Session T6 FIP FGSA: Panel Discussion: Preparation of Graduate Students for Careers in a Globalized World

2:30PM T6.00001 Preparing for Change: Challenges and Opportunities in a Global World
SABINE O’HARA, Institute of International Education — Our world is becoming increasingly global. This may sound like a cliché, yet it is true nonetheless, and poses unprecedented challenges for graduate education. For the new generation of researchers, teachers and professionals to be successful they must be prepared in more than the content area of their chosen field. They must also acquire proficiency in global awareness, cultural literacy, multicultural teamwork and language facility. These global skill sets form the basis for effective multicultural collaboration and will become increasingly important even for those who do not intend to study or work abroad. Knowledge has become more portable in the internet age; large data bases and reports can be accessed in real time from various locations around the globe; information is exchanged in multifaceted knowledge networks; collaborative research takes place within and outside of the traditional venue of the research university in the private sector, research institutes, and associations; research networks span multiple disciplines as progress invariably occurs at the intersection of previously discrete fields of inquiry. Global collaboration thus is no longer dependent on the physical proximity of collaborators but can take place anywhere any time. This then requires yet another set of skills, namely the ability to adapt to change, exhibit flexibility and transfer skills to a range of contexts and applications. Effective graduate education must address these realities and expose students to learning opportunities that will enable them to acquire these much needed global skills sets.

3:06PM T6.00002 International Experiences for Graduate Students: Opportunities and Challenges
AMY FLATTEN, APS Director of International Affairs — Graduate students are often well aware that their physics careers may involve international opportunities available to graduate students and provide insights into some potential challenges of engaging internationally. The speaker will discuss some of the international opportunities available to graduate students and provide insights into some potential challenges of engaging internationally.

3:30PM T6.00003 Graduate studies in a globalized world¹
FATIHA BENMOKHTAR, Carnegie Mellon — In our days physics research, experiment and theory, is done in one way or another in a framework of an international collaboration. As an experimental Medium Energy physicist, I will be talking about my experience in working within international collaborations for more than twelve years. I will go through a couple of questions graduates students should be asking: How is the work environment for a graduate student doing his or her research within these collaborations? What about language barriers? Can they be independent in their analysis? What will happen after getting their PhD.s? — and more.

¹Thanks to the APS
3:54PM T6.00004 Physics Internationally From the Industrial Perspective, T. VENKATESAN, National University of Singapore — Physicists traditionally get employed by academia, National Labs and industry. The investment of multi-national companies in R&D and manufacturing operations globally has been accelerating owing to availability of trained human resources and the economy of operation. This has created tremendous opportunities for candidates with global experience as opposed to a highly localized education. In the last decade, the investments made by Asian academic institutions in education and research has seen a significant increase creating opportunities for Graduate students and researchers alike in parts of the world other than US and Europe, the traditional destinations for students and researchers over the last several decades. Many Asian universities are hiring a diverse faculty from all over the world as opposed to hiring from local talent pools. Many of the Asian countries are focusing on creating local hitech economies by fostering global entrepreneurship programs. In my talk I will discuss this globalization phenomenon with specific examples from both academia and industry. I will also discuss strategies for academic institutions in terms of making the appropriate modification to their programs to deal with this inevitable evolution.

4:18PM T6.00005 I2CAM and ICAM: Physics Internationally, DANIEL COX, University of California Davis — The Institute for Complex Adaptive Matter (ICAM) through the National Science Foundation sponsored International Institute for Complex Adaptive Matter (I2CAM) has, since its formal inception in 2002, grown into a 60+ branch international scientific network devoted to the study of emergent phenomena in correlated electron matter, soft matter, and biological matter. We nucleate forefront research through a blend of discussion oriented workshops (at least 50% of the time for discussion), exchange awards for junior scientists to initiate collaborations between two groups, travel awards for junior scientists to present research work or carry out brief research, and schools on topical subject matter. We also supplement our federal funding with contributions from each branch which support postdoctoral and senior scientist fellowships and unique science outreach activities such as an online science museum (The Emergent Universe). We have also outreach activities to universities with substantial numbers of underrepresented groups in the sciences and to outstanding science institutes in emerging nations. I will review what has worked well with ICAM/I2CAM, how we started and grew, and how we have inspired similar programs in other countries. (This research supported by NSF Grants DMR-0645461 and DMR-0456669).

4:42PM T6.00006 Panel Discussion —