

<u>CURRICULUM VITAE</u>

Béatrice VINCENDON, PhD

Research scientist

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Professional experience :

- 2006 – present** Research scientist at CNRM in the GMME/MICADO team (Mid-latitude convection team of the Meso-scale modelling group) – Toulouse, France
Hydrometeorological coupling for flash floods forecasting
Hydrological impact of heavy precipitation events in the Mediterranean.
Conception, development and assessment of hydrometeorological systems for deterministic and probabilistic flash-floods forecasting.
- 2000 – 2006** Deputy head of Météo-France BDCIM (Climatological Data Base) management team. – Toulouse, France
- 1998 – 2000** Meteorological forecaster at the CMIRN (Northern Inter-Regional Meteorological Center) of Météo-France– Lille, France

Education :

- 2007-2010** PhD degree in Hydrometeorology at UPS – Paul Sabatier University – Toulouse III, France.
- 1995-1998** Master of engineering degree at ENM – Ecole Nationale de la Météorologie (National School of Meteorology) – Toulouse, France

Honors/ Awards :

- 2016** Elsevier Reviewer Recognition
- 2011** Prix Paul Sabatier physique, award from the « Académie des Sciences, Inscriptions et Belles Lettres de Toulouse » for my PhD thesis work
- 2003-2006** Member of the jury of the professional competitive examination for Météo-France engineers recruitment
- 2005** Member of the jury for analyst qualification in Météo-France

Research Interest

Meteorology and Hydrology:

- High impact events
- Coupling between atmospheric- soil- hydrological models
- Probabilistic forecasting
- Short range forecasts and now casting
- Alert and crisis management
- Education

Scientific Projects

- 2010-2020** HYMEX : Hydrological cycle in the Mediterranean experiment.
 Leader of the Team Support TS7c (Real-time modelling forecast during SOP/EOP - Hydrological forecasts)
 Member of the Modelling Task Teams TTM1a (High resolution ensemble hydrometeorological modelling for quantification of uncertainties) and TTM2b (Distributed hydrological modelling over medium to large river basins)
 Member of the Steering Committee of the Science Team TIP "Towards Integrated Prediction of heavy Precipitation, flash-floods and impacts"
- 2013-2016** MOBICLIMEX, French project, ANR SOC & ENV 2012, Residential and routine mobility dynamics and weather extremes under changing climate
 Investigator.
- 2009-2012** PREDIFLOOD, French project, ANR RISKMAT 2008, Distributed flood forecasting for road management in the Cévennes-Vivarais area
 Investigator and Coordinator of CNRM partnership.
- 2007-2011** MEDUP, French project, ANR VMC 2007 Forecast and projection in climate scenario of Mediterranean intense events : Uncertainties and Propagation on environment.
 Investigator.
- 2005-2008** PREVIEW, FP6 integrated european project, PREvention Information and Early Warning, WP4340 on Mediterranean flash-floods.
 Investigator.

Publications :

- Peer-reviewed publications :

Edouard S., Vincendon B. and Ducrocq V : Taking hydrological uncertainty into account in flash flood forecasting, *Journal of Hydrology, in press.*

Vincendon B., Edouard S., Dewaele H., Ducrocq V., Lespinas F., Delrieu G., Anquetin S. : Modeling flash floods for any Mediterranean sub-catchments for road management purposes, *Journal of Hydrology*, 541(2016), 190-205, doi: 10.1016/j.jhydrol.2016.05.054.

Artinyan E., Vincendon B., Kroumova K, Nedkov N, Tsarev P., Balabanova S., Koshinchanov G, Flood forecasting and alert system for Arda River basin, *Journal of Hydrology*, 541(2016), 457-470, doi: 10.1016/j.jhydrol.2016.02.059

Nuissier O , Marsigli C., Vincendon B., Hally A., Bouttier F., Montani A., Paccagnella T.: Evaluation of two convection-permitting ensemble systems in the HyMeX Special Observation Period (SOP1) framework, *Quarterly Journal of the Royal Meteorological Society*, **142**, 404-418.

