. Perrin. 2013. On regionalizing the Turc-Mezentsev water balance formula. *Water Resources Research*, 49, [doi:10.1002/2013WR013575](https://doi.org/10.1002/2013WR013575). **Andréassian, V.**, Lerat, J., Le Moine, N. and Perrin, C. 2012. Neighbors: Nature's own hydrological models. *Journal of Hydrology*, 414-415: 49-58, [doi:10.1016/j.jhydrol.2011.10.007](https://doi.org/10.1016/j.jhydrol.2011.10.007).
- Boldetti, G., Riffard, M., **Andréassian, V.** and Oudin, L. 2010. Data-set cleansing practices and hydrological regionalization: is there any valuable information among outliers? *Hydrological Sciences Journal*, 55(6): 941-951. [DOI: 10.1080/02626667.2010.505171](https://doi.org/10.1080/02626667.2010.505171)
- Oudin, L., A. Kay, **V. Andréassian**, and C. Perrin. 2010. Are seemingly physically similar catchments truly hydrologically similar? *Water Resources Research*, 46, W11558, [doi:10.1029/2009WR008887](https://doi.org/10.1029/2009WR008887)
- Oudin, L., **Andréassian, V.**, Lerat, J., Michel, C. 2008. Has land cover a significant impact on mean annual streamflow? An international assessment using 1508 catchments. *Journal of Hydrology*, 357(3-4), 303-316. [DOI: 10.1016/j.jhydrol.2008.05.021](https://doi.org/10.1016/j.jhydrol.2008.05.021)
- Oudin, L., **V. Andréassian**, C. Perrin, C. Michel, and N. Le Moine. 2008. Spatial proximity, physical similarity and ungauged catchments: confrontation on 913 French catchments, *Water Resources Research*, 44, W03413, [doi:10.1029/2007WR006240](https://doi.org/10.1029/2007WR006240).
- Perrin, C., **V. Andréassian**, T. Mathevet, N. Le Moine. 2008. Discrete parameterization of hydrological models: evaluating the use of parameter sets libraries over 900 catchments. *Water Resources Research*, 44, W08447, [doi:10.1029/2007WR006579](https://doi.org/10.1029/2007WR006579).
- Oudin, L., **Andréassian, V.**, Rojas-Serna, C., Le Moine, N. & Michel, C. 2007. [Testing similarity indices to reduce predictive uncertainty in ungauged basins](#). In: E. Boegh et al. (Editors), Quantification and Reduction of Predictive Uncertainty for Sustainable Water Resources Management, IAHS Publication 313. IAHS Press, Wallingford, pp. 303-310.
- Oudin, L., **Andréassian, V.**, Loumagne, C. & Michel, C. 2006. [How informative is land-cover for the regionalization of the GR4J rainfall-runoff model?](#), IAHS Publication n°307, pp. 246-255.
- Rojas-Serna, C., C. Michel, C. Perrin & **V. Andréassian**. 2006. [Ungauged catchments: How to make the most of a few streamflow measurements?](#), IAHS Publication n°307, pp. 230-236.

5. Quantitative Evaluation of Hydrological models

- Mathevet, T., Gupta, H., Perrin, C., **Andréassian, V.**, Le Moine, N. 2020. Assessing the performance and robustness of two conceptual rainfall-runoff models on a worldwide

sample of watersheds, *Journal of Hydrology*, 585: 124698, <https://doi.org/10.1016/j.jhydrol.2020.124698>.

Crochemore, L., C. Perrin, **V. Andréassian**, U. Ehret, S.P. Seibert, S. Grimaldi, H. Gupta, J-E Paturel. 2015. Comparing expert judgement and numerical criteria for hydrograph evaluation. *Hydrological Sciences Journal*, 60 (3): 402-423, [doi: 10.1080/02626667.2014.903331](https://doi.org/10.1080/02626667.2014.903331).

Pushpalatha, R., Perrin, C., Le Moine, N. and **Andréassian, V.** 2012. A review of efficiency criteria suitable for evaluating low-flow simulations. *Journal of Hydrology*, 420-421: 171-182, [doi:10.1016/j.jhydrol.2011.11.055](https://doi.org/10.1016/j.jhydrol.2011.11.055).

Berthet, L., **Andréassian, V.**, Perrin, C. and Loumagne, C., 2010. How significant are quadratic criteria? Part 1. How many years are necessary to ensure the data-independence of a quadratic criterion value? *Hydrological Sciences Journal*, 55(6): 1051-1062. [DOI: 10.1080/02626667.2010.505890](https://doi.org/10.1080/02626667.2010.505890)

Berthet, L., **Andréassian, V.**, Perrin, C. and Loumagne, C., 2010. How significant are quadratic criteria? Part 2. On the relative contribution of large flood events to the value of a quadratic criterion. *Hydrological Sciences Journal*, 55(6): 1063-1073. [DOI: 10.1080/02626667.2010.505891](https://doi.org/10.1080/02626667.2010.505891)

Mathevet, T., Michel, C., **Andréassian, V.** & Perrin, C., 2006. [A bounded version of the Nash-Sutcliffe criterion for better model assessment on large sets of basins](#). IAHS Red Books Series n°307, pp. 211-219.

Perrin, C., **Andréassian, V.** & Michel, C. 2006. Simple benchmark models as a basis for criteria of model efficiency, [Archiv für Hydrobiologie Supplement 161/1-2, Large Rivers, 17\(1-2\)](#), 221-244.

Perrin, C., Dilks, C., Bärlund, I., Payan, J. L. & **Andréassian, V.** 2006. Use of simple rainfall-runoff models as a baseline for the benchmarking of the hydrological component of complex catchment models, [Archiv für Hydrobiologie Supplement 161/1-2, Large Rivers, 17\(1-2\)](#), 75-96.

6. Calibration of Hydrological Models

Andréassian, V., F. Bourgin, L. Oudin, T. Mathevet, C. Perrin, J. Lerat, L. Coron, L. Berthet. 2014. Seeking genericity in the selection of parameter sets: impact on hydrological model efficiency. *Water Resources Research*, 50(10): 8356-8366, [doi: 10.1002/2013WR014761](https://doi.org/10.1002/2013WR014761).

Andréassian, V., Le Moine, N., Perrin, C., Ramos, M.H., Oudin, L., Mathevet, T., Lerat, J., Berthet, L. 2012. All that glitters is not gold: the case of calibrating hydrological models. *Hydrological Processes*, vol. 26, p. 2206 – 2210. [doi:10.1002/hyp.9264](https://doi.org/10.1002/hyp.9264).

Lerat, J., **Andréassian, V.**, Perrin, C., Vaze, J., Perraud, J. M., Ribstein, P., Loumagne, C. 2012. Do internal flow measurements improve the calibration of rainfall-runoff models? *Water Resources Research*, Vol. 48, No. 2, W02511, [doi:10.1029/2010WR010179](https://doi.org/10.1029/2010WR010179)

Perrin, C., **V. Andréassian**, T. Mathevet, N. Le Moine. 2008. Discrete parameterization of hydrological models: evaluating the use of parameter sets libraries over 900 catchments. *Water Resources Research*, 44, W08447, [doi:10.1029/2007WR006579](https://doi.org/10.1029/2007WR006579).

7. Sensitivity Analysis of Hydrological Models

Ficchì, A. C. Perrin & **V. Andréassian**. 2016. Impact of temporal resolution of inputs on hydrological model performance: An analysis based on 2400 flood events. *Journal of Hydrology*, 538:454-470. [doi:10.1016/j.jhydrol.2016.04.016](https://doi.org/10.1016/j.jhydrol.2016.04.016)

Brigode P., E. Paquet, P. Bernardara, J. Gailhard, F. Garavaglia, P. Ribstein, F. Bourgin, C. Perrin, **V. Andréassian**. 2015. Dependence of model-based extreme flood estimation on the calibration period: the case study of the Kamp River (Austria), *Hydrological Sciences Journal*, 60(7-8): 1424-1437. [doi: 10.1080/02626667.2015.1006632](https://doi.org/10.1080/02626667.2015.1006632).

