



Contribution of women researchers in physics in scientific fields at the Faculty of Sciences of the University Mohammed the first

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University Mohamed I

One of Morocco's 13 universities, located in the north of the country. Includes:

- ❑ 10 institutions: 5 schools and 5 faculties.
- ❑ 74979 students among them 40470 are girls (54%).
- ❑ 1016 teachers, 232 are women (22,8%)
- ❑ 56 laboratories and 17 research teams, covering all disciplines.
- ❑ Three Centers for Doctoral Studies: Science, Technology, Engineering and Health, Letters, Humanities, Arts and Educational Sciences, Law, Political Science, Economics and Management
- ❑ An University council, 5 standing committees.
- ❑ Three researcher centers.

Faculty of Sciences

- Six departments: Biology, Chemistry, Computing, Geology, Mathematics and Physics.
- 6641 students among them 3575 are girls (53,83%).
- 274 teachers, 50 are women and 8 are physicist researchers.
- 17 laboratories, 6 of them in physics.
- One Center for doctoral studies in Science, Technology, Engineering and Health, whose mission is to host doctoral students in six doctoral programs.
- A Faculty council, 5 standing committees

Girls in scientific fields

- Between 2015 and 2023 the number of girls enrolled in the Faculty of Science increased from 44.25% to 58.61% in fundamental and professional bachelor's degrees.
- Girls are increasingly successful in their academic bachelor year: 45.01% in 2015 and 81.46% in 2023.
- The percentage of women depends on the discipline: more girls in biology and chemistry than in mathematics or physics.
- In Physical Sciences the percentage of female PhD graduates is about 27,2% from 2015 to 2023.

