

Is America Falling Behind?

By Chriss Swaney
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A panel of experts led by Carnegie Mellon University Engineering Dean Pradeep Khosla recently shared ideas on how the United States can prepare itself to compete in the ever-changing global economy.

“We must train engineers who will be managing, creating and deploying innovation,” said Khosla during a discussion titled: *“Is America Falling Behind.”*

Moderated by William J. Holstein, editor-in-chief of CEO Magazine, other panel members included Bob Black, deputy executive director of the American Society for Engineering Education; Peter Falettra, assistant director of the office of science for workforce development for teachers and scientists for the U.S. Department of Energy and Alex G. Sciulli, a senior vice president at Mellon Financial Corp. and first vice president at the Engineering Society of Western Pennsylvania (ESWP).

More than 60 engineers, academics, researchers and business leaders jammed a second floor ESWP meeting room Dec. 2, 2005 to discuss ways to stem the brain drain.

Despite recent studies by the American Society for Engineering Education and the National Academy of Engineering reporting that

fewer than 5 percent of undergraduate degrees awarded in 2004 were in engineering, America can remain “at the top of the food chain” if it trains its engineers in management, finance, policy and entrepreneurship, according to Khosla.

“We need to change the perception of engineering,” said Sciulli. “One of our greatest challenges is to prep engineers in topics that are considered “soft” by some — public speaking, leadership and writing,” he said.

Panel members said it’s not enough anymore to be a technical genius, you have to be able to develop a business plan and execute it, too.

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“It’s a new world out there and we need to understand how important engineers and scientists are,” Falettra said. “Scientists and engineers make up less than 5 percent of the population but create up to 50 percent of our gross domestic product.”

But in the disciplines underpinning our high-tech economy — en-



Above: Panelists Pradeep Khosla, Bob Black, Bill Holstein, Alex Sciulli, and Peter Falettra



Left: Panelist Peter Falettra (U.S. Department of Energy)

gineering, math, and science — America is steadily losing its global edge. China will likely produce six times the number of engineers next year than we will graduate, according to the American Society for Engineering Education.

ents than foreign companies. Now, that margin is down to 4,000, and six of the top ten companies are foreign.

Still, Khosla argues that all is not lost in the United States quest to remain a global superpower.

“We still lead the world in research and development,” Khosla said. “We can make the changes necessary to be competitive.”

Sciulli said that you don’t have to be an engineer and work in technology. “You can take leadership roles in other areas.”

That leadership goal is a big part of the ESWP’s mantra as the 125-year-old organization holds quarterly educational panel discussions about key engineering issues, and supports speakers interested in giving talks at area high schools about careers in engineering.



Above: Panel moderator Bill Holstein, (CEO Magazine)

Below: Panelists Pradeep Khosla (CMU) and Bob Black, (American Society for Engineering Education)



Above: Alex Sciulli replies to a question for the audience while moderator Bill Holstein listens.

Below: the media listens as the discussion continues after the program



Dean Pradeep Khosla discusses the issue with colleagues following the presentation

Photography by Larry Rippel