Lebecherel, L., **V. Andréassian**, C. Perrin & P. Maugis. 2014. Analyse de la sensibilité des calculs hydrologiques à la densité spatiale des réseaux hydrométriques. *La Houille Blanche*, n° 1, p. 39-44, [doi: 10.1051/lhb/2014006](https://doi.org/10.1051/lhb/2014006).

Lobligeois, F., **V. Andréassian**, C. Perrin, P. Tabary, & C. Loumagne. 2014. When does higher spatial resolution rainfall information improve streamflow simulation? An evaluation on 3620 flood events. *Hydrology and Earth System Sciences*, 18: 575-594, [doi: 10.5194/hess-18-575-2014](https://doi.org/10.5194/hess-18-575-2014).

Perrin, C., Oudin, L., **Andréassian, V.**, Rojas-Serna, C., Michel, C. & Mathevet, T., 2007. Impact of limited streamflow knowledge on the efficiency and the parameters of rainfall-runoff models. *Hydrological Sciences Journal* 52(1), 131-151, [DOI: 10.1623/hysj.52.1.131](https://doi.org/10.1623/hysj.52.1.131)

Oudin, L., Perrin, C., Mathevet, T., **Andréassian, V.** & Michel, C. 2006. Impact of biased and randomly corrupted inputs on the efficiency and the parameters of watershed models. *J. Hydrol.* 320, 62-83, [doi:10.1016/j.jhydrol.2005.07.016](https://doi.org/10.1016/j.jhydrol.2005.07.016).

Oudin, L., **Andréassian, V.**, Perrin, C., Anctil, F., 2004. Locating the sources of low-pass behaviour within rainfall-runoff models. *Water Resources Research* 40(11), [doi: 0.1029/2004WR003291](https://doi.org/10.1029/2004WR003291).

Anctil, F., Perrin, C. and **Andréassian, V.**, 2004. Impact of the length of observed records on the performance of ANN and of conceptual parsimonious rainfall-runoff forecasting models. *Environmental Modelling and Software*, 19(4): 357-368, [DOI: 10.1016/S1364-8152\(03\)00135-X](https://doi.org/10.1016/S1364-8152(03)00135-X).

Andréassian, V., Oddos, A., Michel, C., Anctil, F. and Perrin, C., 2004. Impact of spatial aggregation of inputs and parameters on the efficiency of rainfall-runoff models: a theoretical study using chimera watersheds. *Water Resources Research*, 40(5), W05209, [doi : 10.1029/2003WR002854](https://doi.org/10.1029/2003WR002854).

Andréassian, V., Perrin, C. and Michel, C., 2004. Impact of imperfect potential evapotranspiration knowledge on the efficiency and parameters of watershed models. *Journal of Hydrology*, 286 : 19-35, [DOI: 10.1016/j.jhydrol.2003.09.030](https://doi.org/10.1016/j.jhydrol.2003.09.030).

Andréassian, V., C. Perrin, C. Michel, I. Usart-Sanchez et J. Lavabre, 2001. Impact of Imperfect Rainfall Knowledge on the Efficiency and the Parameters of Watershed Models. *Journal of Hydrology*, 250 (1-4): 206-223, [doi: 10.1016/S0022-1694\(01\)00437-1](https://doi.org/10.1016/S0022-1694(01)00437-1).

Andréassian, V., C. Perrin, C. Michel, I. Usart-Sanchez et J. Lavabre, 2001. Impact of Imperfect Rainfall Knowledge on the Efficiency and the Parameters of Watershed Models. *Journal of Hydrology*, 250 (1-4): 206-223, [doi: 10.1016/S0022-1694\(01\)00437-1](https://doi.org/10.1016/S0022-1694(01)00437-1)

8. Rainfall Input to Hydrological Models

Ficchi, A. C. Perrin & **V. Andréassian**. 2016. Impact of temporal resolution of inputs on hydrological model performance: An analysis based on 2400 flood events. *Journal of Hydrology*, 538:454-470. [doi:10.1016/j.jhydrol.2016.04.016](https://doi.org/10.1016/j.jhydrol.2016.04.016)

Lobligeois, F., **V. Andréassian**, C. Perrin, P. Tabary, & C. Loumagne. 2014. When does higher spatial resolution rainfall information improve streamflow simulation? An evaluation on 3620 flood events. *Hydrology and Earth System Sciences*, 18: 575-594, [doi: 10.5194/hess-18-575-2014](https://doi.org/10.5194/hess-18-575-2014).

Ancil, F., Lauzon, N., **Andréassian, V.**, Oudin, L. & Perrin, C. (2006) Improvement of rainfall-runoff forecasts through mean areal rainfall optimization. *J. Hydrol.*, [doi:10.1016/j.jhydrol.2006.01.016](https://doi.org/10.1016/j.jhydrol.2006.01.016).

Andréassian, V., C. Perrin, C. Michel, I. Usart-Sanchez et J. Lavabre, 2001. Impact of Imperfect Rainfall Knowledge on the Efficiency and the Parameters of Watershed Models. *Journal of Hydrology*, 250 (1-4): 206-223, [doi: 10.1016/S0022-1694\(01\)00437-1](https://doi.org/10.1016/S0022-1694(01)00437-1).

9. Snow Hydrology and High Mountains

Valéry, A., **V. Andréassian** and C. Perrin. 2014. As simple as possible but not simpler: what is useful in a temperature-based snow-accounting routine? Part 1 - Comparison of six snow accounting routines on 380 catchments. *Journal of Hydrology*, 517: 1166-1175, [doi: 10.1016/j.jhydrol.2014.04.059](https://doi.org/10.1016/j.jhydrol.2014.04.059).

Valéry, A., **V. Andréassian** and C. Perrin. 2014. As simple as possible but not simpler: what is useful in a temperature-based snow-accounting routine? Part 2 - Sensitivity analysis of the Cemaneige snow accounting routine on 380 catchments. *Journal of Hydrology*, 517: 1176-1187, [doi: 10.1016/j.jhydrol.2014.04.058](https://doi.org/10.1016/j.jhydrol.2014.04.058).

Pokhrel, B. K., P. Chevallier, **V. Andréassian**, A. A. Tahir, Y. Arnaud, L. Neppel, O. R. Bajracharya, K. P. Budhathoki. 2014. Comparison of two snowmelt modelling approaches in the Dudh Koshi Basin (Eastern Himalayas, Nepal), *Hydrological Sciences Journal*, 59(8): 1507-1518, [doi: 10.1080/02626667.2013.842282](https://doi.org/10.1080/02626667.2013.842282).

Bourgin, P.-Y., **V. Andréassian**, S. Gascoin & A. Valéry. 2012. Que sait-on des précipitations en altitude dans les Andes semi-arides du Chili ? *La Houille Blanche*(2): 12-17, <http://dx.doi.org/10.1051/lhb/2012010>.

Nicolle, P., Valéry, A., Ramos, M.H., Perrin, C. and **Andréassian, V.** 2012. Mieux prévoir les crues nivales : évaluation de prévisions probabilistes de débit sur des bassins versants de montagne français. *La Houille Blanche* (2): 26-33, [doi: 10.1051/lhb/2012012](https://doi.org/10.1051/lhb/2012012).

Valéry, A., **Andréassian, V.** and Perrin, C., 2010. Regionalization of precipitation and air temperature over high-altitude catchments – learning from outliers. *Hydrological Sciences Journal*, 55(6): 928-940. [DOI: 10.1080/02626667.2010.504676](https://doi.org/10.1080/02626667.2010.504676)

Valéry, A., **Andréassian, V.** and Perrin, C., 2009. [Inverting the hydrological cycle: when streamflow measurements help assess altitudinal precipitation gradients in mountain areas](#). IAHS-AISH Publication 333: 281-286.

10. Hydrology and Uncertainties

Bourgin, F., **V. Andréassian**, C. Perrin, and L. Oudin. 2015. Transferring model uncertainty estimates from gauged to ungauged catchments. *Hydrology and Earth System Sciences*, 19: 2535-2546, [doi:10.5194/hess-19-2535-2015](https://doi.org/10.5194/hess-19-2535-2015).