Braud, I., Aral, P. A., Bouvier, C., Branger, F., Delrieu, G., Le Coz, J., Nord, G., Vandervaere, J.-P., Anquetin, S., Adamovic, M., Andrieu, J., Batiot, C., Boudevillain, B., Brunet, P., Carreau, J., Confoland, A., Didon Lescot J.-F., Domergue, J.-M., Douvinet, J., Dramais, G., Freydier, R., Gérard, S., Huza, J., Leblois, E., Le Bourgeois, O., Le Boursicaud, R., Marchand, P., Martin, P., Nottale, L., Patris, N., Renard, B., Seidel, J.-L., Taupin, J.D., Vannier, O., Vincendon, B., Wijbrans, A., 2014. Multi-scale hydrometeorological observation and modelling for flash-flood understanding, *Hydrology and Earth System Sciences Discussions*, 11, 1871-1945, doi:10.5194/hessd-11-1871-2014

Ducrocq, V., I. Braud, S. Davolio, R. Ferretti, C. Flamant, A. Jansà, N. Kalthoff, E. Richard, I. Taupier-Letage, P.-A. Aral, S. Belamari, A. Berne, M. Borga, B. Boudevillain, O. Bock, J.-L. Boichard, M.-N. Bouin, O. Bousquet, C. Bouvier, J. Chiggiato, D. Cimini, U. Corsmeier, L. Coppola, P. Cocquerez, E. Defer, J. Delanoë, P. Di Girolamo, A. Doerenbecher, P. Drobinski, Y. Dufournet, N. Fourrié, J. J. Gourley, L. Labatut, D. Lambert, J. Le Coz, F. S. Marzano, G. Molinié, A. Montani, G. Nord, M. Nuret, K. Ramage, B. Rison, O. Roussot, F. Said, A. Schwarzenboeck, P. Testor, J. Van-

Baelen, B. Vincendon, M. Aran, J. Tamayo, 2014 : HyMeX-SOP1, the field campaign dedicated to heavy precipitation and flash flooding in the northwestern Mediterranean, Bulletin of the American Meteorological Society, doi :10.1175/BAMS-D-12-00244.1

Masson V., Le Moigne P., Martin E., Faroux S., Alias A., Alkama R., Belamari S., Barbu A., Boone A., Bouyssel F., Brousseau P., Brun E., Calvet J.-C., Carrer D., Decharme B., Delire C., Donier S., El Khatib R., Essaouini K., Gibelin A.-L., Giordani H., Habets F., Jidane M., Kerdraon G., Kourzeneva E., Lafont S., Lebeaupin C., Lemonsu A., Mahfouf J.-F., Marguinaud P., Moktari M., Morin S., Pigeon G., Salgado R., Seity Y., Taillefer F., Tanguy G., Tulet P., Vincendon B., Vionnet V. and Voldoire A., 2013: The SURFEXv7.2 externalized platform for the simulation of Earth surface variables and fluxes, Geoscientific Model Development, 6, 929-960

Vié, B., Molinié, G., Nuissier, O., Vincendon, B., Ducrocq, V., Bouttier, F., and Richard, E., 2012: Hydro-meteorological evaluation of a convection-permitting ensemble prediction system for Mediterranean heavy precipitating events, Nat. Hazards Earth Syst. Sci., 12, 2631-2645, doi:10.5194/nhess-12-2631-2012

Vincendon, B., Ducrocq, V., Nuissier, O., and Vié, B., 2011: Perturbation of convection-permitting NWP forecasts for flash-flood ensemble forecasting, Nat. Hazards Earth Syst. Sci., 11, 1529-1544, doi:10.5194/nhess-11-1529-2011, <http://www.nat-hazards-earth-syst-sci.net/11/1529/2011/>

