CURRICULUM VITAE

Maria-Helena Ramos

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EDUCATION

2018 **HDR** French Habilitation (Habilitation à Diriger des Recherches), Sorbonne Université, Paris, France
2002 **Ph.D.** Atmospheric and Earth Sciences, Université Joseph Fourier Grenoble I, LTHE, Grenoble, France
1998 **M.Sc.** Sanitation, Environment and Water Resources, Federal University of Minas Gerais, BH, Brazil
1993 **B.Sc.** Civil Engineering, Engineering School of the Federal University of Minas Gerais, BH, Brazil

PROFESSIONAL AND RESEARCH EXPERIENCE

2007 – present	**RESEARCH DIRECTOR** (*Directrice de recherche*, HDR) in Hydrology and hydrometeorology at INRAE, *Institut national de la recherche agronomique et de l'environnement* (CEMAGREF/IRSTEA in the period 2007-2019). Since 2020, Associated with Université Paris-Saclay, Antony (Paris), France. **OCCASIONAL LECTURER** in Hydrology at Sorbonne Université (Master), EIVP (Engineer's degree), PolyTech Sorbonne (Engineer's degree), École Polytechnique (International Master), Paris, France.
2006 – 2007	**RESEARCH ASSOCIATE** in Hydrology at IRSTEA, *Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture* (formerly, CEMAGREF), Lyon, France.
2005 – 2006	**POST-DOCTORAL RESEARCHER** in Flood forecasting at the EFAS (European Flood Awareness System) Team, Awardee of IES Exploratory Research fellowship of the European Commission, DG JRC, IES, Ispra, Italy.
2003 – 2005	**POST-DOCTORAL RESEARCHER** in Applied climatology to hydrology at IRSTEA, *Institut national de recherche en sciences et technologies pour l'environnement et l'agriculture* (formerly, CEMAGREF), Lyon, France.
1998 – 2002	**PHD CANDIDATE**, with fellowship awarded by the Brazilian Government (CAPES) at Université Joseph Fourier Grenoble I, IGE (LTHE), Grenoble, France.
1996 – 1998	**MSC CANDIDATE**, with fellowship awarded by the Brazilian Government (CNPq, FAPEMIG) at Federal University of Minas Gerais, Belo Horizonte, Brazil.
2002, '98, '94, '95	**ENGINEER** in hydrology at Golder Associates, ESC & ENGEO Consulting, BH, Brazil.

PROFESSIONAL APPOINTMENTS AND COMMITTEES

2021 – present	**MEMBER** of the Science for Policy Working Group of the European Geosciences Union (EGU).
2020 – present	**MEMBER** of the Scientific Steering Committee of the World Weather Research Programme (WWRP) of the World Meteorological Organization (WMO).
2019 – present	**PRESIDENT** of the Division on Hydrological Sciences of EGU (elected): member of the Council, the GA Programme Committee, the Darcy and Dalton Medal Committees, the Early Career Scientist Award Committee, the Blog editorial team and the Twitter management team.
2019 – present	**CO-PRESIDENT** of the French CNRS INSU EC2CO AT HYBIGE: project evaluation and grant attribution, coordination of about 20 expert evaluators, 40-60 projects per year.
2019 – present	**ASSOCIATE PROFESSOR** at Université Laval (*Dép. génie civil et génie des eaux*), Québec, Canada.
2017 – present	**MEMBER ADVISORY BOARD** of European (EFAS) and Global (GloFAS) Flood Awareness Systems.
2018 – 2019	**VICE-PRESIDENT** of the EGU Division on Hydrological Sciences (HS).
2015 – 2018	**CHAIR** of the EGU Sub-Division on Hydrological Forecasting of the HS Division.
2014 – 2018	**CO-CHAIR** of HEPEX (Hydrologic Ensemble Prediction Experiment).
2012 – 2014	**REGIONAL CHAIR** for Europe of HEPEX (Hydrologic Ensemble Prediction Experiment).

2011 – 2015	**EXPERT MEMBER** of the scientific committee of the French Institute IRD for project and fellowship evaluation, "Direction des Programmes de Recherche et de la Formation au Sud".
2017	**ENVIRONMENTAL EXPERT (VOLUNTEER)**, member of the UN Disaster Assessment and Coordination (UNDAC) team of experts deployed to Peru (2 weeks) to assist in multi-sectoral rapid needs assessment and emergency management; mobilized through the European Civil Protection and Humanitarian Aid Operations (ECHO) of the European Commission. Video
2012	**EXPERT MEMBER** of the consultation committee GCTI-Brazil (Groupe de concertation transversal international), French Government (Ministry of foreign affairs and Ministry of education and research).

VISITING SCIENTIST AND FELLOW PROGRAMS

2019 – present	**FELLOW** of the ECMWF Fellowship program at ECMWF, UK.
2018 (2 months)	**PROFESSORSHIP** at University of Padova, Italy, invited by Pr. Marco Borga.
2013 (6 months)	**VISITING SCIENTIST** at Université Laval, Canada, with Pr. François Anctil.
2011 – 2017 (several short visits; (1 week to 1 month)	**VISITING SCIENTIST** at: Fellowship "Exploration Japon" awarded by the French Embassy in Japan (Tsukuba, Tokyo, Kyoto), with Dr. T. Yoshida (2017); NCAR, Boulder, USA, with Dr. A. Wood (2015); University of Cordoba, Argentina, with Pr. J. C. Bertoni (2015); UFMG, Brazil, with Prof. N. Nascimento (2015); NARO (NIRE), Tsukuba, with Dr. T. Masumoto (2015); ECMWF, Reading, UK, with Dr. F. Pappenberger (2014); UFRGS, Porto Alegre, Brazil, with Prof. W. Collischonn (2013); Fellowship awarded by FAPEMIG at UFMG, Brazil, with Prof. M. Baptista (2012); University of Newcastle, Australia, funded by PHC FAST, with Prof. G. Kuczera (2011).