11. Low Flows Simulation and Forecasting

Perrin, C., Ramos, M.-H., **Andréassian, V.**, Nicolle, P., Crochemore, L. & R. Pushpalatha. 2015. Improved rainfall-runoff modelling tools for low-flow forecasting: application to French catchments. In : Andreu J., A. Solera, J. Paredes-Arquiola, D. Haro-Monteagudo, H. van Lanen (2015). Drought: Research and Science-Policy Interfacing: Taylor and Francis, London, p. 259-265.

Nicolle, P., R. Pushpalatha, C. Perrin, D. Francois, D. Thiéry, T. Mathevet, M. Le Lay, F. Besson, J.-M. Soubeyroux, C. Viel, F. Regimbeau, **V. Andréassian**, P. Maugis, B. Augéard, and E. Morice. 2014. Benchmarking hydrological models for low-flow simulation and forecasting on French catchments. *Hydrology and Earth System Sciences*, 18: 2829-2857, [doi: 10.5194/hess-18-2829-2014](https://doi.org/10.5194/hess-18-2829-2014).

Pushpalatha, R., Perrin, C., Le Moine, N., Mathevet, T. and **Andréassian, V.**, 2011. A downward structural sensitivity analysis of hydrological models to improve low-flow simulation. *Journal of Hydrology*, 411(1-2): 66-76, [doi:10.1016/j.jhydrol.2011.09.034](https://doi.org/10.1016/j.jhydrol.2011.09.034).

12. Evapotranspiration Input to Hydrological Models

Oudin, L., Hervieu, F., Michel, C., Perrin, C., **Andréassian, V.**, Anctil, F. & Loumagne, C. (2005) Which potential evapotranspiration input for a rainfall-runoff model? Part 2 – Towards a simple and efficient PE model for rainfall-runoff modelling. *Journal of Hydrology*,. 303(1-4), 290-306, [DOI: 10.1016/j.jhydrol.2004.08.026](https://doi.org/10.1016/j.jhydrol.2004.08.026).

Oudin, L., Michel, C., **Andréassian, V.**, Anctil, F. & Loumagne, C. (2005) Should Bouchet's hypothesis be taken into account in rainfall-runoff modelling? An assessment over 308 catchments. *Hydrological Processes*, 19(20): 4093-4106, [DOI: 10.1002/hyp.5874](https://doi.org/10.1002/hyp.5874).

Andréassian, V., Perrin, C. and Michel, C., 2004. Impact of imperfect potential evapotranspiration knowledge on the efficiency and parameters of watershed models. *Journal of Hydrology*, 286 : 19-35, [DOI: 10.1016/j.jhydrol.2003.09.030](https://doi.org/10.1016/j.jhydrol.2003.09.030).

13. Intercatchment Groundwater Flows

Le Moine, N., **V. Andréassian**, T. Mathevet (2008), Confronting surface- and groundwater balances on the La Rochefoucauld-Touvre karstic system (Charente, France), *Water Resources Research*, 44, W03403, [doi:10.1029/2007WR005984](https://doi.org/10.1029/2007WR005984).

Le Moine, N., **Andréassian, V.**, Perrin, C. & Michel, C., 2007. How can rainfall-runoff models handle intercatchment groundwater flows? Theoretical study based on 1040 French catchments. *Water Resources Research* 43(6), W06428, [doi: 10.1029/2006WR005608](https://doi.org/10.1029/2006WR005608).

14. Hydrological Models: Lumping and Distribution

de Lavenne, A., G. Thirel, **V. Andréassian**, C. Perrin & M.H. Ramos. 2016. Spatial variability of the parameters of a semi-distributed hydrological model. Proc. IAHS, 373, 87–94, [doi:10.5194/piahs-373-87-2016](https://doi.org/10.5194/piahs-373-87-2016).

Lobligeois, F., **V. Andréassian**, C. Perrin, P. Tabary, & C. Loumagne. 2014. When does higher spatial resolution rainfall information improve streamflow simulation? An evaluation on 3620 flood events. *Hydrology and Earth System Sciences*, 18: 575-594, [doi: 10.5194/hess-18-575-2014](https://doi.org/10.5194/hess-18-575-2014).

Lerat, J., **Andréassian, V.**, Perrin, C., Vaze, J., Perraud, J. M., Ribstein, P., Loumagne, C. 2012. Do internal flow measurements improve the calibration of rainfall-runoff models? *Water Resources Research*, Vol. 48, No. 2, W02511, [doi:10.1029/2010WR010179](https://doi.org/10.1029/2010WR010179)

Andréassian, V., Oddos, A., Michel, C., Anctil, F. and Perrin, C., 2004. Impact of spatial aggregation of inputs and parameters on the efficiency of rainfall-runoff models: a theoretical study using chimera watersheds. *Water Resources Research*, 40(5), W05209, [doi : 10.1029/2003WR002854](https://doi.org/10.1029/2003WR002854).

15. Flood Forecasting & Model Updating

Furusho, C., C. Perrin, J. Viatgé, R. Lamblin & **V. Andréassian**. 2016. Synergies entre acteurs opérationnels et scientifiques au service de l'amélioration de la prévision des crues. *La Houille Blanche*, n° 4 (5-10), [doi 10.1051/lhb/2016033](https://doi.org/10.1051/lhb/2016033).

Bourgin, F., M.H. Ramos, G. Thirel and **V. Andréassian**. 2014. Investigating the interactions between data assimilation and post-processing in hydrological ensemble forecasting. *Journal of Hydrology*, 519: 2775-2784. [doi: 10.1016/j.jhydrol.2014.07.054](https://doi.org/10.1016/j.jhydrol.2014.07.054).

Nicolle, P., Valéry, A., Ramos, M.H., Perrin, C. and **Andréassian, V.** 2012. Mieux prévoir les crues nivales : évaluation de prévisions probabilistes de débit sur des bassins versants de montagne français. *La Houille Blanche* (2): 26-33, [doi: 10.1051/lhb/2012012](https://doi.org/10.1051/lhb/2012012).

Randrianasolo, A., Ramos, M.H., **Andréassian, V.** 2011. Hydrological ensemble forecasting at ungauged basins: using neighbour catchments for model setup and updating. *Advances in Geosciences*, 29: 1-11, [doi:10.5194/adgeo-29-1-2011](https://doi.org/10.5194/adgeo-29-1-2011).

- Lacaze, Y., Chesneau, S., Raimbault, E., Piotte, O., Silva, J.P., Perrin, C., **Andréassian, V.**, Berthet, L., Coron, L. and Fortier-Filion, T.C., 2011. Les modèles de prévision opérationnels d'aujourd'hui auraient-ils été fiables sur la crue de 1910 ? Analyse rétrospective critique sur une base de données de 1910. *La Houille Blanche*, 1: 22-29, [DOI: 10.1051/lhb/2011002](https://doi.org/10.1051/lhb/2011002).
- Randrianasolo, A., Ramos, M.H., Thirel, G., **Andréassian, V.**, Martin, E. 2010. Comparing the scores of hydrological ensemble forecasts issued by two different hydrological models. *Atmospheric Science Letters*, 11: 100-107, [DOI: 10.1002/asl.259](https://doi.org/10.1002/asl.259).
- Berthet, L., **Andréassian, V.**, Perrin, C., Javelle, P. 2009. How crucial is it to account for the antecedent moisture conditions in flood forecasting? Comparison of event-based and continuous approaches on 178 catchments. *Hydrology and Earth System Sciences* 13(6), 819–831, [doi:10.5194/hess-13-819-2009](https://doi.org/10.5194/hess-13-819-2009).
- Ancil, F., Michel, C., Perrin, C. and **Andréassian, V.** 2004. A soil moisture index as an auxiliary ANN input for stream flow forecasting. *Journal of Hydrology*, 286 : 155-167, [DOI: 10.1016/j.jhydrol.2003.09.006](https://doi.org/10.1016/j.jhydrol.2003.09.006).
- Ancil, F., Perrin, C. and **Andréassian, V.**, 2003. ANN output updating of lumped conceptual rainfall-runoff forecasting models. *Journal of the American Water Resources Association*, 39(5): 1269-1280, [doi: 10.1111/j.1752-1688.2003.tb03708.x](https://doi.org/10.1111/j.1752-1688.2003.tb03708.x).