Doerenbecher A., Argence S., Cassou C., Caumont O., Descamps L., Ducrocq V., Fourrié, N., Guidard V., Jaubert G., Joly A., Lambert D., Lebeaupin-Brossier C., Pangaud, T., Sanchez-Gomez E., Talagrand O., Terray L. and Vincendon B., Projet Cyprim, partie III Cyclogenèses et précipitations intenses : éléments de prévisibilité, besoins en observations, La Météorologie - n° 68 - février 2010, p 23-34

Vincendon B., Ducrocq V., Saulnier G.M.; Bouilloud L., Chancibault K., Habets F., Noilhan J. , 2010: Advantages of coupling the ISBA land surface model with a TOPMODEL hydrological model dedicated to Mediterranean flash floods, Journal of Hydrology, 394(1-2), 256-266, doi: 10.1016/j.jhydrol.2010.04.012

Bouilloud L., K. Chancibault, B. Vincendon, V. Ducrocq, F. Habets, G.M. Saulnier, S. Anquetin, E. Martin, J. Noilhan , 2010: An advanced coupling between the ISBA land surface model and the TOPMODEL hydrological model to simulate Mediterranean flash-floods, Journal of Hydrometeorology, 11, 315-332, doi: 10.1175/2009JHM1163.1

Vincendon B., Ducrocq V., Dierer S.; Kotroni V, Le Lay M., Milelli M.; Quesney A; Saulnier G.M.; Rabuffetti D., Bouilloud L., Chancibault K., Anquetin S., Lagouvardos K., Steiner P. 2009: Flash flood forecasting within the PREVIEW project : value of high-resolution hydrometeorological coupled forecast, Meteorology and Atmospheric Physics, 103, 115-125, doi 10.1007/s00703-008-0315-6.

- International conferences

Vincendon B., Edouard S., and Ducrocq V. and Lovat A. : Taking hydrodynamic parameters and initial soil moisture uncertainties into account in an ensemble-based flash-flood forecasting system, HIWeather Conference, 9-12 october 2017 , Landshut, Germany, oral presentation.

Amengual A. and Vincendon B.: Flash-flood forecasting in two Spanish Mediterranean catchments: a comparison of distinct hydrometeorological ensemble prediction strategies, 10th HYMEX workshop, 4-7 july 2017 , Barcelona, Spain, oral presentation.

Vincendon B., Edouard S., and Ducrocq V. and Lovat A. : Taking into account hydrodynamic parameters and initial soil moisture uncertainties in an ensemble-based flash-flood forecasting system, 10th HYMEX workshop, 4-7 july 2017 , Barcelona, Spain, oral presentation.

Vincendon B., Ducrocq V., Edouard S., and Lovat A. : Using SURFEX for flash flood forecasting within HYMEX program, Surfex Users Workshop, 27 February to 1st March 2017, Toulouse, France, oral presentation.

Vincendon B., Nuissier O., Bouttier F., Ducrocq V. and Edouard S : Hydrometeorological ensemble prediction system for flash-flood forecasting within HYMEX program, FFIR Programme Conference 22-24 November 2016, Reading, poster.

Vincendon B. and Edouard S.: Ensemble-based flash flood forecasting with the ISBA-TOP system : achievements and on-going work, First meeting of HYMEX Science Team "Towards integrated prediction of heavy precipitation, flash-floods and impacts", 4th november 2016, Toulouse, oral presentation.

Vincendon B., Nuissier O., Bouttier F., Edouard S. and Ducrocq V., " Hydrometeorological Ensemble Prediction System for flash flood forecasting within HYMEX program " from the 30th Conference on Hydrology. Of the American Meteorological Society (AMS), January 10-14, 2016, New Orleans, USA.