RESEARCH PROJECTS & ROLE IN THE PROJECT

ONGOING:

- WMO Expert Consultation – Feasibility study for flash flood forecasting approaches for West Africa (CREWS), 3 expert partners, 2021/2022, **PI for partner INRAE.**
- CIPRHES – Integrated chain for the hydrometeorological forecasting of low flows and droughts (ANR French Government), 750 k€ (INRAE Antony & Lyon: 243 k€), 5 partners, PI: C. Perrin (INRAE), 2021-2024, **WP co-leader.**
- PICS – Towards Integrated Nowcasting of Flash Flood Impacts (ANR French Government), 628 k€ (INRAE/Irstea Aix-en-Provence & Antony: 143 k€), 8 partners, PI: O. Payrastre (Univ. Gustave Eiffel), 2018-2022, **contributor.**
- DGPR SCHAPI/INRAE – Flood forecasting and warning (French Government; Ministry of Ecology), variable annual budget, since 2008, **PI for ensemble forecasting at the partner level**.

FINALIZED (SELECTED):

- AQUACLEW – Advancing Quality of Climate Services for European Water (ERA4CS JPI Climate), 2.1 M€ (INRAE/Irstea: 363 k€), 8 partners, PI: B. Arheimer (SMHI), 2017-2020, **French case study coordinator.**
- IMPREX – Improving predictions and management of hydrological extremes (H2020 European Commission), 8 M€ (INRAE/Irstea: 320 k€), 23 partners, PI: B. van den Hurk (KNMI), 2015-2019, **WP leader.**
- COMPLEX – Knowledge Based Climate Mitigation Systems for a Low Carbon Economy (FP7 European Commission), 7 M€ (INRAE/Irstea: 200 k€), 17 partners, PI: N. Winder (Newcastle Univ.), 2012-2016, **Task leader.**
- DROP – Benefit of governance in drought adaptation (Interreg IVB NEW), 6.8 M€ (INRAE/Irstea: 283 k€), 11 partners, PI: N. Bressers (Waterschap Vechtstromen), 2013-2015, **coordinator at the partner level.**
- XEROCHORE – An Exercise to Assess Research Needs and Policy Choices in Areas of Drought (FP7 European Commission), 1.5 M€ (INRAE/rstea: 60 k€), 11 partners, PI: A. Markandya (FEEM), 2008-2010, **contributor.**

MENTORING AND SUPERVISING, EXAMINING BOARDS, EVALUATION OF PROJECTS AND PROPOSALS

- **POSTDOC MENTORSHIP**: D. Peredo (2021-today); V. Bourscheidt (2019-2020, visiting from Brazil).
- **PHD SUPERVISING**: **2 ongoing,** E. Valdez Medina (with Université Laval, Quebec, 2019-present); A. Assis dos Reis (with UFMG, Brazil, 2017-present); **6 finalized main supervision,** D. Peredo (2017-2021); A. Lemoine (2017-2021); M. Cassagnole (2016-2020); L. Crochemore (2013-2016); I. Zalachori (2009-2013); A. Randrianasolo (2009-2012); **7 finalized with participation/co- supervision,** A. Caseri (2016); F. Neves Lima (2019), F. Bourgin (2014), L. Berthet (2010), A. Ben Daoud (2010), J.-A. Velazquez (2010), J.-M. Lepioufle (2009).

- **MSc SUPERVISING**: 18 MSc (or equivalent) students supervised, 2003-2018.
- **EXAMINING BOARDS HDR & PHD**: 12 since 2010 (5 France, 4 Canada, 1 Italy, 1 Netherlands, 1 Denmark).
- **EVALUATOR OF PROJECTS/PROPOSALS**: European Commission (EIC Horizon Prize), Canada (CRSNG, RIISQ), UK (NERC), CNRS-INSU AT HYBIGE (France)

ORGANIZATION OF CONFERENCE AND SCIENTIFIC SESSIONS

- **MEMBRE OF ORGANIZING AND SCIENTIFIC COMMITTEES**:
  SHF (Société Hydrotechnique de France) HydroES workshop, "L'Hydroélectricité, un catalyseur de la transition énergétique en Europe", Lyon & Online, 22-24/09/2021.
  Joint Virtual Workshop on "Connecting global to local hydrological modelling and forecasting: scientific advances and challenges", HEPEX-CEMS/ECMWF-GFP, Online, 29/06- 1/07/2021. Newsletter here.
  7th HEPEX workshop "Breaking the Barriers", University of Melbourne, Australia, 6-8/02/2018.
  SHF workshop "REX Crues des bassins moyens de la Loire et de la Seine 2016", Paris, France, 28/09/2017.
  6th HEPEX workshop "Ensemble for better forecasts", Université Laval, Quebec, 6-8/06/2016.
  HEPEX workshop on "Seasonal Hydrological Forecasting", Norrköping, Sweden, 21-23/09/2015.
  5th HEPEX workshop "10th Anniversary", NCEP, Maryland, USA, 24-26/06/2014.
  SHF HydroES workshop, "Hydropower and Environmental Sustainability", Grenoble, 16-17/03/2016.
  Workshop France-Québec on "Hydrological Ensemble Prediction", Grenoble & Chichilianne, France, 11-13/04/2011.
  HEPEX Workshop on "Post-processing and downscaling of atmospheric ensemble forecasts for hydrologic applications", Toulouse, France, 15-18/06/2009.
  1st EFAS workshop on the use of "Ensemble Prediction Systems for flood forecasting", European Commission DG JRC, Ispra, Italy, 21-22/11/2005.
- **CONVENER/CO-CONVENER OF SCIENTIFIC SESSIONS**: EGU (since 2010), AGU (2016, 2019), IAHS (2015, 2019, 2022)

