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**Modern International Research Groups: Networks and Infrastructure**

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In a globalized economy, education and research are becoming increasingly international in content and context. Academic and research institutions worldwide try to internationalize their programs by setting formal or informal collaborations. An education that is enhanced by international experiences leads to mobility of the science and technology workforce. Existing academic cultures and research structures are at odds with efforts to internationalize education. For the past 20-30 years, the US has recognized the need to improve the abroad experience of our scientists and technologists: however progress has been slow. Despite a number of both federally and privately supported programs, efforts to scale up the numbers of participants have not been satisfactory. The exchange is imbalanced as more foreign scientists and researchers move to the US than the other way around. There are a number of issues that contribute to this imbalance but we could consider the US academic career system, as defined by its policies and practices, as a barrier to internationalizing the early career faculty experience. Strict curricula, pre-tenure policies and financial commitments discourage students, post doctoral fellows and pre-tenure faculty from taking international leaves to participate in research abroad experiences. Specifically, achieving an international experience requires funding that is not provided by the universities. Furthermore, intellectual property requirements and constraints in pre-tenure probationary periods may discourage students and faculty from collaborations with peers across the Atlantic or Pacific or across the American continent. Environments that support early career networking are not available. This presentation will discuss the increasing need for international collaborations and will explore the need for additional programs, more integration, better conditions and improved infrastructures that can encourage and support mobility of scientists. In addition, we will discuss the need to incorporate internationalization into existing norms and legacy forms that govern the research enterprise in the US.