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Women in Physics and Scientific Research in Colombia FREE


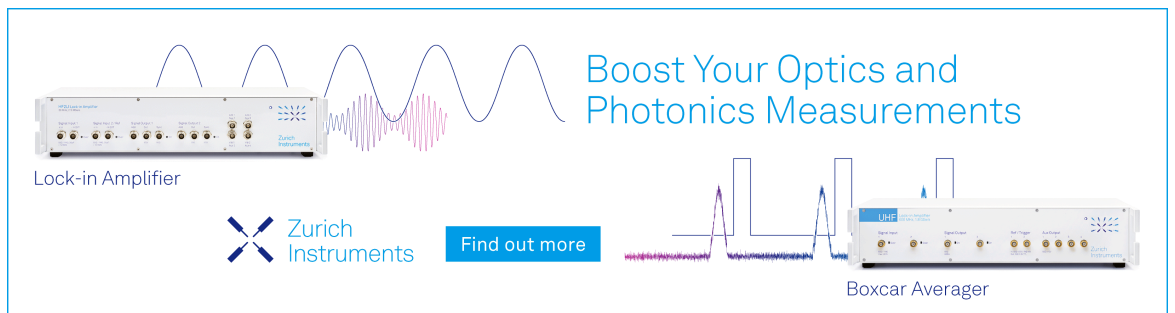
Doris Girata




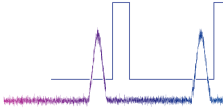
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Women in Physics and Scientific Research in Colombia

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Abstract. Generally speaking, scientists in Colombia do not have a role in changing the social or economic situation of the nation. Although the proportion of women who study physics increases slowly year by year, the number of women who work in physics research has not considerably increased. Many problems in Colombia might be solved if women's status as researchers in Colombia changed. It is necessary to promote a national project for improving women's status in the sciences and to present this project to the Colombian government. Many Colombian women have grown up believing they are not able to take scientific jobs, and therefore choose to study other disciplines "for women." If Colombian women found opportunities in physics and the sciences in general, they would likely pursue such disciplines, but we need government support to promote an efficient program that will give women more information about physics as a feasible career option.

Keywords: Colombia, women in physics, women in science

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Generally speaking, scientists in Colombia do not have a role in changing the social or economic situation of the nation. Although the proportion of women who study physics increases slowly year by year, the number of women who work in physics research has not considerably increased.

Many problems in Colombia might be solved if women's status as researchers in Colombia changed. It is necessary to promote a national project for improving women's status in the sciences and to present this project to the Colombian government. Many Colombian women have grown up believing they are not able to take scientific jobs, and therefore choose to study other disciplines "for women." If Colombian women found opportunities in physics and the sciences in general, they would likely pursue such disciplines, but we need government support to promote an efficient program that will give women more information about physics as a feasible career option.

What are the career prospects for female scientists, technological professionals, and engineers? To answer this question, we might start by carefully studying the reasons that a number of young females drop out of the scientific workforce and how Colombia might retain talented women in its workforce. In other words, what are the reasons for the women leave in the first stages of professional life? I would suggest that these are interrelated social and economic phenomena and that these phenomena are connected with the lack of new opportunities, employment, and recognition for women in Colombia. This situation is poorly understood and largely unconsidered in Colombian universities, factories, and government. Turning specifically to careers in physics for women, I would suggest the course of action described below.

PROPOSAL

We must establish a Committee on the Status of Women in Physics (CSWP) in Colombia similar to the CSWP of the American Physical Society. The Colombian committee would have a similar objective of studying the retention and career development of women physicists, including those who are studying at the undergraduate and graduate levels. This committee would promote workshops for women physicists in order to provide valuable information and construct a more welcoming atmosphere. In addition, the committee would encourage and enable women to return to scientific research after an absence. Finally, the committee would provide information about areas of study in physics and motivate young women to consider physics as a career.

The Colombian CSWP would conduct a survey of physics department directors to study retention and career development of women physicists. Patterned after the American Physical Society survey [1], the Colombian survey would pose questions about undergraduate and graduate programs in physics to assess the their accessibility and atmosphere for women. Department chairs might be asked the following questions:

1. How many male and female students begin studies in undergraduate and graduate physics programs each year?

2. How many undergraduate and graduate students are there currently? What is the proportion of male to female students?
3. How many students graduate from programs in physics each year? What is the proportion of male to female graduates?
4. Is there a family leave policy for graduate students? If so, please describe.
5. Is there family health insurance available for graduate students? Is it included in the stipend?
6. How many tenure-track or tenured faculty do you have? What is the proportion of male to female tenure-track or tenured professors?
7. What proportion of your physics department graduates are currently employed in physics-related work? How many of these are male and how many female?
8. In a paragraph, please describe why a prospective graduate student who is interested in a female-friendly department should choose your institution.

Interpretation of the survey data should consider that in Colombia, physics as a career only started in the 1960s. For this reason, Colombian women did not have access to higher learning and laboratories, effectively preventing them from contributing to progress in physics until quite recently.

Applying its findings, the proposed Colombian CSWP would partner with the Colombian government to develop a comprehensive program for encouraging and enabling young women to pursue and advance their careers in physics. This national project would provide women with support and information about physics as a feasible career option and promote women's status in the sciences. In this way, we might hope to nurture more female physicists and achieve a higher retention rate of women in the science workforce.

ACKNOWLEDGMENTS

I would like to acknowledge the valuable input of Fulbright Scholar Kristen Dennesen of the University of Chicago.

REFERENCE

1. American Physical Society, "Is Your Graduate Department in Physics Female Friendly?" [<http://www.aps.org/programs/women/female-friendly/index.cfm>].