**CV**

Rémi COUSIN

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Professional Preparation

*Diplôme d’Ingénieur* *Civil des Mines,* 2005

International Short Courses at the Oceanography Department of the University of Concepción, Chile: paleo-oceanography, remote sensing, Individual Based Models (IBM) for fish populations (2004-2005)

First, second and third years at the *Ecole Nationale Supérieure des Mines de Nancy* Option: geo-engineering (geology, geotechnic, hydrogeology, geostatistics, mining and oil exploitation) (2001-2004)

Scientific *Baccalaureat*, 1998, math and physics

Appointments

**Since 07/2013**: Senior Staff Associate, Climate Information Analyst, at the **International Research Institute for Climate and Society (IRI)** at Columbia University’s Earth Institute, New York, New York. Design solutions to **disseminate science-based climate information to community of users**. Assist in the conduct of research activities in climate and sectors of application of climate information (agriculture, health, water, food security, disaster risk). Research and design climate-related science-based solutions addressing real world problems for the benefit of end-users of tailored climate information. Engage with communities of users to serve as a bridge between users of climate information and producers of climate science. Train and enable communities of users to employ developed tools.

Engage with scientists and communities of users to tailor web- based tools (IRI Data Library Maprooms). Define or identify potential projects and articulate the needs of users. Link disparate efforts across disciplines that might have synergies and could use lessons learned. Use IRI DL Maprooms to implement tools that select data sets, devise and apply appropriate analysis filters and create clean presentations and decision paths for users. Participate in workshops with stakeholders where tools and their content are being defined. Assist in research activities, conduct experiments, perform data analysis, and interpret results. Adapt methods developed in one domain to new specific fields. Translate new functionality in to the IRI DL to enable broader use and dissemination of newly researched methods. Participate in capacity building and training initiatives on science concepts and methods, use of climate-informed tools, use of IRI DL/Maprooms software.

**Principal Investigator: 04/2015-12/2015:** Establishing a Framework Collaboration Agreement with IRI, CAZALAC (Water Center for Arid and Semi-Arid Zones in Latin America and the Caribbean) **Principal Investigator: 08/2014-11/2014:** Plan de Capacitacion Avanzada IRI: Implementacion Observatorio, ANA (Autoridad Nacional del Agua, Peru)

**04/2008 to 06/2013:** Staff Associate at the **International Research Institute for Climate and Society (IRI)** at Columbia University’s Earth Institute, New York, New York. Built internet-based tools to **disseminate climate information tailored to specific users** in the IRI Maprooms. Contribute to different aspects of the Maprooms building: gather data, support research behind the presented analysis, make such analysis work in IRI software, set up the information provided in the Maproom to best communicate it to the user. The Maprooms can address different sectors: analysis of climate model outputs, of climate observations, agriculture, fire risk management, health (malaria), fishery, food security. They can address an issue at a specific country, region, continent or global level.

**Trained local stakeholders** on how to use climate information: professionals of health and meteorology in Colombia, Madagascar, Ethiopia, South America and in-house; fire risk managers in Indonesia; staff of Ethiopia and Tanzania national meteorology agencies, AGRHYMET regional center, on IRI technology after it had been transferred to them.

**Seconded to the World Food Program (WFP)** Climate Change and Disaster Risk Reduction Unit in Rome Headquarters to make a tailored study of the impact of climate variability to food security in Mali, encompassing timescales from the season to the decade (3 months from July to October 2010).

**Research**: interaction between climate and malaria in Sri Lanka and Madagascar; reconstruction of temperature datasets from remotely sensed observations; interaction between climate and plague in Madagascar; changes in atmospheric stability in the Andes; probabilistic seasonal forecast.

**09/2006-03/2008:** Advisor for **NASA’s Jet Propulsion Laboratory (JPL)** Ocean-Atmosphere Interaction Group, Pasadena, California. Developed graphical salinity products for Aquarius mission **education and public outreach** website. The website allows to navigate through the NOAA World Atlas. A Q&A guides the visitor towards the understanding of the role of salinity in the ocean.

**Research**: Validated the 1/12° Pacific Ocean simulation from ROMS by comparison with observations from TAO and TOPEX. Studied Peru-Chile coastal upwelling system in the context of fishery management. Studied the role of salinity in ENSO. Scientific consultant for ***Collecte Localisation Satellite* (*CLS*)** Spatial Oceanography Department, Toulouse, France. Developed toolboxes to run, analyze and validate **MERCATOR-ocean** forecasting operational prototypes. The tools enable to conduct experiences with complex MERCATOR models: set up the model (physics, computation, parameterization...), run simulations, analyze outputs thanks to a computing and visualization software toolbox

Key Publications

Blumenthal, M.B., Bell, M., del Corral, J., Cousin, R., Khomyakov, I., 2014. Iri data library: enhancing accessibility of climate knowledge. Earth Perspectives 1, 1–12.

Dinku, T., Block, P., Sharoff, J., Hailemariam, K., Osgood, D., del Corral, J., Cousin, R., Thomson, M.C., 2014. Bridging critical gaps in climate services and applications in africa. Earth Perspectives 1, 1–13.

Giannini, A., Krishnamurthy, P., Cousin, R., Choularton, R., 2011. The climate sensitivity of food security in Mali, a historical perspective on availability and access dimensions. AGU Fall Meeting Abstracts 1, 05.

Greene, A.M., Goddard, L., Cousin, R., 2011. Web tool deconstructs variability in twentieth-century climate. Eos, Transactions American Geophysical Union 92, 397–398.