



**Maria-Helena Ramos**

**Research Scientist in Hydrology and Hydrometeorology**

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Born in 1971

Personal webpage: <http://www.irstea.fr/en/ramos>

Organization and research team webpages: <http://www.irstea.fr> - <https://webgr.irstea.fr>

**EDUCATION**

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**Ph.D. Atmospheric and Earth Sciences**, Université Joseph Fourier, LTHE, Grenoble, France, June 2002.

**M.Sc. Sanitation, Environment and Water Resources**, Federal Univ. of Minas Gerais (UFMG), Brazil, June 1998.

**B.Sc. Civil Engineering**, Engineering School, UFMG, Belo Horizonte, Brazil, 1989 –1993.

**PROFESSIONAL EXPERIENCE**

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**Nov 2007 – present**     **Research scientist (*Chargé de recherche, CR1*) in hydrology and hydrometeorology** at Irstea (Antony/Paris, France) - **HDR** (French Habilitation) defended on 06 April 2018

**Dec 2006 – Oct 2007**     **Research fellow in hydrology (*Poste d'accueil haut niveau*)** at Irstea (formerly, Cemagref) (Lyon, France) - *Climatology applied to hydrology*

**Apr 2005 – Oct 2006**     **Post-doctoral researcher** at Institute for Environment and Sustainability (IES), DG Joint Research Centre (JRC), European Commission (Ispra, Italy) - *Flood forecasting and warning (EFAS Project: European Flood Awareness System)*

**Jan 2003 – Apr 2005**     **Post-doctoral researcher** at Irstea/Cemagref (Lyon, France) - *Space-time variability of rain fields and rainfall severity indicators*

**1998 – 2002**             **Ph.D. thesis** at University Joseph Fourier (UJF), LTHE (Grenoble, France) - *Analysis of rainfall under mesoscale convective systems*

**1996 – 1998**             **M.Sc. thesis** at Federal University of Minas Gerais (Brazil) - *Urban hydrology*

**Aug – Dec 2002**         **Engineer** in Hydrology and water resources at Golder Associates Brasil and ENGEO Ltda (Belo Horizonte, Brazil) – *Several studies in hydrology/hydraulics, flood control, integrated management and national policy on water resources.*

**Feb – Jun 1998**

**1994 – 1995**

**PROFESSIONAL APPOINTMENTS**

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**President-elected of the Hydrological Sciences Division** of the European Geosciences Union (EGU): Deputy-president (2018), President (starting in 2019)

**Member of the EGU Outreach and Communication Division Committee** of HS Division, since 2016.

**Member of the Advisory Board** of EFAS/GloFAS (*European/Global Flood Awareness Systems*), since 2017.

**Chair of the Hydrological Forecasting Sub-division** of the Hydrological Sciences Division of EGU, 2015 – 2018.

**Co-chair of HEPEX** - Hydrologic Ensemble Prediction EXperiment ([www.hepex.org](http://www.hepex.org)), 2014 – 2018.

**Regional chair of HEPEX for Europe**, 2012 – 2014.

**Environmental Expert (volunteer)**: associate member of the UN Disaster Assessment and Coordination (UNDAC) team deployed to Peru. Assistance in conducting a multisectoral rapid needs assessment and providing support to emergency management. Mobilized through the European Civil Protection and Humanitarian Aid Operations (ECHO), ERCC (European Commission) and COGIC (Centre opérationnel de gestion interministérielle des crises du Ministère de l'Intérieur, French Government), 23 March-14 April 2017.

**Expert member** of the evaluation committee for the IRD French research institute (*Comité scientifique d'arbitrage et renforcement des capacités, Programmes de Recherche et de la Formation au Sud*), 2011 – 2015.

**Expert member** of the consultation committee GCTI-Brazil (*Groupe de concertation transversal international*) for the French Government (Ministry of foreign affairs, Ministry of education and research), 2012.

**TEACHING EXPERIENCE AND TRAINING MATERIAL**

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**Lecturer** in Hydrology at UPMC Paris VI, EIVP, EPU (Engineering Schools), Paris, France, since 2007.

**Training course organizer and lecturer** on flood forecasting and uncertainty to postgraduate students and professionals in Argentina (2015), Brazil (2012, 2013, 2015 - 2017) and France (SCHAPI-SPC, since 2016).

**Co-author of 5 games for teaching and training** on the use of probabilistic predictions in hydrology. Available at: <http://hepex.irstea.fr/resources/#gamestraining>

## STUDENT SUPERVISING AND PhD EXAMINING BOARDS

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**PhD (main supervision):** 4 completed and 4 ongoing (since 2009)

