2008 APS March Meeting

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Tuesday, March 11, 2008 11:15AM - 2:15PM –

Session J4 FIP: Panel Discussion: Making the Invisible Scientist Visible: Science in Emergent Countries Morial Convention Center 206

11:15AM J4.00001 Scientists in an alternative vision of a globalized world[1] AYSE ERZAN, Department of Physics, Istanbul Technical University, Maslak, Istanbul — Why should "increasing the visibility of scientists in emergent countries" be of interest? Can increasing the relevance and connectedness of scientific output, both to technological applications at home and cutting edge basic research abroad contribute to the general welfare in such countries? For this to happen, governments, inter-governmental and non-governmental organizations must provide incentives for the local industry to help fund and actively engage in the creation of new technologies, rather than settling for the solution of well understood engineering problems under the rubric of collaboration between scientists and industry. However, the trajectory of the highly industrialized countries cannot be retraced. Globalization facilitates closer interaction and collaboration between scientists but also deepens the contrasts between the center and the periphery, both world wide and within national borders; as it is understood today, it can lead to the redundancy of local technology oriented research, as the idea of a "local industry" is rapidly made obsolete. Scientists from all over the world are sucked into the vortex as both the economic and the cultural world increasingly revolve around a single axis. The challenge is to redefine our terms of reference under these rapidly changing boundary conditions and help bring human needs, human security and human happiness to the fore in elaborating and forging alternative visions of a globalized world. Both natural scientists and social scientists will be indispensable in such an endeavor.

[1]Partial support from the Turkish Academy of Sciences is gratefully acknowledged.

11:45AM J4.00002 Globalizing Science and Engineering , VENKATESH NARAYANAMURTI, Harvard University — In this talk I will review recent trends in Science and Engineering Research and Education in an increasingly interconnected, "flat" world. The enormous economic transformation being fueled by technology will, over a period of time, lead to new models of interaction among universities, industry and governments. Scientists and Engineers in "emergent" countries may be expected to play a key role in this "new" world order.

12:15PM J4.00003 The Mutual Benefit of International Research Interactions , MONICA OLVERA DE LA CRUZ, Northwestern University — Emergent economies provide a fruitful source of scientific knowledge. We have the responsibility to nurture interactions to increase scientific knowledge in the world. Moreover, we have benefited greatly from discoveries and education provided to scientists and engineers in emergent economies. I will give examples of successful modes of interactions between the US and emergent economies, and in particular with Latin American countries. I will review the impact of our interactions in their countries and in ours, and ways to increase the impact.

12:45PM J4.00004 The Invisible Scientist in India – a case study for emergent countries , ANITA MEHTA, S D Bose National Centre — Emergent countries such as India, China, and Brazil, face unique problems in the realisation of their science and technology potential. I will discuss the situation in India, which may be relevant at least in part to the others. The basic focus of the talk will be the possible ways in which the invisible scientist, the person on the ground who has no part in the pyramid of the science establishment, can be rendered more visibleboth for her or his own sake, and to prevent the erosion of an enormous intellectual potential by a still continuing brain drain.

1:15PM J4.00005 Panel Discussion –

Thursday, March 13, 2008 11:15AM - 2:15PM –

Session V34 FIP CSWP: Panel Discussion: International Gender Issues in Physics Morial Convention Center 226

11:15AM V34.00001 Session Introduction , BEVERLY HARTLLINE, Delaware State University — This abstract not available.

11:25AM V34.00002 The APS 2007 Meeting on Gender Equity in Physics , ARTHUR BIENENSTOCK, Stanford University — This abstract not available.

11:44AM V34.00003 Promoting Positive Images of Women in Physics , BARBARA SANDOW — Why are so few women among the students who study physics? Worldwide statistics show that there have been very few female students in the physics in any country, in the past and in current times. The situation in Germany is outstandingly precarious. The fraction of women to study physics is lower than 15% of all students who study physics. In the last years we have had a lot of changes in structure and also activities to improve the situation for women. Here I shall present some of the activities in Germany and in other countries. The aims are to bring more girls in to physics, modify the image of scientists and find ways to stop women to drop out of physics. The experiences and the expectations will be discussed.