EDITORIAL AND REVIEWER DUTIES

- **EDITORIAL DUTIES**:
  Associate Editor for Journal of Hydrology (2018-2020).
  Section editor for the Handbook of Hydrometeorological Ensemble Forecasting, 6 chapters (2013-2017).
  Guest editor for HESS (2016-2017) Special issue: Sub-seasonal to seasonal hydrological forecasting. Editors: F. Wetterhall, I.G. Pechlivanidis, M.-H. Ramos, A. Wood, Q. J. Wang, E. Zehe, and U. Ehret, 40 papers.
  Guest editor for Hydrological Processes (2013), Special issue: Hydrological Ensemble Prediction Systems (HEPS), vol. 27. Editors: H. Cloke, F. Pappenberger, S.J van Andel, J. Schaake, J. Thielen, M.-H. Ramos, 11 papers.
  Guest editor for Advances in Geosciences (2011), Special issue: Towards practical applications in ensemble hydro-meteorological forecasting, vol. 29. Editors: Y. He, F. Pappenberger, J. Thielen-del Pozo, A. Weerts, M.-H. Ramos, and M. Bruen, 14 papers.
- **REVIEWER FOR INTERNATIONAL JOURNALS**: HESS, Journal of Hydrology, Water Resources Research, BAMS, Journal of Hydrometeorology, Hydrological Sciences Journal, Atmospheric Science Letters, NHES, Sciences, HP, etc.

TRAINING COURSES (MATERIAL, CONCEPTION AND LECTURING)

- Co-author of 5 games (teaching and training material): (1) Flood control game (2012), (2) Water management game (2013), (3) Pay for a forecast game (2015), (4) The Shopkeepers dilemma: a decision-making game using probabilistic forecasts (2016), (5) Pathways to running a flood forecasting centre: an adventure game (2017). Publicly available here.
- Course on flood forecasting and uncertainty assessment for flood forecasters in France (SCHAPI-SPC, Ministry of Environment), France, since 2016.
- Course on flood forecasting and uncertainty assessment to postgraduate students and professionals (operational flood forecasters), in Argentina (2015) and Brazil (2012, 2013, 2015, 2016, 2017).
- Course on hydrology at INFOMA for staff from Ministry of agriculture, Nancy, France, 2005 – 2007.

INVITED TALKS (SELECTED)

- Cité des sciences et de l'industrie, Round-table: "Pluies et inondations : mieux vaut prévenir !", Duplex conference with Niger, Paris, 4/11/2021.
- Global Water Futures program of the University of Saskatchewan. Talk: "The quality and value of hydrological forecasts and predictions", in the Topical Webinar Series hosted by the Core Modelling and Forecasting Team. Recording available here, Online webinar, 12/08/2021.
- Atelier Clim2Power. Talk: "Chaine de valeur des projections climatiques à la production hydroélectrique en France", Online workshop, 24/11/2020.
- European Parliament (EP) Intergroup on 'Climate Change, Biodiversity and Sustainable Development' event. Talk: "The role of water in the new EU Strategy on Adaptation to Climate Change", Online event, 20/11/2020.
- Research Center Jülich/German Science Foundation: RealPEP Conference "Precipitation and Flash Flood Prediction from Minutes to Days". Talk: "Evaluating NWP-based ensemble forecasts for distributed hydrological modelling and flash flood forecasting in France", Online webinar, 7/10/2020.
- RTE/IPSL Webinar on Hydrology modeling for energy models. Talk: "Impacts of river flow regime change on the operation of hydropower reservoirs", Online webinar, 1/7/2020.
- AGU 2019, Session "Water and Society: Enhancing and Communicating Hydroclimatic Forecasts for Water Resources Decision-making". Invited talk: "Communicating uncertainty in hydro-meteorological forecasts: mission accomplished?", San Francisco, USA, 11/12/2019.
- CEST 2019, 16th International Conference on Environmental Science and Technology. Invited talk: "Water and Climate Services for Hydropower", Rhodes, Greece, 6/9/2019.
- IAHS- IUGG Scientific Assembly 2019. Invited talk during the round table on "Hydrological research & practice workshop", Montreal, Canada, 10/07/2019.
- Journées techniques SCHAPI "Prévisions d'ensemble" (Ensemble forecasting). Invited talk: "L'histoire et des faits marquants de la prévision hydrologique d'ensemble", Toulouse, France, 28/01/2019.
- Rencontres R&D 2018 Météo-France. Invited talk: "Prévision saisonnière des débits : comment dépasser l'usage de la climatologie ?", Toulouse, France, 13/06/2018.
- WMO Global Conference on "Prosperity through Hydrological Services". Invited keynote speaker on "Hydrological Products", Geneva, Switzerland, 7-9/05/2018.
- 8th World Water Forum. Talks: "Agriculture and drought risk: driving action for change"; "How can supporting biodiversity benefit qualitative and quantitative water management?", Side events organized by the French Water Partnership, Brasilia, Brazil, 19-23/03/2018.
- EURAC/FP7 EUPORIAS project. 2nd EUPORIAS Climate Services Masterclass. Invited expert and speaker on the use of climate information in the water sector. Bolzano, Italy, 16-20/05/2016.
- NVE, Norwegian Water Resources and Energy Directorate. Seminar on Hydrometeorological modelling in Norway. Talk: "Probabilistic forecasting for the hydropower industry". Lillehammer, Norway, 9-10/12/2015.

