

Bruce Gerson: Welcome to Carnegie Mellon Online. For more multimedia from Carnegie Mellon University visit www.cmu.edu/multimedia. Hello, I'm Bruce Gerson and welcome to this Carnegie Mellon University G-20 Podcast. In these interviews, you'll hear from several leading Carnegie Mellon faculty members about some of the issues related to the G-20 summit this September 24th and 25th in Pittsburgh. With us today is Pradeep Khosla, the Philip and Marsha Dowd Professor of Electrical and Computer Engineering and Dean of the College of Engineering. Professor Khosla is also the Founding Director of Carnegie Mellon CyLab, one of the largest university-based cyber security research and education centers in the United States. Professor, welcome.

Pradeep Khosla: Thank you.

Bruce Gerson: Dean Khosla, how important is globalization and innovation in the College of Engineering curriculum?

Pradeep Khosla: I can tell you it's extremely important. It is so important that we are currently seriously considering rethinking our undergraduate curriculum to include globalization and innovation. One of the things I personally am concerned about is how do we employ our 75,000 engineers that we graduate in this country every year. And without factoring in globalization and innovation, I think we're going to have a big challenge in our hands.

Bruce Gerson: Can you tell us a bit about the international programs you have underway in engineering?

Pradeep Khosla: So for a long time now, like eight or nine years, you had several international programs, they're all based in the broad area of information technology. And the reason we focus on information technology is because we cannot afford to build international programs in all areas of engineering that we currently operate in. Within these programs, Bruce, we are interested in integrating technology, policy and business education in one program. This is unique to Carnegie Mellon and it is a skill that is needed by the rest of the world in areas like networking, wireless, cyber security, where policy and technology issues cannot be decoupled from each other. So the programs we have, for example, are Kobe, Japan, in Athens, Greece with five different universities in Portugal. We are talking about a program in Africa in the country of Rwanda, which is still in conversation phases, nothing specific as yet.

Bruce Gerson: You mentioned cyber security, what are the major cyber security challenges you see now and in the future for global business leaders?

Pradeep Khosla: There are many, many challenges. Let me just break them into two very broad categories. One is technological challenges, which is just building technology that will make computer systems more secure, more available during an attack. And let's assume we are able to conquer the challenge we succeed. The bigger challenge, I think, is going to be international cooperation in the area of cyber security because without having laws and policies that are harmonized across countries, we cannot implement cyber security policies across multiple countries and be effective. So for example, if a culprit or a criminal in country A attacks the U.S. system and there is no treaty between country A and the U.S., it would be as if the U.S. had no good infrastructure, our whole investment in great infrastructure would not worth it. So I think harmonizing international issues are really important.

Bruce Gerson: What are some of your academic goals as dean of one of the world's top ranked engineering programs?

Pradeep Khosla: Well, we have several goals. My biggest priority right now is rethinking our undergraduate program in the context of innovation and globalization and trying to put forth a model both for this country and the rest of the world of an undergraduate engineering education program that would train an engineer for the world and not just for county A or country B. The second challenge that we're working on very aggressively is building both professional education and research programs in areas like energy and cyber security where we want to be able to lead both within the U.S. and the world because of our unique ability to combine technology and policy, which hardly any other place can do as effectively.

Bruce Gerson: Thank you Professor Khosla for your time and your insights. This has been a Carnegie Mellon University G-20 Podcast. Learn more from our faculty experts at cmu.edu/G-20. Thank you for listening.

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