16. Inundation Modeling

- Rebolho, C., **V. Andréassian** & N. Le Moine. Inundation mapping based on reach-scale effective geometry. *Hydrology and Earth System Sciences*, 22, 5967–5985, [doi: 10.5194/hess-22-5967-2018](https://doi.org/10.5194/hess-22-5967-2018).

17. Forest Hydrology

- Folton, N., **V. Andréassian**, R. Duperray. 2015. Hydrological impact of forest-fire from paired-catchment and rainfall–runoff modelling perspectives, *Hydrological Sciences Journal*, 60(7-8): 1213-1224. [doi: 10.1080/02626667.2015.1035274](https://doi.org/10.1080/02626667.2015.1035274).

Andréassian, V., 2012. **Visualising** the hydrological signature of an unsteady land cover – an application to deforested and afforested catchments in Australia, the USA and France. *IAHS Publ.* 353: 125-134.

- Oudin, L., **Andréassian, V.**, Lerat, J., Michel, C. 2008. Has land cover a significant impact on mean annual streamflow? An international assessment using 1508 catchments. *Journal of Hydrology*, 357(3-4), 303-316. [DOI: 10.1016/j.jhydrol.2008.05.021](https://doi.org/10.1016/j.jhydrol.2008.05.021)

- Cosandey, C., **V. Andréassian**, C. Martin, J.-F. Didon-Lescot, J. Lavabre, N. Folton, N. Mathys, and D. Richard, 2005. The hydrological impact of the Mediterranean forest: a review of French research. *Journal of Hydrology*, 301(1-4): 235-249, [DOI: 10.1016/j.jhydrol.2004.06.040](https://doi.org/10.1016/j.jhydrol.2004.06.040).

- Andréassian, V.**, 2004. Couvert forestier et comportement hydrologique des bassins versants. *La Houille Blanche*, n°2, 31-35, [DOI: 10.1051/lhb:200402002](https://doi.org/10.1051/lhb:200402002).
- Andréassian, V.**, 2004. Waters and Forests: from historical controversy to scientific debate. *Journal of Hydrology*, 291(1-2): 1-27, [DOI: 10.1016/j.jhydrol.2003.12.015](https://doi.org/10.1016/j.jhydrol.2003.12.015).
- Andréassian, V.**, Parent, E., and Michel, C., 2003. A distribution-free test to detect gradual changes in watershed behavior. *Water Resources Research*, 39(9): 1252, [doi : 10.1029/2003WR002081](https://doi.org/10.1029/2003WR002081).
- Andréassian, V.** and Lavabre, J., 2002. Relations entre le couvert forestier et le comportement hydrologique à l'échelle du bassin versant. *Comptes Rendus de l'Académie d'Agriculture de France*, 88(7): 97-98.
- Lavabre, J., **V. Andréassian**, et O. Laroussinie, 2002. Les eaux et les forêts. La forêt : un outil de gestion des eaux? *La Houille Blanche*, n°3 : 72-77, [doi: 10.1051/lhb/2002047](https://doi.org/10.1051/lhb/2002047).
- Andréassian, V.**, M. Tangara et J. Muraz, 2001. Evaluer l'impact de l'évolution du couvert forestier sur le comportement hydrologique des bassins versants : méthodologie et premiers résultats fondés sur les données de l'IFN. *Revue Forestière Française*, LIII (3-4): 475-480.
- Lavabre, J. & **V. Andréassian**, 2000. Eaux et forêts. La forêt : un outil de gestion des eaux ? Cemagref, Antony. 147 p.

18. Climatic Variability, Climate Change, Changing Catchments & Model Extrapolation Capacity

- Andréassian, V.**, L. Coron, J. Lerat, and N. Le Moine. 2016. Climate elasticity of streamflow revisited – an elasticity index based on long-term hydrometeorological records. *Hydrology and Earth System Sciences*, 20, 4503–4524, [doi:10.5194/hess-20-4503-2016](https://doi.org/10.5194/hess-20-4503-2016)
- Brigode P., E. Paquet, P. Bernardara, J. Gailhard, F. Garavaglia, P. Ribstein, F. Bourgin, C. Perrin, **V. Andréassian**. 2015. Dependence of model-based extreme flood estimation on the calibration period: the case study of the Kamp River (Austria), *Hydrological Sciences Journal*, 60(7-8): 1424-1437. [doi: 10.1080/02626667.2015.1006632](https://doi.org/10.1080/02626667.2015.1006632).
- Coron L., **V. Andréassian**, C. Perrin, N. Le Moine. 2015. Graphical tools based on Turc-Budyko plots to detect changes in catchment behaviour. *Hydrological Sciences Journal*, 60(7-8): 1394-1407. [doi: 10.1080/02626667.2014.964245](https://doi.org/10.1080/02626667.2014.964245).
- Thirel G., **V. Andréassian**, C. Perrin. 2015. Editorial: On the need to test hydrological models under changing conditions, *Hydrological Sciences Journal*, 60(7-8): 1165-1173, [doi: 10.1080/02626667.2015.1050027](https://doi.org/10.1080/02626667.2015.1050027).
- Folton, N., **V. Andréassian**, R. Duperray. 2015. Hydrological impact of forest-fire from paired-catchment and rainfall–runoff modelling perspectives, *Hydrological Sciences Journal*, 60(7-8): 1213-1224. [doi: 10.1080/02626667.2015.1035274](https://doi.org/10.1080/02626667.2015.1035274).
- Kuentz, A., T. Mathevet, D. Cœur, C. Perret, J. Gailhard, L. Guérin, Y. Gash & **V. Andréassian**. 2014. Hydrométrie et hydrologie historiques du bassin de la Durance. *La Houille Blanche*, 4: 57-63. [doi: 10.1051/lhb/2014039](https://doi.org/10.1051/lhb/2014039).

- Coron, L., **V. Andréassian**, C. Perrin, M. Bourqui, and F. Hendrickx. 2014. On the lack of robustness of hydrologic models regarding water balance simulation – a diagnostic approach on 20 mountainous catchments using three models of increasing complexity. *Hydrology and Earth System Sciences*, 18: 727-746, [doi: 10.5194/hess-18-727-2014](https://doi.org/10.5194/hess-18-727-2014).
- Kuentz, A., T. Mathevet, J. Gailhard, C. Perret & **V. Andréassian**. 2013. Over 100 years of climatic and hydrologic variability of a Mediterranean and mountainous watershed: the Durance River. *IAHS Publ. 360*: 19-25.
- Refsgaard J.C., H. Madsen, **V. Andréassian**, K. Arnbjerg-Nielsen, T.A. Davidson, M. Drews, D.P. Hamilton, E. Jeppesen, E. Kjellström, J.E. Olesen, T.O. Sonnenborg, D. Trolle, P. Willems, J.H. Christensen. 2013. A framework for testing the ability of models to project climate change and its impacts. *Climatic Change*, 122(1-2): 271-282. [doi:10.1007/s10584-013-0990-2](https://doi.org/10.1007/s10584-013-0990-2).
- Andréassian, V.**, 2012. **Visualising** the hydrological signature of an unsteady land cover – an application to deforested and afforested catchments in Australia, the USA and France. *IAHS Publ. 353*: 125-134.
- Coron, L., **V. Andréassian**, C. Perrin, J. Lerat, J. Vaze, M. Bourqui, and F. Hendrickx, 2012. Crash testing hydrological models in contrasted climate conditions: An experiment on 216 Australian catchments, *Water Resources Research*, 48, [W05552](https://doi.org/10.1029/2011WR011721), [doi:10.1029/2011WR011721](https://doi.org/10.1029/2011WR011721)
- Coron, L., **Andréassian, V.**, Bourqui, M., Perrin, C. and Hendrickx, F., 2011. Pathologies of hydrological models used in changing climatic conditions: a review, *Hydro-Climatology: Variability and Change. IAHS Publication. 344*, pp. 39-44.
- Le Moine, N., **Andréassian, V.**, Perrin, C. & Michel, C., 2007. [‘Outlier’ catchments: what can we learn from them in terms of prediction uncertainty in rainfall-runoff modelling?](#) In: E. Boegh et al. (Editors), *Quantification and Reduction of Predictive Uncertainty for Sustainable Water Resources Management*, IAHS Publication 313. IAHS Press, Wallingford, pp. 195-203.
- Andréassian, V.**, Parent, E., and Michel, C., 2003. A distribution-free test to detect gradual changes in watershed behavior. *Water Resources Research*, 39(9): 1252, [doi : 10.1029/2003WR002081](https://doi.org/10.1029/2003WR002081).