PUBLICATIONS

- Over 100 publications, including 46 peer-reviewed scientific papers, 15 book chapters, 6 comments, prefaces or Newsletter articles, and 4 policy-briefs.
- More than 70 blog posts published since 2013, mainly on HEPEX blog and EGU HS blog.
- ORCID: https://orcid.org/0000-0003-1133-4164; h-index 21 (on 8/10/2021 Scopus, Author ID: 9638664600)

SELECTED PUBLICATIONS:

THESES:

Ramos, M.H. (2018) *Qualité et valeur des prévisions hydrologiques d'ensemble*. Mémoire d'HDR (French Habilitation), Sorbonne Université, Paris, France, 102 pp. [in French]

Ramos, M.H. (2002) *Analyse de la pluviométrie sous des systèmes nuageux convectifs. Étude de cas sur des données de la ville de Marseille et de la méthode ISIS de Météo-France*. Thèse de Doctorat (PhD), UJF, LTHE, Grenoble, France, 165 pp. [in French]

Ramos, M.H. (1998) *Drenagem Urbana: aspectos urbanísticos, legais e metodológicos em Belo Horizonte*. Dissertação de Mestrado (MSc), Escola de Engenharia da Universidade Federal de Minas Gerais, Belo Horizonte, Brasil, 89 pp. [in Portuguese]

PEER-REVIEWED PAPERS:

1. Valdez, E. S., Anctil, F., and **Ramos, M.-H.**, 2021. Choosing between post-processing precipitation forecasts or chaining several uncertainty quantification tools in hydrological forecasting systems, *Hydrol. Earth Syst. Sci. Discuss.* [preprint], https://doi.org/10.5194/hess-2021-391
2. Cassagnole, M., **Ramos, M.-H.**, Zalachori, I., Thirel, G., Garçon, R., Gailhard, J., and Ouillon, T., 2021: Impact of the quality of hydrological forecasts on the management and revenue of hydroelectric reservoirs – a conceptual approach, *Hydrol. Earth Syst. Sci.*, 25, 1033–1052, https://doi.org/10.5194/hess-25-1033-2021
3. Siqueira, V.A., Fan, F.M., de Paiva, R.C.D., **Ramos, M-H.**, Collischonn, W., 2020. Potential skill of continental-scale, medium-range ensemble streamflow forecasts for flood prediction in South America, *Journal of Hydrology* (2020), https://doi.org/10.1016/j.jhydrol.2020.125430
4. Assis dos Reis, A., dos Santos Fernandes, W., **Ramos, M-H.**, 2020. Assessing two precipitation data sources at basins of special interest to hydropower production in Brazil, *Brazilian Journal of Water Resources,* RBRH, Porto Alegre, v. 25, e14, 2020, doi: 10.1590/2318-0331.252020190068
5. Lavers, D., **M-H. Ramos**, L. Magnusson, I. Pechlivanidis, B. Klein, C. Prudhomme, L. Arnal, L. Crochemore, B. Van Den Hurk, A. Weerts, S. Harrigan, H. Cloke, D. Richardson, F. Pappenberger, 2020. A Vision for Hydrological Prediction. *Atmosphere* 11, 237; doi:10.3390/atmos11030237
6. Crochemore, L., **Ramos, M-H.**, Pechlivanidis, I., 2019. Can continental models convey useful seasonal hydrologic information at the catchment scale? *Water Resources Research*, Vol. 56 (2): e2019WR025700. https://doi.org/10.1029/2019WR025700
7. de Lavenne, A., Andréassian, V., Thirel, G., **Ramos, M.-H.**, Perrin, C., 2019. A regularization approach to improve the sequential calibration of a semi-distributed hydrological model. *Water Resources Research*, 55 (11): 8821-8839. https://doi.org/10.1029/2018WR024266
8. Blöschl, G., M. F.P. Bierkens, A. Chambel, C. Cudennec, G. Destouni, (…), **M.H. Ramos**, *et al*. (collective of 219 authors), 2019. Twenty-three Unsolved Problems in Hydrology (UPH) – a community perspective. *Hydrological Sciences Journal*, 64 (10): 1141-1158, DOI: 10.1080/02626667.2019.1620507
9. Viatgé J., Berthet L., Marty R., Bourgin F., Piotte O., **Ramos M.-H.**, Perrin C., 2019. Vers une production en routine d'intervalles de confiance sur les prévisions de crue dans Vigicrues. *La Houille Blanche*, 2: 63-71, DOI: https://doi.org/10.1051/lhb/2019016
10. Thiboult, A., Anctil, F., **Ramos, M.H.**, 2017. How does the quantification of uncertainties affect the quality and value of flood early warning systems? *Journal of Hydrology*, Vol. 551: 365-373. DOI: 10.1016/j.jhydrol.2017.05.014
11. Engeland, K., Borga, M., Creutin, J.-D., François, B., **Ramos, M.H.**, Vidal, J.-P., 2017. Space-time variability of climate variables and intermittent renewable electricity production - a review. *Renewable & Sustainable Energy Reviews*, 79: 600-617. DOI:10.1016/j.rser.2017.05.046
12. Zhao, T., Bennett, J., Wang, Q.J., Schepen, A., Wood, A., Robertson D., **Ramos, M.-H.,** 2017. How suitable is quantile mapping for post-processing GCM precipitation forecasts? *Journal of Climate,* 30: 3185-3196. DOI: 10.1175/JCLI-D-16-0652.1
13. Crochemore, L., **Ramos, M.-H.**, Pappenberger, F., and Perrin, C., 2017. Seasonal streamflow forecasting by conditioning climatology with precipitation indices. *Hydrol. Earth Syst. Sci.,* 21: 1573-1591. DOI: 10.5194/hess-21-1573-2017
14. Arnal, L., **Ramos, M.-H.**, Coughlan, E., Cloke, H.L., Stephens, E., Wetterhall, F., van Andel, S.J., Pappenberger, F., 2016. Willingness-to-pay for a probabilistic flood forecast: a risk-based decision-making game. *Hydrol. Earth Syst. Sci.*, 20: 3109-3128. 10.5194/hess-20-3109-2016
15. Crochemore, L., **Ramos, M.-H.**, and Pappenberger, F., 2016. Bias correcting precipitation forecasts to improve the skill of seasonal streamflow forecasts. *Hydrol. Earth Syst. Sci.*, 20: 3601-3618. DOI: 10.5194/hess-20-3601-2016
16. Caseri, A., Javelle, P., **Ramos, M.-H.**, Leblois, E., 2016. Generating precipitation ensembles for flood alert and risk management. *Journal of Flood Risk Management*, 9 (4): 402-415. DOI : 10.1111/jfr3.12203
17. Hurk, B. van den, L. Bouwer, C. Buontempo, R. Döscher, E. Ercin, C. Hananel, J. Hunink, E. Kjellström, B. Klein, M. Manez, F. Pappenberger, L. Pouget, **M.-H. Ramos**, P. Ward, A. Weerts, J. Wijngaard, 2016. Improving Predictions and Management of Hydrological Extremes through Climate Services: www.imprex.eu. *Climate Services,* 1: 6-11. DOI: 10.1016/j.cliser.2016.01.001
18. Pagano, T. C., Pappenberger, F., Wood, A. W., **Ramos, M.-H.**, Persson, A., Anderson, B., 2016. Automation and human expertise in operational river forecasting. *WIRES Water* 2016, 3, 5: 692-705. DOI: 10.1002/wat2.1163
19. Crochemore, L., **M.H. Ramos**, F. Pappenberger, S.J. van Andel, A. Wood, 2016. An experiment on risk-based decision-making in water management using monthly probabilistic forecasts. *Bull. Amer. Meteor. Soc.,* 97 (4): 541-551. DOI: 10.1175/BAMS-D-14-00270.1
20. Fan, F., **M.-H. Ramos**, W. Collischonn, 2015. Sobre o uso de previsões hidrológicas probabilísticas para tomada de decisão. *Revista Brasileira de Recursos Hídricos*, RBRH, 20 (4): 914-926.
21. La Jeunesse, I., Larrue, C., Furusho, C., **Ramos, M.H.**, Opeicle, A., Browne, A., De Boer, C., Vidaurre, R., 2015. Gouvernance de la sécheresse : le cas du bassin versant de la Vilaine aval (Bretagne, France). *Revue SET*, 6 p. http://www.set-revue.fr/gouvernance-eau-secheresse-bassin-versant-Vilaine-Bretagne (last seen on 17/02/2015)