Vincendon B., Ducrocq V., de Saint-Aubin C., Garandeau L., Brech L., Lovat A., Larvor G., Gastrin P.: Hydrometeorological assessment of AROME EPS on the fall 2014 HyMeX events, 9th HyMeX Workshop, September 21-25, 2015, Mykonos, Greece

Vincendon B., Nuissier O., Bouttier F., Ducrocq V. : Real-time hydrometeorological ensemble for flash-floods forecasting within HYMEX, 4th EMS Annual Meeting & 10th European Conference on Applied Climatology (ECAC), October 06-10, 2014, Prague, Czech Republic

Vincendon B., Amengual A, Dewaele H., Ducrocq V. : Flash-floods forecasting of HyMeX IOP8 with AROME/ISBA-TOP hydrological ensemble prediction system, 8th HyMeX workshop 15-18 September 2014, La Valletta, Malta, oral presentation

Vincendon B., Caumont O., Nuissier N., Ducrocq V. : Real time hydrometeorological ensemble forecasting during the HYMEX SOP1 : evaluation of two hourly discharge ensembles, 7th HYMEX workshop, Cassis, October 7-10, 2013, oral presentation.

Dewaele H., Vincendon B., Ducrocq V. : Flash-flood modelling using ISBA-TOP model within the MobiClimEx project, 7th HYMEX workshop, Cassis, 7-10 October 2013, poster

Vincendon B., Ferretti R., Lombardi A., Tomassetti B., Verdecchia M.: Insight on the real time model forecast for hydrological models during HYMEX SOP1, HYMEX SOPs' debriefing workshop, Toulouse, April 15-17, 2013, oral presentation

Nuissier O., Vié B. and Vincendon B.: A dedicated hydrometeorological ensemble prediction chain for flash-floods during the HYMEX NW-MED SOP, 6th Hymex workshop, Primosten, Croatia, May 2012, poster.

Vincendon B., Ducrocq V., Nuissier O., Vié B.: Usefulness of radar QPE for flash-flood ensemble forecasting within HYMEX, ERAD2012, Toulouse, France, June 2012, oral presentation.

Vincendon B., Ducrocq V., Nuissier O., and Vié, B. : Benefit of convective-scale meteorological models for Mediterranean flash-floods forecasting, IMPRINTS workshop, Toulouse, February 2011, poster.

Vincendon B., Ducrocq V., Nuissier O., and Vié, B. : Hydrometeorological ensemble forecasting of Mediterranean flash-flood events, 5th Hymex workshop, Punta Prima (Sant Lluís), Menorca, Spain, May 2011, oral presentation.

Vincendon B., Ducrocq V., Nuissier O., and Vié, B.: Hydrometeorological ensemble forecasting of Mediterranean flash flood events, WRaH (Weather Radar and Hydrology), April 18-21, 2011, Exeter, Great Britain, oral presentation

Vincendon B., Ducrocq V., Nuissier O., Saulnier G-M.: Hydrometeorological ensemble forecasting of Mediterranean flash-flood events, EMS, Toulouse, September 28-October 2, 2009., oral presentation.

Vincendon B., Ducrocq V., Nuissier O., Saulnier G-M.: Hydrometeorological ensemble forecasting of Mediterranean flash-flood events, HEPEX09 Meeting, Toulouse, June 15-19, 2009., poster

Vincendon B., Ducrocq V., Nuissier O., Saulnier G-M.: Hydrometeorological ensemble forecasting of Mediterranean flash-flood events, 3rd atelier Hymex , Heraklion, Crêtes, June 1-4, 2009, poster.

Vincendon B., Ducrocq V., Nuissier O., Saulnier G.M. : Hydrometeorological ensemble forecasting of Mediterranean flash-flood events, EGU (European Geoscience Union) General Assembly 2009, Vienna, Austria, April 19-24, 2009, poster

Vincendon B., V. Ducrocq, L. Bouilloud, G-M. Saulnier, K. Chancibault, F. Habets , E. Martin, J. Noilhan : Coupling ISBA and TOPMODEL for flash-Flood forecasting over Cevennes-Vivarais, 2nd Hymex workshop, June 2-4, 2008, Palaiseau, poster.