19. Smart Tricks for Hydrological Modelling

- Pelletier, A., & **V. Andréassian**. 2020. Hydrograph separation: an impartial parameterisation for an imperfect method. *Hydrology and Earth System Sciences*, 24, 1171–1187, <https://doi.org/10.5194/hess-24-1171-2020>.
- Nicolle, P., **V. Andréassian** & E. Sauquet. 2013. Blending neighbor-based and climate-based information to obtain robust low-flow estimates from short time series. *Water Resources Research*, 49, [doi:10.1002/2012WR012940](https://doi.org/10.1002/2012WR012940).
- Payan, J. L., C. Perrin, **V. Andréassian**, C. Michel 2008. How can man-made water reservoirs be accounted for in a lumped rainfall-runoff model? *Water Resources Research*, 44, W03420, [doi:10.1029/2007WR005971](https://doi.org/10.1029/2007WR005971).

- Oudin, L., **Andréassian, V.**, Mathevet, T., Perrin, C. & Michel, C. 2006. Dynamic averaging of rainfall-runoff model simulations from complementary model parameterizations, *Water Resources Research*, 42(7), W07410, [doi:10.1029/2005WR004636](https://doi.org/10.1029/2005WR004636).
- Moulin, L., Perrin, C., Michel, C. & **Andréassian, V.** 2005. Prise en compte de barrages-réservoirs dans un modèle pluie-débit global : application au cas du bassin de la Seine amont (Taking into account water storage data in a lumped rainfall-runoff model: case study on the Seine basin). *La Houille Blanche*, 5, 79-87, [DOI: 10.1051/lhb:200505008](https://doi.org/10.1051/lhb:200505008).
- Michel, C., **Andréassian, V.** & Perrin, C. 2005. Soil Conservation Service Curve Number method: How to mend a wrong soil moisture accounting procedure? *Water Resources Research*, 41, W02011, [doi:10.1029/2004WR003191](https://doi.org/10.1029/2004WR003191).
- Michel, C., Perrin, C. and **Andréassian, V.**, 2003. The exponential store: a correct formulation for rainfall-runoff modelling. *Hydrological Sciences Journal*, 48(1): 109-124, [DOI: 10.1623/hysj.48.1.109.43484](https://doi.org/10.1623/hysj.48.1.109.43484).

20. Model Comparisons

- Thirel, G., **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](https://doi.org/10.1080/02626667.2014.967248).
- Smith, M., Koren, V., Zhang, Z., Moreda, F., Cui, Z., Cosgrove, B., Mizukami, N., Kitzmiller, D., Ding, F., Reed, S., Anderson, E., Schaake, J., Zhang, Y., **Andréassian, V.**, Perrin, C., Coron, L., Valéry, A., Khakbaz, B., Sorooshian, S., Behrangi, A., Imam, B., Hsu, K-L., Todini, E., Coccia, G., Mazzetti, C., Andres, E.O., Francés, F., Orozco, I., Hartman, R., Henkel, A., Fickenscher, P., Staggs, S. 2013. The Distributed Model Intercomparison Project - Phase 2: Experiment Design and Summary Results of the Western Basin Experiments, *Journal of Hydrology*, 507:300-329. [doi:10.1016/j.jhydrol.2013.08.040](https://doi.org/10.1016/j.jhydrol.2013.08.040).
- Andréassian, V.**, Bergstrom, S., Chahinian, N., Duan, Q., Gusev, Y.M., Littlewood, I., Mathevet, T., Michel, C., Montanari, A., Moretti, G., Moussa, R., Nasonova, O.N., O'Connor, K.M., Paquet, E., Perrin, C., Rousseau, A., Schaake, J., Wagener, T. & Xie, Z., 2006. [Catalogue of the models used in MOPEX 2004/2005](#). IAHS Publication n°307, pp. 41-93.
- Chahinian, N., **Andréassian, V.**, Duan, Q., Fortin, V., Gupta, H., Hogue, T., Mathevet, T., Montanari, A., Moretti, G., Moussa, R., Perrin, C., Schaake, J., Wagener, T. & Xie, Z., 2006. [Compilation of the MOPEX 2004 results](#). IAHS Publication n°307, 313-338.
- Chahinian, N., Mathevet, T., Habets, F. & **Andréassian, V.**, 2006. [The MOPEX 2004 French database: main hydrological and morphological characteristics](#), IAHS Publication n°307, pp. 29-40.
- Duan, Q., Schaake, J., **Andréassian, V.**, Franks, S., Goteti, G., Gupta, H.V., Gusev, Y.M., Habets, F., Hall, A., Hay, L., Hogue, T., Huang, M., Leavesley, G., Liang, X., Nasonova, O.N., Noilhan, J., Oudin, L., Sorooshian, S., Wagener, T. & Wood, E.F., 2006. Model Parameter Estimation Experiment (MOPEX): An overview of science

strategy and major results from the second and third workshops. *Journal of Hydrology*, 320(1-2), 3-17, [DOI: 10.1016/j.jhydrol.2005.07.031](https://doi.org/10.1016/j.jhydrol.2005.07.031).

Wagener, T., Hogue, T., Schaake, J., Duan, Q., Gupta, H., **Andréassian, V.**, Hall, A. & Leavesley, G., 2006. [The Model Parameter Experiment \(MOPEX\): its structure, connection to other international initiatives and future directions](#). IAHS Publication n°307, 339-346.

21. Model Coupling

Lerat, J., Perrin, C., **Andréassian, V.**, Loumagne, C., Ribstein, P. 2012. Towards robust methods to couple lumped rainfall-runoff models and hydraulic models: A sensitivity analysis on the Illinois River. *Journal of Hydrology*, Vol. 418-419, 123-135, [doi:10.1016/j.jhydrol.2009.09.019](https://doi.org/10.1016/j.jhydrol.2009.09.019)

22. Water Resources

Andréassian, V., J. Margat, G. Thirel & P. Hubert. 2015. What part of natural flow can be considered a 'water resource'? In: Cudennec, C; Demuth, S; Mishra, A; editors. Proceedings of the 11th Kovacs Colloquium on Hydrological Sciences and Water Security: Past, Present and Future. IAHS Publ. 366. Pages: 86-92.

Andréassian, V. 2015. L'eau : milieu et ressource. In : Euzen, A., C. Jeandel et R. Mosseri. L'eau à découvert. CNRS Editions, Paris, p 142-143.

Andréassian, V. & J. Margat. 2014. Allons-nous manquer d'eau ? Editions le Pommier, 128 p.

Andréassian, V. & J. Margat. 2012. Rivières et Rivaux – les frontières de l'eau. Editions Quae, 136 p.

Margat, J. & **V. Andréassian**. 2008. L'eau, idées reçues. Editions le Cavalier Bleu, 125 p.

23. Water Quality Modelling

Meybeck, M., Idlafkih, Z., Fauchon, N. and **Andréassian, V.**, 1999. Spatial and temporal variability of Total Suspended Solids in the Seine Basin. *Hydrobiologia*, 410: 295-306, [DOI: 10.1023/A:1003712032230](https://doi.org/10.1023/A:1003712032230).

Tunqui Neira, J.M., **V. Andréassian**, G. Tallec & J.M. Mouchel. 2020. A two-sided affine power scaling relationship to represent the concentration–discharge relationship; *Hydrology and Earth System Sciences*, 24, 1823–1830. <https://doi.org/10.5194/hess-24-1823-2020>.