22. Pappenberger, F., **Ramos, M.H.**, Cloke, H.L., Wetterhall, F., Alfieri, L. Bogner, K., Mueller, A. Salamon, P., 2015: How do I know if my forecasts are better? Using benchmarks in Hydrological Ensemble Prediction. *Journal of Hydrology*, 552: 697-713. DOI: 10.1016/j.jhydrol.2015.01.024
23. Bourgin, F., **Ramos, M.H.**, Thirel, G., Andreassian, V., 2014. Investigating the interactions between data assimilation and post-processing in hydrological ensemble forecasting. *Journal of Hydrology,* 519, Part D: 2775-2784.
24. Randrianasolo, A. Thirel, G., **Ramos, M.-H.**, Martin, E., 2014. Impact of streamflow data assimilation and length of the verification period on the quality of short-term ensemble hydrologic forecasts, *Journal of Hydrology*, 519, Part D: 2676-2691.
25. François, B., Borga, M., Anquetin, S., Creutin, J.D., Engeland, K., Favre, A.C., Hingray, B., **Ramos, M.H.**, Raymond, D., Renard, B., Sauquet, E., Sauterleute, J.F., Vidal, J.P., Warland, G., 2014. Integrating hydropower and intermittent climate-related renewable energies: a call for hydrology. *Hydrol. Process.*, 28 (21): 5465-5468.
26. Pagano, T.C., Wood, A.W., **Ramos, M.-H.**, Cloke, H.L., Pappenberger, F., Clark, M.P., Cranston, M., Kavetski, D., Mathevet, T., Sorooshian, S. and Verkade, J.S., 2014. Challenges of Operational River Forecasting. *J. Hydrometeorol.*, 15: 1692-1707.
27. **Ramos, M.H.**, van Andel, S.J., Pappenberger, F., 2013. Do probabilistic forecasts lead to better decisions? *Hydrol. Earth Syst. Sci.*, 9, 17: 2219-2232.
28. Zalachori, I., **Ramos, M.H.**, Garçon, R., Mathevet, T., Gailhard J., 2012. Statistical processing of forecasts for hydrological ensemble prediction: a comparative study of different bias correction strategies. *Adv. Sci. Res.*, 8: 135-141.
29. Nicolle, P., Valéry, A., **Ramos, M.H.**, Perrin, C., 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.
30. 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* 26 (14): 2206-2210.
31. Randrianasolo, A., **Ramos, M.H.**, Andreassian, V., 2011. Hydrological ensemble forecasting at ungauged basins: using neighbour catchments for model setup and updating. *Adv. in Geosciences,* 29: 1-11.
32. Velázquez, J.A., Anctil, F., **Ramos, M.H.**, Perrin, C., 2011: Can a multi-model approach improve hydrological ensemble forecasting? A study on 29 French catchments using 16 hydrological model structures. *Adv. in Geosciences,* 29: 33-42.
33. Ben Daoud, A., Sauquet, E., Lang, M., **Ramos, M.H.**, 2011. Peut-on étendre l'échéance de prévision des crues en optimisant la prévision de pluies par recherche d'analogues ? Application au bassin de la Seine à Paris. *La Houille Blanche,* 1: 37-43.
34. **Ramos, M.H.**, Mathevet, T., Thielen, J., Pappenberger, F., 2010. Communicating uncertainty in hydro-meteorological forecasts: mission impossible? *Meteorological Applications*, 17: 223-235.
35. Randrianasolo, A., **Ramos, M.H.**, Thirel, G., Andreassian, V., Martin, E., 2010. Comparing the scores of hydrological ensemble forecasts issued by two different hydrological models. *Atmospheric Science Letters,* 11(2): 100-107.
36. 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.
37. Thielen, J., Bartholmes, J., **Ramos, M.H.,** de Roo, A., 2009. The European Flood Alert System – Part 1: Concept and development. *Hydrology and Earth System Sciences,* 13 (2): 125–140.
38. Bartholmes, J.C., Thielen, J., **Ramos, M.H.,** Gentilini, S., 2009. The European Flood Alert System EFAS – Part 2: Statistical skill assessment of probabilistic and deterministic operational forecasts. *Hydrol. Earth Syst. Sci,* 13 (2): 141–153.
39. Kalas, M., **Ramos, M.H.,** Thielen, J., Babiakova, G., 2008. Evaluation of the medium-range European flood forecasts for the March-April 2006 flood in the Morava River. *Journal of Hydrology and Hydromechanics* 56 (2): 116-132.
40. Younis, J., **Ramos, M.H.,** Thielen, J., 2008. EFAS forecasts for the March-April 2006 flood in the Czech part of the Elbe River Basin - a case study. *Atmospheric Science Letters,* 9 (2): 88-94.
41. Sauquet, E., **Ramos, M.H.,** Chapel, L., Bernardara, P., 2008. Streamflow scaling properties: investigating characteristic scales from different statistical approaches. *Hydrological Processes,* 22 (17): 3462-3475.
42. **Ramos, M.H.,** Bartholmes, J., Thielen, J., 2007. Development of decision support products based on ensemble weather forecasts in the European Flood Alert System. *Atmospheric Science Letters*, 8 (4): 113-119.
43. Demeritt, D., Cloke, H., Pappenberger, F., Thielen, J., Bartholmes, J., **Ramos, M.H.**, 2007. Ensemble predictions and perceptions of risk, uncertainty, and error in flood forecasting. *Environmental Hazards,* 7 (2): 115-127.
44. **Ramos, M.H.,** Leblois, E., Creutin, J-D., 2006. From point to areal rainfall: linking the different approaches for the frequency characterization of rainfalls in urban areas. *Water Sci. Technol.,* 54 (6-7): 33-40.
45. **Ramos, M.H.,** Creutin, J-D., Leblois, E., 2005. Visualization of storm severity. *J. of Hydrology*, 315: 295-307.
46. **Ramos, M.H.**, 2003: La désagrégation de l'information de pluie. *La Houille Blanche*, 6: 123-128.

