



**HIGH ACHIEVERS:** The finalists of Intel Corporation's Science Talent Search posed with President Bush in the Rose Garden of the White House earlier this year. Of the top 40 finalists, 60 percent were the children of immigrants.  
ERIC DRAPER/WHITE HOUSE PHOTO/AP

## Immigrants' children ace sciences

By [Amanda Paulson](#) | Staff writer of *The Christian Science Monitor*

Enrico Fermi, Albert Einstein, John von Neumann, Niels Bohr: The legacy of foreign-born scientists and mathematicians in America is well known.

They helped create the computer and the atom bomb, and have contributed a good portion of America's Nobel Prizes. Today, more than half of all engineers with PhDs working here were born abroad, as were 45 percent of computer scientists and physicists with doctorates.

But according to a recent study, there's another, less documented benefit that many immigrants bring to math and science in this country: their children. While doing some research on the Intel Science Talent Search (the "Junior Nobel Prize"), Stuart Anderson noticed a high number of finalists who seemed to have recent immigrant roots.

When the director of the National Foundation for American Policy delved deeper, the results were even more striking. Seven of the Top 10 award winners in this year's contest were immigrants or their children. Of the top 40 finalists, 60 percent were the children of immigrants. And a striking number had parents who had arrived on skilled employment, or H-1B, visas.

"The study indicates there are significant gains to immigration that haven't really been realized," says Mr. Anderson.

"There's been controversy over employment-based immigration, but if we had blocked these people from coming in, two-thirds of the top future of math and science wouldn't be here, because we wouldn't have allowed their parents in."

It's no surprise to most people who follow such high-level competitions, of course, that children of immigrants are well represented there, but even participants say they are surprised at just how significant the trend is.

"It seems like a lot of the parents who are immigrants, they've just had to work a lot harder to get where they are right now," says Divya Netti, a finalist in Intel whose research on the molecular compound myosin furthered the understanding of muscle contractions. "In India, such a huge focus is placed on

education, because jobs are so scarce that it's a question of survival."

Her parents, both software engineers, came to the US from India when Divya was 9 months old, in large part because they wanted more opportunities for their children.

Anderson says immigrant parents view the science and math fields as good for their children because they're objective. "You don't have to worry about the subjectivity that can creep into fields like politics, or law, that are based on family connections or what you look like," he says.

There's also the fact that many of the parents themselves are working in those fields. In fact, the numbers that arrived on the professional H-1B visas is strikingly high. Of the 40 Intel finalists, for instance, 18 had parents who came on an H-1B visa - more than the 16 finalists who had American-born parents.

The visas are a political hot potato, however. Between the security concerns after 9/11 and economic concerns during the recession, there's been significant pressure to reduce immigration and tighten the visa-granting process.

A National Science Foundation report issued this year noted that denial of high-skilled visa applications nearly doubled from 2001 to 2003, and universities have said fewer foreign students are applying.

The report also gave a stark warning about how the future of US dominance in research and development could be affected if the country continues to lag behind in educating its own citizens in the sciences. And this spring, 25 academic and scientific organizations, including the National Academy of Sciences and the Association of American Universities, issued a joint statement about the need for changes to the granting of visas.

So far, however, the discussion has centered only on the immigrants themselves - not their children. Yet the notion that many of these children are successful has been established for some time, says Marcelo Suárez-Orozco, codirector of immigration studies at New York University.

What's striking about the data, he says, is how "bimodal" it is, with immigrants' children trending toward both ends of the spectrum. Studies have shown that today, they're more likely than ever to end up at places like Princeton, or Harvard, or MIT.

"But at the other end of this distribution, there are large numbers that are struggling," says Dr. Suárez-Orozco. Immigrant children arrive with an edge over their American counterparts, Suárez-Orozco says, but "over time there is a relative decline in terms of optimism and energy."

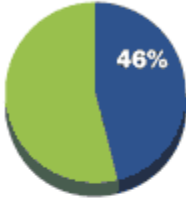
Among the top students that Anderson looked at, however, that optimism and energy are still very much in evidence.

Andrei Munteanu - whose parents came from Romania when he was 13, and who got the idea for his research on data to predict asteroid collisions from watching the movie "Armageddon" - is excited about starting classes at Harvard, which he chose over MIT because he "likes other things" in addition to math and science. Like Divya, he credits his parents with a lot of his success. "They gave me not pressure," he says, "but encouragement."

## Top performers

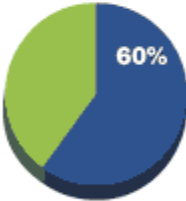
### Children of Immigrants on 2004 US physics team

Out of 20 high school seniors



### Children of immigrants among 2004 Intel science talent search finalists

Out of 40 high school seniors



### Children of immigrants among 2004 US Math Olympiad top scorers

Out of 20 high school seniors



SCOTT WALLACE - STAFF  
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AMERICAN POLICY INTERVIEWS WITH  
FINALISTS AND PARENTS