24. Satellite Rainfall

Brochart, D. & V. **Andréassian**. 2015. Correction des estimations des pluies par satellite pour les bassins versants de Guyane française. *Bull. Séanc. Acad. R. Sci. Outre-Mer*, 60 (2014-2): 361-370.

25. Hydrological Maps

Brigode, P., D. Lilas, **V. Andréassian**, P. Nicolle, N. Le Moine, C. Perrin, S. Gremminger et B. Augeard. 2019. Une cartographie de l'écoulement des rivières de Corse. *LaHouille Blanche*, n°1, p. 68-77. [doi: 10.1051/lhb/2019009](https://doi.org/10.1051/lhb/2019009).

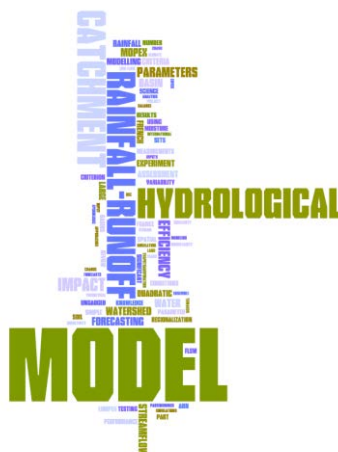
26. Other Topics

Archfield, S., M. Clark, B. Arheimer, L. Hay, H. McMillan, J. Kiang, J. Seibert, K. Hakala, A. Bock, T. Wagener, W. Farmer, **V. Andréassian**, S. Attinger, A. Viglione, R. Knight, S. Markstrom, T. Over. 2015. Accelerating advances in continental domain hydrologic modelling. *Water Resources Research*, 51(12): 10078–10091. [doi:10.1002/2015WR017498](https://doi.org/10.1002/2015WR017498).

Wasson, J.-G., Tusseau-Vuillemin, M.-H., **Andréassian, V.**, Perrin, C., Faure, J.-B., Barreteau, O., Bousquet, M. and Chastan, B., 2003. What kind of water models are needed for the implementation of the European Water Framework Directive? Examples from France. *International Journal of River Basin Management*, 1(2): 125-135, [doi: 10.1080/15715124.2003.9635199](https://doi.org/10.1080/15715124.2003.9635199).

27. For children

Andréassian, V. & J. Lerat, 2007. *Le surprenant cycle de l'eau*. Editions le Pommier, 59 p. (pour enfants)



Popular Science Books

- Lefèvre, D. & **V. Andréassian**, 2016. L'eau en péril ? [Water in peril]. Editions Quae, 168 p.
- Andréassian**, V. & J. Margat, 2014. Allons-nous manquer d'eau ? [Will we lack water? augmented edition] Editions le Pommier, 128 p.
- Andréassian**, V. & J. Margat, 2012. [Rivières et Rivaux – les frontières de l'eau](#). [Rivers and Rivals – the borders of water]. Editions Quae, 136 p.
- [Prix Charles Grad of the Société de Géographie (2012)]
 - [Prix Ptolémée of the Festival de Géographie de St Dié (2012)]
- Margat, J. and **V. Andréassian**, 2008. [L'eau, idées reçues](#) [Water, commonplace ideas]. Editions le Cavalier Bleu, Paris, 125 p.
- Andréassian**, V. and J. Lerat, 2007. [Le surprenant cycle de l'eau](#) [The amazing water cycle]. Editions le Pommier, Paris, 59 p. (for children)
- [Translated in Korean, *Dasan, Seoul, 2012*]
 - [Translated in Chinese: 2010]
 - [Translated in Spanish: *El sorprendente mundo del agua, Oniro, Barcelona, 2008*]
 - [Translated in Italian: *L'acqua... dal fiume al bicchiere, Dedalo, Bari, 2008*]
- Andréassian**, V. and J. Margat, 2005. [Allons-nous manquer d'eau ?](#) [Will we lack water?] Editions le Pommier, Paris, 59 p.
- [Translated in Korean: 2007]
- Andréassian**, V., 2005. [Pourquoi les rivières débordent-elles ?](#) [Why do river overtop their banks?] Editions le Pommier, Paris, 63 p.

Scientific Books

- Andréassian**, V., V. Sarkissian, W. Chelmicki, V. Al. Stănescu and R. Moussa, 2005. Dictionary of hydrological engineering: English, French, Armenian, Russian, Polish, Romanian, Arabic. Cemagref éditions, Antony. 214 p.
<http://www.cemagref.fr/webqgr/Download/LexiqueHydro.pdf>
- Lavabre, J. and **V. Andréassian**, 2000. Eaux et forêts. [La forêt : un outil de gestion des eaux ?](#) [Waters and Forests. Can forest be a water management tool?] Cemagref éditions, Antony. 147 p.

Popular science articles

- Margat, J. & **V. Andréassian**. 2010. L'eau a-t-elle un prix ? [Has water a price?] Analyse Financière n°26: 24-25.
- Andréassian**, V., & J. Margat 2010. Une ressource naturelle pas comme les autres. [Water: a different natural resource] Analyse Financière n°26: 20-21.
- Andréassian**, V. 2008. Quel effet la forêt a-t-elle sur les écoulements ? [What is the impact of forest on streamflow?] Dossier Pour la Science (L'eau. Attention fragile !) n°58: 38-41.
- Perrin, C. and **V. Andréassian**, 2008. Crues et inondations : phénomènes naturels sous surveillance. [Floods and inundations: natural phenomena] Dossier Pour la Science (L'eau. Attention fragile !) n°58: 48-50.
- Andréassian**, V. 2006. L'homme est-il responsable des inondations ? [Is man responsible for flooding?] Wapiti n° 235, p. 20-23. (for children)

Articles in technical journals

- Furusho, C., C. Perrin, R. Lamblin, D. Dorchies, L. Berthet, **V. Andréassian**. 2015. Dynamique de collaboration entre acteurs opérationnels et scientifiques pour une amélioration des systèmes de prévision des crues en France. *Sciences Eaux & Territoires*, 17: 49-45.
- Andréassian, V.**, J. Margat & G. de Marsily. 2009. Les ressources en eau. [Water resources] Dossier Spécial du BRGM '10 enjeux des géosciences', p. 76-89.
- Andréassian, V.** 2008. Quelles questions se pose-t-on encore au sujet du lien entre couvert forestier et hydrologie ? [Which questions remain on the link between forest cover and hydrology?] *RDV Techniques ONF*, n°22: 25-29.
- Hurand, A., and **Andréassian, V.**, 2003. Le couvert forestier et l'hydrologie des bassins versants. [Forest cover and catchment hydrology] *RDV Techniques ONF*, n°2: 37-40.

Publications in collective books

- Andréassian, V.**, 2015. L'eau : milieu et ressource. In : Euzen, A., C. Jeandel et R. Mosseri. *L'eau à découvert*. CNRS Editions, Paris, p 142-143.
- Margat, J. & **V. Andréassian**. Les ressources en eau sont inépuisables. In: Collectif, 2015. *Climat, environnement, énergies: 30 idées reçues pour démêler le vrai du faux*. Le Cavalier Bleu, Paris, p. 59-64.
- Margat, J. & **V. Andréassian**. Les problèmes de pollution des eaux vont croissant. In: Collectif, 2015. *Climat, environnement, énergies: 30 idées reçues pour démêler le vrai du faux*. Le Cavalier Bleu, Paris, p. 65-69.
- Perrin, C., Ramos, M.-H., **Andréassian, V.**, Nicolle, P., Crochemore, L. & R. Pushpalatha. 2015. Improved rainfall-runoff modelling tools for low-flow forecasting: application to French catchments. In : Andreu J., A. Solera, J. Paredes-Arquiola, D. Haro-Monteagudo, H. van Lanen (2015). *Drought: Research and Science-Policy Interfacing*: Taylor and Francis, London, p. 259-265.
- Lobligeois, F., **V. Andréassian**, C. Perrin, C. Loumagne. 2013. Réanalyse des lames d'eau radar pour la modélisation hydrologique pluie-débit. In : C. Loumagne & G. Tallec. *L'observation long terme en environnement. Exemple du bassin versant de l'Orgeval*. p. 39-62.
- Furusho, C., D. Lilas, C. Perrin, **V. Andréassian**, L. Coron, J. Peschard, L. Berthet, P. Ansart, C. Loumagne. 2013. Prévision des crues par modélisation hydrologique. In : C. Loumagne & G. Tallec. *L'observation long terme en environnement. Exemple du bassin versant de l'Orgeval*. p. 63-73.
- Nicolle, P., C. Perrin, **V. Andréassian**. 2013. Prévision des étiages. In : C. Loumagne & G. Tallec. *L'observation long terme en environnement. Exemple du bassin versant de l'Orgeval*. p 75-87.
- Aït-Mesbah, S., G. Tallec, C. Perrin, **V. Andréassian**. 2013. Analyse hydrométéorologique du bassin de l'Orgeval : tendance et stationnarité sur les 50 dernières années. In : C. Loumagne & G. Tallec. *L'observation long terme en environnement. Exemple du bassin versant de l'Orgeval*. P. 289-297.
- Margat, J. & **V. Andréassian**. 2010. L'homme est responsable de l'augmentation des inondations. In: Collectif, *Le Grand Livre des idées reçues*. Le Cavalier Bleu, Paris, p. 176-178.
- Perrin, C., C. Michel & **V. Andréassian**. 2010. A set of hydrological models. In: Tanguy, J.-M., editor. *Mathematical Models, Environmental Hydraulics series*, p. 493-509.