OPINION PAPERS, COMMENTS AND PREFACES, NEWSLETTER ARTICLES:

47. Andréassian, V., **Ramos, M-H.**, Perrin, C., 2021. Prévisions, climat, gestion des risques… Les crues mortelles d'Allemagne et de Belgique en sept questions. *The Conversation*, 18 juillet 2021 [in French].
48. Pillosu, F., Modigliani, U., Magnusson, L., Bonshoms Calvelo, M., Sterponi, L., **Ramos, M.-H.**, Valderrama, P., 2017. ECMWF supports flood disaster response in Peru. *ECMWF Newsletter*, N° 152, Summer 2017, ECMWF, Reading, England: 2-3.

49. Barillier, A., Caignaert, G., Gouraud, V., **Ramos, M.-H.**, Roult, D., Viollet, P.-L., 2016. Environnement & Hydroélectricité: HydroES 2016 - Synthèse de la conférence internationale organisée par la SHF les 16 et 17 mars 2016 à Grenoble. *Houille Blanche* (5): 64-67. http://dx.doi.org/10.1051/lhb/2016052
50. Cloke, H., Pappenberger, F., van Andel, S.J, Schaake, J., Thielen, J., **Ramos, M.H.**, 2013. Hydrological Ensemble Prediction Systems. *Preface to the Special Issue: Hydrological Ensemble Prediction Systems (HEPS). Hydrological Processes*, 27, 1-4. 10.1002/hyp.9679
51. Yi, H., Pappenberger, F., Thielen-del Pozo, J., Weerts, A., **Ramos, M.H.**, Bruen, M., 2011. Towards practical applications in ensemble hydro-meteorological forecasting. *Preface of the Special Issue in Advances in Geosciences,* 29: 119-121.
52. Pappenberger, F., Zappa, M. Smith, P.J. **Ramos, M.H.** Cloke, H.L., He, Y., Wetterhall, F., Rossa, A., Schaake, J., Thielen, J., 2010. Reply to "Ensemble, uncertainty and flood prediction" by Dance, S. and Zou, Q.P., *Hydrology and Earth System Sciences Discussions*, 7 (3), 15 p.

