

# Curriculum Vitae

## Jérôme Gaillardet

Professor « classe exceptionnelle »  
Institut de Physique du Globe de Paris  
Senior Member of Institut Universitaire de France  
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### PERSONAL INFORMATION

- Name : GAILLARDET, Jérôme Michel Hugues
- born: 28 octobre 1966, Montbéliard, France
- French

### EDUCATION

- 1986-1990: Ecole Normale Supérieure de Saint Cloud-Lyon, France**
- 1989 : Agrégation de Sciences Naturelles** (highest highschool teaching degree in Biology and Geology)
- 1995: PhD Paris Diderot University**, Geochemistry of the Congo and Amazon. advisors: Pr. B. Dupré et Pr.C. Allègre
- 2000: Habilitation à diriger des recherches , Université Paris 7 – Denis Diderot: Rivers and the Global Carbon Cycle.**

### EXPERIENCE

- Maître de Conférence University Paris 7, 1996-2000**
- Professor**, Institut de Physique du Globe de Paris, 2000-2011
- Professeur « classe exceptionnelle»**, Institut de Physique du Globe de Paris, 2011-now

### RESEARCH EXPERTISE

- Geochemistry of large rivers.
- The geochemical cycle of elements with particular focus on Critical Zone processes
- Coupling between physical and chemical processes of erosion.
- Isotope geochemistry
- Isotopic tracing of anthropogenic pollution
- Evolution of the oceanic pH.

I am an expert in chemical potamology, i.e. the study of chemical composition of rivers as messengers from environmental and geodynamic processes. I am interested by the global role of chemical weathering and more generally Critical Zone processes in the Earth's chemical engine and therefore the role of chemical interactions at the surface of the Earth as a planetary process of climate, ocean and continental crust evolution. I focused on the « drainage basin » approach both at large scale and small scale. I am especially interested by the geochemistry of the sediments transported by rivers and produced by chemical weathering in soils. I am also working on the acidity-alkalinity balance of the ocean through boron isotope geochemistry. My tools are elemental and isotopic geochemistry. I have developed or participated to the development of several techniques for measuring precise isotopic abundances in natural materials (B, Li, Zn, Mg) and applied these techniques to study rainwater, riverwater, sediments, rocks. I have been involved in the adventure of using boron isotopes in carbonates as a tracer of paleo-pH of the ocean. More recently, I got interested in using isotopes to trace pollution. I have created (2014) and am leading a research team (G2E, Geochemistry of the External Earth) at IPGP, Paris composed of about 25 people working on Critical Zone and marine geochemistry.

I have created the ObserA observatory (Observatoire de l'eau et de l'érosion aux Antilles) in the Lesser Antilles (2007) and got progressively involved in the international organization of a multidisciplinary network of Earth's surface observatories (known as the Critical Zone Exploration Network). I am coordinating a research infrastructure network on drainage basins (RBV), now included in the formal National Infrastructure OZCAR

(« Observatoires de la Zone Critique, ressources et applications ») that I launched in 2015. RBV has been awarded a subsequent 10 years equipment program called CRITEX for the multidisciplinary exploration of the Critical Zone that I am presently coordinating. I am involved in the European LTER initiative including 18 countries to design a future European Infrastructure at the interface LTER-CZ observatoires.

**Research ID :** <http://www.researcherid.com/rid/F-9096-2010>

#### **ADMINISTRATIVE RESPONSABILITIES**

- ❑ Member of the administration council of IPGP since 2004 (elected) from the administration council of Paris Diderot University (2005-2007).
- ❑ Vice Chairman of Institut de Physique du Globe de Paris (2004-2009, Chairman Vincent Courtillot).
- ❑ Head of the Earth Science, planetary and environmental science teaching department of Paris Diderot University (2004-2009).
- ❑ Team leader of the Geochemistry of the Outer Envelopes (G2E) group at IPGP, Paris (25 people including graduate students, technicians, engineers and researchers)
- ❑ President of the scientific board of Nancy Earth Science observatory (OSU Otelio) and of the Scientific board of Besançon Observatory (OSU Theta) and member of the scientific steering committees of IPEV (Institut Paul Emile Victor) and OPE at ANDRA (Agence nationale pour les déchets radioactifs).

#### **SCIENTIFIC RESPONSABILITIES**

- ❑ “Chargé de mission” (special adviser) at CNRS to set up (2011) a national network of drainage basins (RBV part of the international Critical zone initiative, <http://portailrbv.sedoo.fr/>)
- ❑ National coordinator of the Research Infrastructure OZCAR (Observatories of the Critical Zone : Applications and Research).
- ❑ Principal Investigator of the Equipment of Excellence Program CRITEX (2012-2022, 9 M€) (<https://www.critex.fr/>)
- ❑ Member of the « commission spécialisée SIC » from SIC: definition of the national programs in Earth’s surface geosciences. In charge of the Observatory commission.
- ❑ Associate Editor at Geochimica Cosmochimica Acta journal since 2009.
- ❑ Chief Editor at Chemical Geology since 2015
- ❑ Member of the steering Committee du Luquillo Observatory, Porto-Rico (Resp. Pr. W. McDowell) (2013-now)

#### **COLLABORATION WITH INDUSTRY**

- ❑ IPGP-TOTAL-SCHLUMBEGGER research program on the geological sequestration of CO<sub>2</sub>. In charge of the « natural sequestration » part (2005-2007).
- ❑ Collaboration with industrial partners in CRITEX program

#### **CURRENT FUNDED PROJECTS (PI)**

- ❑ IUF grant.
- ❑ ANR (National Research Agency) project CARBORIC
- ❑ ANR bilateral (China-France) project SEDIMAN
- ❑ ANR project CRITEX
- ❑ European ITN ISONOSE project

#### **AWARDS**

- ❑ French Academy of Sciences : Prix Etienne Roth, 2002, for young geochemists.
- ❑ Gast Lecturer, Goldschmidt Conference, Vancouver, 2008.
- ❑ Helmholtz International Award, Germany, 2012.
- ❑ Fellow of the International Association of GeoChemistry (2014)