- Perrin, C., C. Michel & **V. Andréassian**. 2010. Familles de modèles en hydrologie. [Families of models in hydrology] In: Tanguy, J.-M., editor. *Traité d'hydraulique environnementale*, vol. 4. p. 335-353.
- [Valéry, A., Andréassian, V. & Perrin, C. 2009. Inverting the hydrological cycle: when streamflow measurements help assess altitudinal precipitation gradients in mountain areas. IAHS Publ. 333, p. 281-285.](#)
- Berthet, L., Ramos, M.-H., Perrin, C., **Andréassian, V.** & Loumagne, C. 2009. Can discharge assimilation methods be used to improve flood forecasting when few data are available? IAHS Publ. 333, p.
- Margat, J. & **V. Andréassian**. 2009. Les problèmes de pollution des eaux vont croissants. [Water pollution problems are increasing] In: Collectif, *Le Grand Livre des idées reçues*. Le Cavalier Bleu, Paris, p. 179-182.
- Margat, J. & **V. Andréassian**. 2008. Les pays riches gaspillent plus d'eau que les pays pauvres. [Rich countries waste more water than poor ones] In: Collectif, *Le Grand Livre des idées reçues*. Le Cavalier Bleu, Paris, p. 170-172.
- Margat, J. & **V. Andréassian**. 2008. L'eau sera un enjeu de conflits au XXIème siècle. [Water will be a matter of conflict in the 21st century] In: Collectif, *Le Grand Livre des idées reçues*. Le Cavalier Bleu, Paris, p. 244-248.
- Le Moine, N., **Andréassian, V.**, Perrin, C. and Michel, C., 2007. 'Outlier' catchments: what can we learn from them in terms of prediction uncertainty in rainfall-runoff modelling? In: E. Boegh et al. (Editors), *Quantification and Reduction of Predictive Uncertainty for Sustainable Water Resources Management*, IAHS Publication 313. IAHS Press, Wallingford, pp. 195-203.
- Oudin, L., **Andréassian, V.**, Rojas-Serna, C., Le Moine, N. and Michel, C., 2007. Testing similarity indices to reduce predictive uncertainty in ungauged basins. In: E. Boegh et al. (Editors), *Quantification and Reduction of Predictive Uncertainty for Sustainable Water Resources Management*, IAHS Publication 313. IAHS Press, Wallingford, pp. 303-310.
- Andréassian, V.**, A. Hall, N. Chahinian, J. Schaake (editors), 2006. Large sample basin experiments for hydrological model parameterization. IAHS (Red Book Series N°307), Wallingford. 347 p.
- Andréassian, V.**, S. Bergström, N. Chahinian, Q. Duan, I. Littlewood, T. Mathevet, C. Michel, A. Montanari, G. Moretti, R. Moussa, O. Nasonova, K. O'Connor, E. Paquet, C. Perrin, A. Rousseau, J. Schaake, T. Wagener, Z. Xie. 2006. Catalogue of the models used in MOPEX 2004/2005. In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), *Large sample basin experiments for hydrological model parameterization*. IAHS (Red Book Series N°307), Wallingford, p. 41-93.
- Chahinian, N., **V. Andréassian**, Q. Duan, V. Fortin, H. Gupta, T. Hogue, T. Mathevet, A. Montanari, G. Moretti, R. Moussa, C. Perrin, J. Schaake, T. Wagener, Z. Xie. 2006. Compilation of the MOPEX 2004 results. In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), *Large sample basin experiments for hydrological model parameterization*. IAHS (Red Book Series N°307), Wallingford, p. 313-338.
- Chahinian, N., T. Mathevet, F. Habets, **V. Andréassian**. 2006. The MOPEX 2004 French database: main hydrological and morphological characteristics. In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), *Large sample basin experiments for hydrological model parameterization*. IAHS (Red Book Series N°307), Wallingford, p. 29-40.
- Mathevet, T., C. Michel, **V. Andréassian**, C. Perrin. 2006. A bounded version of the Nash-Sutcliffe criterion for better model assessment on large sets of basins. In: Andréassian,

- V., A. Hall, N. Chahinian, J. Schaake (editors), Large sample basin experiments for hydrological model parameterization. IAHS (Red Book Series N°307), Wallingford, p. 211-219.
- Michel, C., C. Perrin, **V. Andréassian**, L. Oudin, T. Mathevet. 2006. Has basin-scale modelling advanced beyond empiricism? In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), Large sample basin experiments for hydrological model parameterization. IAHS (Red Book Series N°307), Wallingford, p. 108-116
- Oudin, L., **V. Andréassian**, C. Loumagne, C. Michel. 2006. How informative is land-cover for the regionalisation of the GR4J rainfall-runoff model? Lessons of a downward approach. In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), Large sample basin experiments for hydrological model parameterization. IAHS (Red Book Series N°307), Wallingford, p. 246-255.
- Rojas-Serna, C., C. Michel, C. Perrin, **V. Andréassian**. 2006. Ungauged catchments: How make the most of a few streamflow measurements? In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), Large sample basin experiments for hydrological model parameterization. IAHS (Red Book Series N°307), Wallingford, p. 230-236.
- Wagener, T., T. Hogue, J. Schaake, Q. Duan, H. Gupta, **V. Andréassian**, A. Hall, G. Leavesley. 2006. The Model Parameter Estimation Experiment (MOPEX): Its structure, connection to other international initiatives and future directions. In: Andréassian, V., A. Hall, N. Chahinian, J. Schaake (editors), Large sample basin experiments for hydrological model parameterization. IAHS (Red Book Series N°307), Wallingford, p. 339-346.
- Perrin, C., C. Michel & **V. Andréassian**, 2001. Long-term low flow forecasting for French rivers by continuous rainfall-runoff modelling. Meeting of the British Hydrological Society on Continuous River Flow Simulation, Wallingford, UK, 5th July 2001, Littlewood, I.G. (Ed.), BHS Occasional Paper n° 13: 21-29.
- Andréassian, V.** & E. Gaume, 1998. Comment les besoins en eau évolueront-ils? Prospective à l'horizon 2025. In: J. Margat and J.-R. Tiercelin, L'eau en questions. Romillat, Paris. pp 123-148.
- Meybeck, M., J.-M. Mouchel, Z. Idlafkih, **V. Andréassian** and S. Thibert, 1998. Transferts d'eau, de matières dissoute et particulaire dans le réseau fluvial. In: M. Meybeck, G. de Marsily and E. Fustec, La Seine en son bassin : fonctionnement écologique d'un système fluvial anthropisé. Elsevier, Paris. pp 345-389.