BOOK CHAPTERS:

53. Boucher, M.-A., **Ramos, M.H.**, 2018. Ensemble streamflow forecasts for hydropower systems. In: Q. Duan, F. Pappenberger, J. Thielen-del Pozo, A. Wood, H. L. Cloke, J. Schaake (Eds.), *Handbook of Hydrometeorological Ensemble Forecasting*. Springer-Verlag Berlin Heidelberg 2016, DOI: 10.1007/978-3-642-40457-3_54-1
54. Anctil, F., **Ramos, M.H.**, 2018. Verification metrics for hydrological ensemble forecasts. In: Q. Duan, F. Pappenberger, J. Thielen-del Pozo, A. Wood, H. L. Cloke, J. Schaake (Eds.), *Handbook of Hydrometeorological Ensemble Forecasting*. Springer-Verlag Berlin Heidelberg 2016, DOI: 10.1007/978-3-642-40457-3_3-1
55. Cloke H., Di Baldassarre, G., Landeg, O., Pappenberger, F., **Ramos, M.-H.,** 2017. Hydrological risk: Flood. In: Poljanšek, K., Marín Ferrer, M., De Groeve, T., Clark, I., (Eds.), *Science for disaster risk management 2017: knowing better and losing less*. EUR 28034 EN, Publications Office of the European Union, Luxembourg, Chapter 3.4. ISBN 978-92-79-60678-6, DOI: 10.2788/688605, JRC102482. Available online at : http://drmkc.jrc.ec.europa.eu/knowledge/Challenges-Sharing
56. Pappenberger, F., Pagano, T. C., Brown, J. D., Alfieri, L., Lavers, D. A., Berthet, L., (…), **Ramos**, **M. -H.,** Reinbold, D., Tibaldi, S., Silvano, P., (…), Zappa, M., Van der Zwan R. E. and Thielen-del Pozo, J., 2016. Hydrological Ensemble Prediction Systems around the Globe. In: Q. Duan, F. Pappenberger, J. Thielen-del Pozo, A. Wood, H. L. Cloke, J. Schaake (Eds.), *Handbook of Hydrometeorological Ensemble Forecasting*. Springer-Verlag Berlin Heidelberg 2016, DOI: 10.1007/978-3-642-40457-3_47-1
57. Creutin, J.-D., Hewitt, R., Tøft, L., **Ramos, M.-H.**, Borga, M., 2016. Energy companies as stakeholders. In Winder, N., H. Liljenström and R. Seaton (Eds) *The Quest for a Model-Stakeholder Fusion*, COMPLEX Final Scientific Report, Vol.1, 220 p. Upsala, Sweden. ISBN: 978-91-976048-1-9
58. La Jeunesse, I., C. Larrue, C. Furusho, **Ramos, M.-H.**, A. Browne, C. de Boer, R. Vidaurre, L. Crochemore, J.-P. Arrondeau, A. Penasso, 2016. Chapter 6: The Governance Context of Drought Policy and Pilot Measures for the Arzal Dam and Reservoir, Vilaine Catchment, Brittany, France. In: H. Bressers, N. Bressers, C. Larrue (eds.), *Governance for Drought Resilience - Land and Water Drought Management in Europe*. Springer eBook, Switzerland, 266 p. DOI: 10.1007/978-3-319-29671-5
59. Furusho, C., Vidaurre, R., La Jeunesse, I., **Ramos**, **M.-H.**, 2016. Chapter 11: Cross-cutting Perspective Freshwater. In: H. Bressers, N. Bressers, C. Larrue (eds.), *Governance for Drought Resilience – Land and Water Drought Management in Europe*. Springer eBook, Switzerland, 266 p. DOI: 10.1007/978-3-319-29671-5.
60. La Jeunesse, I., Larrue, C., Furusho, C., **Ramos**, **M.-H.**, Browne, A., de Boer, C. , Vidaurre, R., Crochemore, L., Arrondeau, J.-P., Penasso, A., 2016. Chapter 6: The Governance Context of Drought Policy and Pilot Measures for the Arzal Dam and Reservoir, Vilaine Catchment, Brittany, France. In: H. Bressers, N. Bressers, C. Larrue (Eds.), *Governance for Drought Resilience – Land and Water Drought Management in Europe*. Springer eBook, Switzerland, 266 p. DOI: 10.1007/978-3-319-29671-5.
61. Arrondeau, J.-P., Penasso, A., **Ramos, M.-H.**, Crochemore, L., 2015. Chapter "Pilot Freshwater". In: Bressers, N. (ed), *DROP Handbook – Practice measures example book, Benefit of governance in DROught adaptation – A handbook for regional water authorities*, The Netherlands, January 2015, 64 p.
62. Bressers, H., Bressers, N., Browne, A., Furusho, C., La Jeunesse, I., Larrue, C., Özerol, G., **Ramos, M.-H.**, Stein, U., Tröltzsch, J., Vidaurre, R., 2015. *Benefit of Governance in Drought Adaptation – Governance Assessment Guide*. DROP Interreg IVB Project, The Netherlands, March 2015, 24 p.
63. Furusho, C., Stomp, Q., Perrin, C., **Ramos, M.H.** (2015) Como as falhas das previsões podem ajudar a melhorar os modoles hidrológicos? Caso do seventos de cheia de 2013 na França. In A. R. Cardoso, A. L. L. Da Silveira, C. Poleto, F. Dornelles, J. A. Goldenfum, P. M. Moura, R. Tassi (Org.) *Aguas Urbanas*, ABRH, Brasil, Capítulo 4: 63 - 82, ISBN 978-85-8868-638-0.
64. Perrin, C., **Ramos, M.-H.**, Andréassian, V., Nicolle, P., Crochemore, L., Pushpalatha, R., 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 (Eds), *Drought: Research and Science-Policy Interfacing,* Taylor and Francis Group, London, ISBN 978-1-138-02779-4
65. **Ramos, M.H.**, Thielen, J., de Roo, A., 2010. Ensemble Hydrological Forecasting and Alert with the European Flood Alert System (EFAS): Case of the Danube Basin Floods in August 2005. In: Tanguy, J.-M. (Ed.), *Environmental Hydraulics: Practical Applications in Engineering*, Vol. 4, Chapter 5, p.47-61. Wiley-ISTE, October 2010, Hoboken, USA, 448 p.