12:03PM V34.00004 She's a Physicist!?[1] , LAURA H. GREENE, Department of Physics and Frederick Seitz Materials Research Laboratory, University of Illinois at Urbana-Champaign, Urbana, IL 61801 USA — Any minority often feels either left out or at the center of attention. The difficulty of blending in creates both challenging obstacles and unique opportunities. Such negative and positive distractions, whether major or minor, can have a profound impact on accomplishing one's goals. Success requires sustained focus, a constant eye on the "big picture", and the ever-important sense of humor. In other words, don't be distracted by the ups and downs, keep your passion focused on the science, and enjoy the ironies. I will discuss some of my personal experiences as a woman and how I have learned to navigate the physics world since before 1970. Through losses and wins, I will share how I have managed to, at least most of the time, keep on keeping on.

[1]I presently enjoy funding from the U.S. DoE Division of Materials Sciences DE-FG02-07ER46453 through the FSMRL, the NSF DMR 07-06013, and continual support from my sisters and girlfriends

12:22PM V34.00005 Women in Physics in a Rapidly Changing China , LING-AN WU, Institute of Physics, Chinese Academy of Sciences, Beijing 100080, China — Despite the upheavals of the 20th century, physics managed to survive quite well in China, where the first woman president of the American Physical Society was born and bred. During the 1950s as a result of policies that emphasized science and engineering, declared equal rights and equal pay for men and women, and assigned jobs to college graduates irrespective of sex, the number of women in physics increased rapidly, many of whom made notable achievements. Since China's opening up over the last thirty years tremendous changes have taken place, and women now face new opportunities as well as challenges in all aspects of society. Whereas physics used to be regarded as the most elite of the sciences, new fields such as computer science, biotechnology and business are now competing for the best students. Compared with other countries the statistics are not bad; in schools and many physics departments the ratio of women teachers may be 30% or higher, but the numbers drop drastically with rank. Moreover, in some research institutions the ratio of female physicists is actually declining, due to retirement of the older generation and fewer successors. Compulsory retirement for women at an earlier age than for men is also a new factor. Conversely, in recent years the ratio of female graduate students enrolling in physics has increased, even reaching 40% in some universities. However, the reasons for this do not bode well: men are not performing so well as women in entrance exams, while the latter are facing increasing discrimination in employment so they have to seek higher degree qualifications. With the further development of China's economy there will be abundant demand for qualified personnel including women with a physics background. It is imperative to actively support the upcoming generation of women physicists and not lose them in the leaky pipeline. The Chinese Physical Society has taken certain positive steps, such as the recent establishment of the Xie Xi-De Prize for Women in Physics. However, there is complacency and a general lack of awareness of the special difficulties and discrimination that women in physics face, and this needs to be brought to the attention of all sectors at all levels.

12:41PM V34.00006 Marshak Lectureship Talk: Women in Physics in the Baltic States Region: Problems and Solutions , DALIA SATKOVSKIENE, Vilnius University — In this contribution the gender equality problem in physics will be discussed on the basis of the results obtained implementing the project "Baltic States Network: Women in Sciences and High Technology" (BASNET) initiated by Lithuanian women physicists and financed by European Commission. The main goal of BASNET project was creation of the regional Strategy how to deal with women in sciences problem in the Baltic States. It has some stages and the contribution follows them. The first one was in depth sociological study aiming to find out disincentives and barriers women scientists face in their career and work at science and higher education institutions. Analysis of results revealed wide range of problems concerned with science organization, management and financing common for both counterparts. However it also proved the existence of women discrimination in sciences. As main factors influencing women under-representation in Physics was found: the stereotypes existing in the society where physics is assigned to the masculine area of activity; failings of the science management system, where highest positions are distributed not using the institutionalized objective criteria but by voting, where the correctness of majority solutions is anticipated implicitly. In physics where male scientists are the majority (they also usually compose executive boards, committees etc.) results of such a procedures often are unfavorable for women. The same reasons also influence women "visibility" in physicist's community and as the consequence possibility to receive needed recourses for their research as well as appropriate presentation of results obtained. The study revealed also the conservatism of scientific community- reluctance to face existing in the scientific society problems and to start solving them. On the basis of the results obtained as well practice of other countries the common strategy of solving women in physics (sciences) in the Baltic States region was formulated. As changing the stereotypes is long lasting process it was decided firstly to concentrate strategy implementation plans on changes in science management policy tackling the problem from the top and allowing receive the most quick results. For this we created the regional Baltic States Network among the corresponding international women working groups, professional organizations (Scientific societies) and corresponding departments of the governmental institutions. BASNET also became a full member of European Platform of Women Scientists (EPWS)-prestige women organization signally influencing the European Community science policy.

1:15PM V34.00007 Panel Discussion —