Theses

- **Andréassian, V.** 2005. [Three Riddles in Hydrological Modelling](#). Habilitation thesis, Université Pierre et Marie Curie, Paris, 154 pp.
- **Andréassian, V.** 2002. [Impact de l'évolution du couvert forestier sur le comportement hydrologique des bassins versants. \[Impact of forest cover changes on catchment-scale hydrological behavior\]](#) PhD thesis, Université Pierre et Marie Curie, Paris, 781 pp.
- **Andréassian, V.** 1992. Comparative Hydrology of Mediterranean shrublands. Master's thesis, University of Arizona, Tucson. 139 p.

Directed PhD theses

All manuscripts are accessible at: <https://webqr.inrae.fr/publications/theses/>

1. Soutiff--Bellenger, M. (in preparation, 2023)
2. Astagneau, P. (in preparation, 2022)
3. Pelletier, A. (in preparation, 2022)
4. Royer-Gaspard, P. (in preparation, 2020)
5. Rebolho, C., 2018. Modélisation conceptuelle de l'aléa inondation à l'échelle du bassin versant. Thèse de doctorat, Irstea (Antony), GRNE (Paris), 286 pp.
6. Ficchi, A., 2017. An adaptive hydrological model for multiple time-steps: Diagnostics and improvements based on fluxes consistency. Thèse de doctorat, Irstea (Antony), GRNE (Paris), 281 pp.
7. Poncelet, C., 2016. Du bassin au paramètre : jusqu'où peut-on régionaliser un modèle hydrologique conceptuel ? Thèse de doctorat, Irstea (Antony), GRNE (Paris), 366 pp.
8. Lebecherel, L., 2015. Sensibilité des calculs hydrologiques à la densité des réseaux de mesure hydrométrique et pluviométrique. Thèse de doctorat, Irstea (Antony), AgroParisTech (Paris), 280 pp.
9. Bourgin, F., 2014. Comment quantifier l'incertitude prédictive en modélisation hydrologique ? Travail exploratoire sur un grand échantillon de bassins versants. Thèse de Doctorat, Irstea (Antony), AgroParisTech (Paris), 230 pp.
10. Lobligeois, F., 2014. Mieux connaître la distribution spatiale des pluies améliore-t-il la modélisation des crues ? Diagnostic sur 181 bassins versants français. Thèse de Doctorat, Irstea (Antony), AgroParisTech (Paris), 312 pp.
11. Defrance, D., 2014. Adaptation et évaluation d'un système d'anticipation de crues éclair sur des bassins de montagne non-jaugés. Thèse de Doctorat, Irstea (Aix), UPMC (Paris), 230 pp.
12. Coron, L., 2013. Les modèles hydrologiques conceptuels sont-ils robustes face à un climat en évolution ? Thèse de doctorat, Irstea (Antony), AgroParisTech (Paris), 364 pp.
13. Pushpalatha, R., 2013. Simulation et prévision des étiages sur des bassins versants français : approche fondée sur la modélisation hydrologique. Thèse de Doctorat, Irstea (Antony), AgroParisTech (Paris), 230 pp.
14. Kuentz, A. 2013. Un siècle de variabilité hydro-climatique sur le bassin de la Durance : Recherches historiques et reconstitutions. Thèse de Doctorat, EDF (Grenoble), AgroParisTech (Paris), 230 pp.
15. Randrianasolo, A., 2012. Généralisation de l'approche d'ensemble à la prévision hydrologique dans les bassins non jaugés. Thèse de Doctorat, Irstea (Antony), AgroParisTech (Paris), 314 pp.
16. Boldetti, G., 2012. Estimation des paramètres des modèles hydrologiques sur des bassins versants non-jaugés : confrontation des approches directes et indirectes. Thèse de Doctorat, Irstea (Antony), AgroParisTech (Paris), 206 pp.
17. Valéry, A., 2010. Modélisation précipitations – débit sous influence nivale. Élaboration d'un module neige et évaluation sur 380 bassins versants. Thèse de Doctorat, Cemagref (Antony), AgroParisTech (Paris), 405 pp.

18. Berthet, L., 2010. Prédiction des crues au pas de temps horaire : pour une meilleure assimilation de l'information de débit dans un modèle hydrologique. Thèse de Doctorat, Cemagref (Antony), AgroParisTech (Paris), Paris, 603 pp.
19. Le Moine, N., 2008. Le bassin versant de surface vu par le souterrain : une voie d'amélioration des performances et du réalisme des modèles pluie-débit ? Thèse de Doctorat, Université Pierre et Marie Curie (Paris), Cemagref (Antony), 324 pp.

Contribution to the direction of PhD theses

All manuscripts are accessible at: <https://webgr.inrae.fr/publications/theses/>

20. Tunqui Neira, J., 2019. Relations concentration-débit (C-Q) et mesures haute-fréquence. Thèse de doctorat, Irstea (Antony), Sorbonne Université (Paris), GRNE (Paris), 201 pp.
21. Santos, L., 2018. Que peut-on attendre des Super Modèles en hydrologie ? Évaluation d'une approche de combinaison dynamique de modèles pluie-débit. Thèse de doctorat, Irstea (Antony), GRNE (Paris), 256 pp.
22. Caseri, A., 2017. Apport de la simulation conditionnelle géostatistique pour la prévision immédiate d'ensemble de pluies et l'alerte aux crues rapides. Thèse de doctorat, Irstea (Aix-en-Provence & Antony), AgroParisTech (Paris), 201 pp.
23. Crochemore, L., 2016. Seasonal streamflow forecasting for reservoir management. Thèse de doctorat, Irstea (Antony), AgroParisTech (Paris), 213 pp.
24. Lerat, J., 2009. Quels apports hydrologiques pour les modèles hydrauliques ? Vers un modèle intégré de simulation des crues. Thèse de Doctorat, Université Pierre et Marie Curie, Paris, 300 pp.
25. Bourqui, M., 2008. Impact de la variabilité spatiale des pluies sur les performances des modèles hydrologiques, Thèse de Doctorat, ENGREF (Paris), Cemagref (Antony), 333 pp.
26. Payan, J.L., 2007. Prise en compte de barrages-réservoirs dans un modèle global pluie-débit, Thèse de Doctorat, ENGREF (Paris), Cemagref (Antony), 256 pp.
27. Mathevet, T., 2005. Quels modèles pluie-débit globaux pour le pas de temps horaire ? Développement empirique et comparaison de modèles sur un large échantillon de bassins versants. Thèse de Doctorat, ENGREF (Paris), Cemagref (Antony), France, 463 pp.
28. Rojas-Serna, C., 2005. Quelle connaissance hydrométrique minimale pour définir les paramètres d'un modèle pluie-débit ? Thèse de Doctorat, Cemagref (Antony), ENGREF (Paris), France, 319 pp.
29. Tangara, M., 2005. Nouvelle méthode de prévision de crue utilisant un modèle pluie-débit global. Thèse de Doctorat, Cemagref Antony, EPHE, Paris, 374 pp.
30. Oudin, L., 2004. Recherche d'un modèle d'évapotranspiration potentielle pertinent comme entrée d'un modèle pluie-débit global. Thèse de Doctorat, ENGREF (Paris) / Cemagref (Antony), 495 pp.
31. Mouelhi S., 2003. Vers une chaîne cohérente de modèles pluie-débit conceptuels globaux aux pas de temps pluriannuel, annuel, mensuel et journalier. Thèse de Doctorat, ENGREF, Cemagref Antony, France, 323 pp.

Organization of international workshops

- Testing simulation and forecasting models in non-stationary conditions, Göteborg, July 2013
- [The Court of Miracles of Hydrology, Paris, 25-27 June 2008](#)
- MOPEX workshop, Paris, 1-3 July 2004

Distinctions

- Vice-satrape of Social Hydrology (2007)
- Corresponding Member of the Académie Royale des Sciences d'Outre-Mer (2013)
- Special representative of the Social Hydrology satrapy in charge of hydrological traditions (2019)
- [Tison award of the International Association of Hydrological Sciences \(2010\)](#)
- Prix Charles Grad of the Société de Géographie for the book 'Rivières et Rivaux' (2012)
- Prix Ptolémée of the Festival de Géographie de St Dié for the book 'Rivières et Rivaux' (2012)

Editing boards

- Journal of Hydrology, Assistant Editor 2009-present

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Last updated : 23/06/2020