66. **Ramos, M.H.**, Thielen, J., de Roo, A., 2009. Prévision hydrologique d'ensemble et alerte avec le système européen d'alerte aux crues (EFAS) : cas des crues du bassin du Danube en août 2005. In: Tanguy, J.-M. (Dir.), *Traité d'hydraulique environnementale : applications des modèles numériques en ingénierie 1*, Vol. 7, Chapitre 5, 11p. Hermès Lavoisier, Octobre 2009, Paris, France, 190 p.
67. Baptista, M.B., Nascimento, N.O., **Ramos, M.H.,** Champs, J.R.B., 1998. Aspectos da evolução da urbanização e dos problemas de inundações em Belo Horizonte [Aspects of the evolution of the urbanization and flood problems in Belo Horizonte]. In: Braga, B., Tucci, C. & Tozzi, M. (Org.) *Drenagem Urbana: gerenciamento, simulação, controle*, Ed. Univ. UFRGS, ABRH: 39-50. [In Portuguese]

POLICY BRIEFS:

- 2019: Hydropower Policy Brief: The benefits of informing hydropower reservoir operations with climate and inflow forecasts. By **Ramos, M-H.**, A. Castelletti, M. Pulido-Velasquez, M. Giuliani, H. Macian-Sorribes, D. Gustafsson, M. Cassagnole, G. Thirel, L. Crochemore, I. Pechlivanidis. Policy brief of the H2020 IMPREX project, Deliverable 8.2, 7 p. https://www.imprex.eu/deliverables (last seen 4/10/2021)
- 2016: *Science-Policy Brief: a climate variability viewpoint on renewable energy and electricity systems*. By Creutin, J.-D, **Ramos, M.-H**, Hingray, B., François, B., Borga, M., Tøfte L. Policy brief of the FP7 COMPLEX project, 4 p. Available at: http://owsgip.itc.utwente.nl/projects/complex/images/uploaded_files/CRE-SPB_VF-20160731_VF.pdf (last seen 18/01/2018)
- 2010: *Science-Policy Brief #1 – Characterisation of water bodies and of the analysis of pressures and impacts*. Policy brief of the FP7 XEROCHORE project (An Exercise to Assess Research Needs and Policy Choices in Areas of Drought), 4 p. http://www.feem-project.net/xerochore/files/PB1.pdf (last seen 18/01/2018)
- 2010: *Science-Policy Brief #5 – River basin management plans*. Policy brief of the FP7 XEROCHORE project (An Exercise to Assess Research Needs and Policy Choices in Areas of Drought), 4 p. http://www.feem-project.net/xerochore/files/PB5.pdf (last seen 18/01/2018)

BLOG POSTS (SELECTION):

1. Post #vEGU21 hydrological reflections Posted on May 5, 2021. Contributed by Maria-Helena Ramos, EGU HS Division blog, https://blogs.egu.eu/divisions/hs, 2021.
2. A HEPEX researcher in the times of a pandemic Posted on November 11, 2020. Contributed by Maria-Helena Ramos, HEPEX Portal, www.hepex.org, 2020.
3. Can hydrological forecasting contribute to Science & Art projects? Posted on September 19, 2018. Contributed by Maria-Helena Ramos and Louise Arnal, HEPEX Portal, www.hepex.org, 2018.
4. WhatsApp chat between a forecaster and a modeller in hydrology. Posted on January 19, 2016 by Maria-Helena Ramos. HEPEX Portal, www.hepex.org, 2016.
5. Interactions between data assimilation and post-processing. Posted on August 4, 2015 by Maria-Helena Ramos. HEPEX Portal, www.hepex.org, 2015.
6. On the economic value of hydrological ensemble forecasts. Contributed by Marie-Amélie Boucher, Maria-Helena Ramos and Ioanna Zalachori. Posted on January 31, 2014 by Marie-Amélie Boucher. HEPEX Portal, www.hepex.org, 2014.
7. Multi-model approaches for river flow forecasting: blessing or burden? Contributed by François Anctil, Maria-Helena Ramos and Florian Pappenberger. Posted on November 1, 2013 by François Anctil. HEPEX Portal, www.hepex.org, 2013.

VIDEOS AND INTERVIEWS:

- Video Irstea « Paroles d'experts » : Maria Helena RAMOS, risques liés à l'eau (Paris, October 2019) Here (1.5 min)
- Interview on "Games in Geosciences" for the Radio Dutch 1, recorded at EGU 2018 in Vienne, on air on 12/04/2018 17h-18h (Interview by Rolf Hut). Here (approx. 2 min).
- Video on the participation to the H2020 IMPREX project, within the series "Ils l'ont fait !" (Ademe, 2016), Paris, 27/02/2017. Here (approx. 5 min).
- Invited talk at the round table organized by the French Ministry in charge of Higher Education and Research (MENESR "PCN Environnement") on the evaluation of European projects (SC5 Climate action, environment, resource efficiency and raw materials), Paris, 17/10/2016. Here (approx. 25 min).