# Job Description

**Typical job**: Researcher / Chercheur

- REME, REFERENS, BIBLIOPHILE

**Job**: Postdoctoral researcher in climate variability

**Catégorie**: A

**Corps**: researcher / chercheur

**BAP (si ITRF)**:

*The activities that make up the job description are subject to change in line with knowledge of the profession and service requirements.*

## Presentation of Sorbonne Université

To pass on knowledge, understand the world and meet the challenges of the 21st century, a new university came into being on 1 January 2018, the result of the merger between the universities of Paris-Sorbonne and Pierre and Marie Curie. Sorbonne Université is a multidisciplinary, research-intensive, world-class university. Anchored in the heart of Paris and with a regional presence, it is committed to the success of its students and to meeting the scientific challenges of the 21st century. [www.sorbonne-universite.fr](http://www.sorbonne-universite.fr)

## Presentation of the structure (laboratory, training department, central service, etc.)

**Description (missions, teams,...)**:

The IPSL (https://www.ipsl.fr/) is a research federation comprising 8 laboratories and 2 associated teams in the Paris region, with around 1400 staff. IPSL's main objectives are to coordinate research and training, develop innovative programmes and provide societal services in the field of climate science.

One of the IPSL's research themes focuses on understanding internal and forced climate variability, from diurnal to multi-millennial scales. Expertise in this research theme includes, for example, the study of the Madden-Julian Oscillation, monsoons, the El Niño Southern Oscillation, stratospheric circulation and the quasi-biennial oscillation (QBO) or the multi-decadal variability of the Atlantic Ocean. The research carried out at the IPSL explores both the modes of internal variability of the climate system and the effect of external forcings, such as volcanoes, fires and anthropogenic emissions. Research at the IPSL is at the forefront of understanding the key processes associated with variability (turbulence and its interaction with large-scale flow, air-sea interactions, diabatic processes linked to clouds and aerosols, etc.).

**Location**:

This position is to be filled in one of the joint research units of the IPSL federation, within the Faculté des Sciences et Ingénierie.

## Main tasks and activities
**Mission (purpose of the job):**

The candidate will work in one of the following research areas:

- understanding climate variability and/or its link with urban climate and the hydrological cycle,
- application of machine learning algorithms to understand climate processes and quantify their impacts,
- improving understanding of processes through innovative instrumentation and/or the production or exploitation of observation data (from field campaigns, observation programmes),
- understanding and improving the representation of variability and processes in the IPSL climate model,
- tipping points in the climate system,
- geo-engineering,
- multidisciplinary approaches.

The candidate will lead a research project promoting synergies between IPSL laboratories on one of these themes. This research will lead to new opportunities in relation to current IPSL research.

**Main activities (10 maximum):**

- Carrying out a research project rigorously and independently,
- Contribute to knowledge transfer between IPSL laboratories,
- Publication of scientific articles,
- Communication of scientific results at conferences,
- Supervision of master’s students.

If applicable, other activities of the position:

**Supervision:** NO
**No. of staff supervised per category:** ... A - ... B - ... C

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<tr>
<th>Knowledge and skills*</th>
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<tr>
<td>PhD in atmospheric, oceanic and climate sciences, or related,</td>
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<td>Knowledge of ocean and/or atmospheric physics,</td>
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<td>Knowledge of Python programming languages and associated scientific libraries,</td>
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<td>Knowledge of Unix/Linux and bash programming.</td>
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**Skills:**

- Excellent writing of scientific articles
- Excellent oral and interpersonal communication skills
- Ability to plan work and work independently towards general objectives.

**Cross-disciplinary skills:**

- Scientific rigour
- Initiative and adaptability
- Ability to work in two research teams with a variety of expertise

**Personal skills (3 maximum):**

- Excellent interpersonal skills
- Sense of service
- Reliability

**Particular conditions of employment:**

* Conformément à l’annexe de l’arrêté du 18 mars 2013 (NOR : MENH1305559A)