**MSc or equivalent (main supervision):** 16 completed and 2 ongoing (since 2003)

**Member of PhD Evaluation Board:** 5 participations since 2010 (1 in France; 3 in Canada; 1 in Denmark).

## RECENT RESEARCH PROJECTS

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- PICS (ANR), 628k€ (Irstea Aix-en-Provence & Antony: 143k€), 8 partners, PI: Olivier Payrastre (Ifsttar), *Towards Integrated Nowcasting of Flash Flood Impacts*. Contributor. Period: 2018 – 2021.
- AQUACLEW (ERA4CS, ERA-NET JPI Climate / ANR) 2.1M€ (Irstea: 363k€), 8 partners, PI: Berit Arheimer (SMHI), *Advancing Quality of Climate Services for European Water*. Contributor and coordinator at the partner level of WP1 and WP3 (User needs and User uptake). <http://www.aquaclew.eu/> Period: 2017 – 2020.
- IMPREX, H2020 European Commission, 8M€ (Irstea: 320k€), 23 partners, *IMproving PRedictions and management of hydrological Extremes*. Leader of the work-package “Sectoral survey: Hydropower” and coordinator at the partner level. [www.imprex.eu](http://www.imprex.eu) Period: 2015 – 2019.
- HYRADIER (Regional Program STIC-AmSud, Research - Innovation) between Argentina, Brazil and France, 20k€, 4 partners, *Hydrology from Radar Information*. Coordinator of the training courses on flood forecasting and coordinator at the partner level. Period: 2015 – 2017.
- DGPR SCHAPI-Irstea/Cemagref, French Government, *Flood forecasting and warning*. Coordinator of the actions on hydrological ensemble prediction at Irstea Centre of Antony. Period: occasionally since 2008.
- COMPLEX, FP7 European Commission, 7M€ (Irstea: 200k€), 17 partners, *Knowledge Based Climate Mitigation Systems for a Low Carbon Economy*. Team member WP “Climate-related energies” and coordinator at Irstea Antony level. <http://owsgip.itc.utwente.nl/projects/complex/>. Period: 2012 – 2016.
- DROP, Interreg IVB NWE European Regional Development Funding, 6.8M€ (Irstea: 283k€), 11 partners, *Benefit of governance in DROught adaptation*. Coordinator at the partner level (drought governance and seasonal forecasting). <http://www.droproject.eu/> Period: 2013 – 2015.
- XEROCHORE, FP7 (Support action) European Commission, 1.5M€ (Irstea: 60k€), 11 partners, *An Exercise to Assess Research Needs and Policy Choices in Areas of Drought*. Team member (Cemagref/Irstea). <http://www.feem-project.net/xerochore> Period: 2008 – 2010.
- EURORISK/PREVIEW FP6 European Commission and EFAS Project (IES DG JRC), Development of the European Flood Awareness/Alert System (<https://www.efas.eu/>). Contributor Period: 2005 – 2006.

## OTHER SCIENTIFIC ACTIVITIES (selected)

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**Organization of workshops and conferences:** convener at European Geosciences Union (EGU, since 2010); American Geophysical Union (AGU, 2016); IAHS (2015, 2017). Member of the organizing committees of the Seminar “REX Crues des bassins moyens de la Loire et de la Seine 2016” (SHF, 2017), Workshop Hydropower and Environmental Sustainability (SHF, 2016); Workshop France-Québec on Hydrological Ensemble Prediction (2011); HEPEX Workshops in Melbourne (6-8/02/2018), Quebec (6-8/06/2016), Norrköping (21-23/09/2016), Maryland (24-26/06/2014), Toulouse (15-18/06/2009).

**Guest editor and reviewer:** Guest editor for *Hydrol. Earth Syst. Sci.*, “Sub-seasonal to seasonal hydrological forecasting” (2016 – 2017); *Hydrol. Process.*, “Hydrological Ensemble Prediction Systems (HEPS)” (2013); *Adv.in Geosciences*, “Towards practical applications in ensemble hydro-meteorological forecasting” (2011). Reviewer for HESS, J. of Hydrology, Water Resources Res., J. of Hydrometeorology, Hydrological Sciences Journal, etc.

**Visiting scientist, invited talks, fellowships and awards:** Visiting scientist/lecturer: Program “Exploration Japon”, French Embassy in Japan (Tsukuba, Tokyo and Kyoto, 2017); UFMG, Brazil (2012, 2015 - 2017); NCAR, Boulder, USA (2015); University of Cordoba, Argentina (2015); NARO (NIRE), Japan (2015, 2017); ECMWF, Reading, UK (2014); Université Laval, Canada (2013; 6 months); UFRGS, Brazil (2013). Invited talks (recent): EURAC/FP7 EUPORIAS project, 2<sup>nd</sup> Climate Services Masterclass (Italy, 2016); NVE, Norwegian Water Resources and Energy Directorate (Lillehammer, Norway, 2015); LSCE-IPSL, Laboratoire des sciences du climat et de l’environnement (Gif-sur-Yvette, France, 2015); CEH (Wallingford, UK, 2014); Joint H-SAF & HEPEX Workshops on Coupled Hydrology (Reading, UK, 2014). Fellowships awarded for Postdoctoral studies (EC, JRC, 2005-2007); PhD research (CAPES, Brazilian Government, 1998-2002), MSc research (CNPq and FAPEMIG, Brazilian Government, 1996-1998). Award of best paper presented at the 19th Brazilian Congress in Sanitation and Environment (ABES, Foz do Iguaçu, 14-19/09/97).

## PUBLICATIONS

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h-index = 14 (Scopus on 20/04/2018; Author ID: 9638664600; <https://orcid.org/0000-0003-1133-4164>)

- 85 publications, of which 37 peer-reviewed papers, 14 book chapters, 4 comments and prefaces and 3 policy-briefs
- 894 citations in 44 documents indexed by Scopus ; 99 co-authors (Scopus on 20/04/2018)
- 63 blog posts published in the HEPEX website ([www.hepex.org](http://www.hepex.org)) (2013 - 2017)

**Full list of publications at:** <http://www.irstea.fr/en/ramos>