

## Internship offer

### **Highlighting the characteristics of gender inequalities - in mathematics, and in applied mathematics, in the world - and in science in Africa by analyzing responses to an international survey**

#### **Context, objectives and missions of the internship**

The internship will take place in the framework of the Gender Gap in Science project "A Global Approach to the Gender Gap in Science: How to measure it? How to reduce it? » <https://gender-gap-in-science.org/>

The internship will be devoted to the statistical analysis of the responses to the Global Survey of Scientists in mathematics (including applied mathematics), and for all participating sciences in Africa, that were previously collected.

The work to be done consists of:

- To study about the questionnaire and the methodology used to collect the responses;
- To read the Gender Gap in Science book and more particularly chapter 1 and chapter 2 of this book <https://zenodo.org/record/3882609> ;
- To set up a data analysis methodology;
- To constitute significant results on the characteristics of inequalities between women and men in mathematics (and of the subset of applied mathematics), as well as among all sciences participating in the survey in Africa, and to compare them with all the responses;
- To choose the most significant results and to highlight them graphically;
- To write a two-part report in English, one on mathematics, and applied mathematics, the other on participating sciences in Africa, with a methodological annex that will guide the work of other disciplines or other geographical areas.

The “Global Survey of Scientists” database includes 32,000 people, of which 5,300 have declared themselves to be mathematicians and around 600 are based in Africa.

All analyzes will use PostgreSQL.

#### **Internship conditions**

##### **Research structure:**

Paul Painlevé Laboratory (UMR 8524)  
Faculty of Science and Technology, Department of Mathematics  
University of Lille - Campus Cité Scientifique - M3 building  
59655 Villeneuve D'Ascq

**Supervision:** Sophie Dabo - Professor, with two of the Gender Gap in Science project officers as co-supervisors

##### **Prerequisites / Profile sought**

Master student (M2) in statistics (ideally residing in Lille (France) or close to it).

Good knowledge of English.

Mastery of R software, Python, Excel, HTML / CSS, MySQL.

Data extraction and main analyzes will be done via the Aircloak platform (<https://aircloak.com>).

##### **Internship duration**

6 months (M2 internship).

##### **Contract**

French internship contract, “intern” status.

Based in Lille

Compensation of 700 euros per month (no coverage of travel or accommodation expenses).

Internship period from February 2021

Send your application + motivation letter to the main supervisor [sophie.dabo@univ-lille.fr](mailto:sophie.dabo@univ-lille.fr) and to the co-supervisors [colette.guillope@u-pec.fr](mailto:colette.guillope@u-pec.fr) and [marie-francoise.roy@univ-rennes1.fr](mailto:marie-francoise.roy@univ-rennes1.fr)