Vincendon B., L. Bouilloud, K. Chancibault, G-M. Saulnier, V. Ducrocq, F. Habets, E. Martin, J. Noilhan, S. Anquetin : Flash flood forecasting with the ISBA-TOPMODEL coupled system, WRaH (Weather Radar and Hydrology), March 10-15, 2008, Grenoble, oral presentation

Vincendon B., L. Bouilloud, K. Chancibault, G-M. Saulnier, V. Ducrocq, F. Habets, E. Martin, J. Noilhan, S. Anquetin : Flash flood forecasting with the SURFEX/TOPMODEL coupled system, Plinius, September 10-13, 2007, Varenna, Italy, oral presentation

Vincendon B., Chancibault K., Ducrocq V., Anquetin S., Saulnier G-M., Le Lay M., Quesney A., Donnadille J., Milelli M., Rabuffetti D., Kotroni V., Lavougaros K., Dierer S., Steiner P., Flash-flood forecasting within PREVIEW, 1st Hymex workshop, January 9-11, 2007, Toulouse, poster.

Vincendon B., Ducrocq V., Dierer S.; Kotroni V, Le Lay M., Milelli M.; Quesney A; Saulnier G.M.; Rabuffetti D., Bouilloud L., Chancibault K., Anquetin S., Lavougaros K., Steiner P.: Flash flood forecasting within the PREVIEW project high-resolution hydrometeorological simulations, ICAM (International Conference on Alpine Meteorology), June 4-8, 2006, Chambéry, France, oral presentation.

- Ph.D. thesis

Audard-Vincendon B., 2010 : Benefit of convective-scale meteorological models for Mediterranean flash-floods forecasting : towards an ensemble discharge forecasting system in the Cevennes-Vivarais region defended on December 16, 2010 (in French).

Advisors: Véronique Ducrocq (CNRM) and Georges-Marie Saulnier (EDYTEM).

- Reports / Book Chapters

Contribution to : “Flash Floods : Forecasting and Warning” of Kevin Sene, published on 14/12/2012; ISBN: 978-94-007-5163-7 ; DOI 10.1007/978-94-007-5164-4 Springer.

Ducrocq V., Anquetin S., Bouilloud L., Chancibault K., Chavaux F., Dierer S., Donnadille J., Jaubert, G., Kotroni V, Labatut L., Lavougaros K., Le Lay M., Milelli M.; Quesney A; Rabuffetti D., Steiner P., Saulnier G.M., Vincendon B., April 2005: PREVIEW WP4340 “Very short range Flash Flood Laboratory” , Scientific report.

Co-author of “Naviclim, le climat des oceans “ , an atlas of ocean climate and phenomena, Cédérom. Météo-France, 2002

Teaching

- 2015-present** Teacher for ENM (French National School of Meteorology) continuous training department on the use of AROME-EPS for flash-flood forecasting (in French)
- 2009** Teacher for ENM (French National School of Meteorology) continuous training department on Flash flood forecasting (in English).
- 2000 – 2006** Teacher for ENM initial and continuous training departments on Operational Climatology at Météo-France. (in French).

Graduated students Supervision

- 2016-present** Supervisor of Alexane Lovat, PhD student (advisor: Drs. Véronique Ducrocq) on Mediterranean Flash-Flood Nowcasting
- 2013-2016** Supervisor of Simon Edouard, PhD student (advisor: Drs. Véronique Ducrocq) on building a complete HEPS for Mediterranean flash-floods forecasting.
- 2013-2014** Supervisor of Hélène Dewaele, research engineer enrolled in CNRM/GMME/MICADO, Toulouse, France
- 2010** Supervisor of Franck Lespinas, postdoctoral researcher enrolled in CNRM/GMME/MICADO, Toulouse, France
- 2010** Supervisor of Céline Sorbet, ENM student on master degree internship/
2007 Supervisor of Ludovic Bouilloud, postdoctoral researcher enrolled in CNRM/GMME/MICADO, Toulouse, France
- +
- 2003-present** Supervisor of about twenty undergraduates on internship.

Languages

French (native), Spanish (fluent), English (professional), German (beginner)

Community Involvement / personal interest:

Secretarial duties of a local scout group of SGDF-Scouts et Guides de France (Scouts and Guides of France).
 Sports (running), Music (singing)