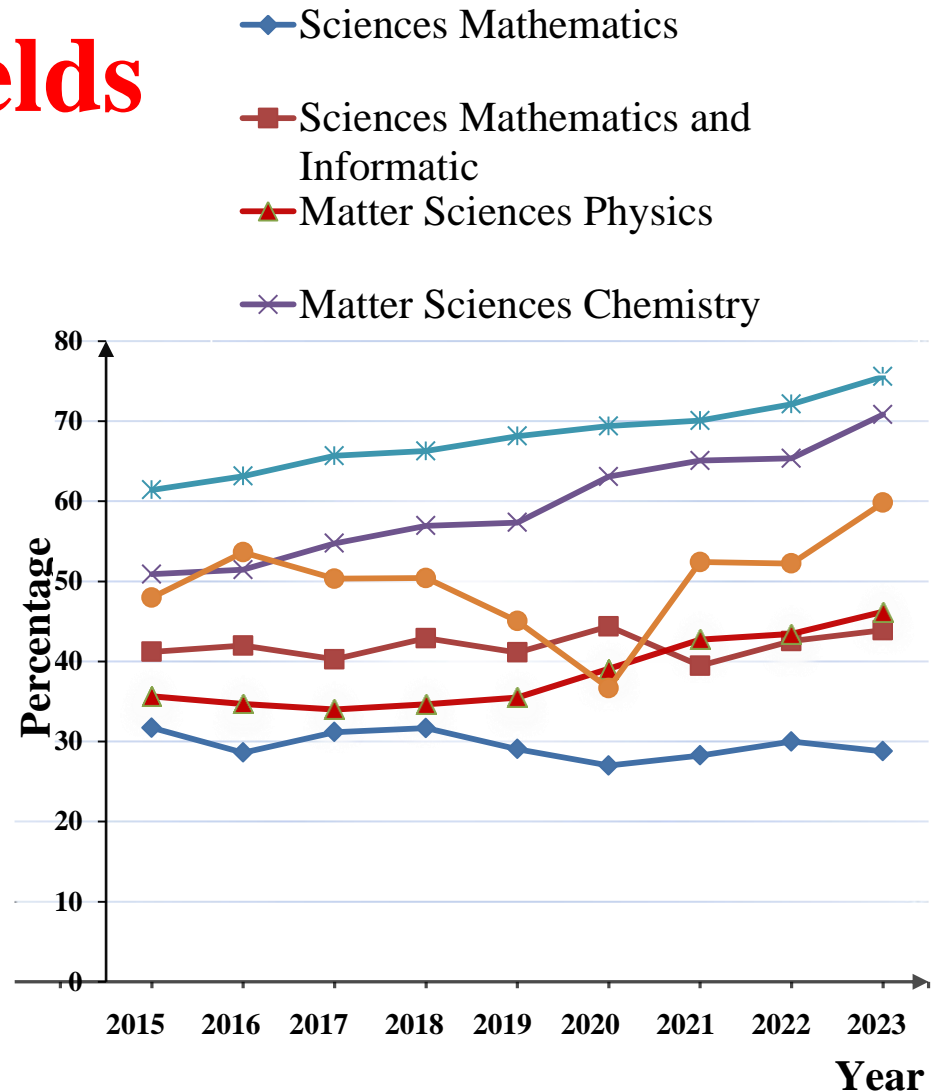


Figure 1: Percentage of female students in different disciplines of the fundamental bachelor's degree

Scientific women

- Between 2013 and 2023 the number female teachers at the Faculty of Science increased slowly from 13,6% to 17,54% [1].
- Women decrease in their academic career : they were 21,42% assistant professors and 71% professors in 2013 [2]. In 2023, they are 24% assistant professors and 46% professors [3].
- Female physicists represent 3.4% of the total number of female professors at the university, and 16% of those in the Faculty of Science. The majority are assistant professors (71%).
- Only one woman professor has been director of a chemistry research laboratory (7%) since the faculty was founded (1979).
- A female physicist was vice-director of the physics research laboratory.
- Two women professors (**one in Physics**) are elected to the Faculty Council (8,3%) (2019-2023).
- Female professors account for 8% (**one in physics**) of national thesis referees from 2014 to 2023.
- 2% of female teachers (**one in department of physics**) have chaired a national thesis jury (in the same period).

Women researchers at decision-making levels

- ❑ Between 2013 and 2023, the number of Moroccan female teacher-researchers rose from 26.6% to 30.2% [3].
 - ❑ Since its creation, the Moroccan university has had only 3 female presidents, the first having been appointed in 2002 [4].
 - ❑ Only 6 women were appointed deans of faculties between 2012 and 2022 (0.46%), compared with 158 male appointments [5].
 - ❑ The proportion of female school directors (and equivalents) is 10.76%, the proportion occupying statutory positions is 0.78%, and 0.50% for the position of Secretary General [5].
- Since its creation in 1979, Mohamed the first University has had only **one female physicist director**, one female vice-director in Faculty of Medicine and one general secretary.
 - Only two women professors in the Faculty of Humanities are elected to the University Council (8,3%).
 - 4 female professors (from the faculties of medicine, humanities and law) are directors of research laboratories (7%).
 - No female researcher has been director of the 3 doctoral study centers since they were created in 2008.

Conclusions

Moroccan women researchers have increasingly acquired skills in many scientific, literary and legal disciplines, but they still represent a minority in national decision-making positions [3].

No significant representation of female teachers in decision-making positions at Mohamed the first University and the same is true of the Faculty of Science. Among the many reasons for this absence are the following:

- Decision-making positions are very demanding and don't offer much flexibility for women who devote a great deal of time and effort to their families. That's why few women stand for election [6].

- The constraints associated with doctoral studies, research structuring and scientific contribute to this unfavorable context.
- Virtual barriers, for social and educational reasons, women don't have the self-confidence to take on responsibility. Women are victims of internalized stereotypes [4].
- The under-representation of women is "often a sign of institutional cultures that are neither inclusive nor oriented towards broader social and cultural change and greater gender equality“ [7]. For no scientific reasons, managers generally choose a man when they have the power to do so.

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