

May 15, 2023

The Honorable Mike Gallagher
Chairman, Select Committee on the Strategic
Competition Between the United States and the
Chinese Communist Party
U.S. House of Representatives
Washington, DC 20515

The Honorable Raja Krishnamoorthi
Ranking Member, Select Committee on the
Strategic Competition Between the United States
and the Chinese Communist Party
U.S. House of Representatives
Washington, DC 20515

Cc: Members of the Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party

Dear Chairman Gallagher, Ranking Member Krishnamoorthi, and Members of the Select Committee on the Strategic Competition Between the United States and the Chinese Communist Party:

U.S. leadership in technology rests in large part on our ability to leverage domestic and international talent. We are writing because you are in a position to influence whether Congress protects or forfeits this national asset in the face of unprecedented competition from China.

As national security leaders who have served in each of the past several administrations, we are united in calling on Congress to address the emerging gap in advanced STEM talent with China. From computing to aerospace, critical sectors of our defense-industrial base rely on attracting global STEM talent. For example, nearly two in three graduate students in the United States specializing in artificial intelligence and semiconductor-related programs were born abroad.¹

As this committee explores a wide range of issues, it has a critical opportunity to highlight the self-inflicted drag that immigration bottlenecks impose on U.S. competitiveness. Previous legislative efforts have considered exempting those with advanced STEM degrees from green card caps to better compete with China. That policy adjustment would respond appropriately to this national security concern, especially if paired with policies that protect government-supported research and development, such as the full implementation of NSPM-33. We urge the committee to conduct a substantive hearing examining the U.S. talent bottleneck with knowledgeable witnesses and to issue a prescriptive report to committees with a jurisdictional mandate to take action.

¹ Will Hunt and Remco Zwetsloot, "[The Chipmakers: U.S. Strengthes and Priorities for the High-End Semiconductor Workforce](#)," Center for Security and Emerging Technology, 2020.

President Xi Jinping has said that “scientific and technological innovation has become the main battlefield of the international strategic game, and the competition around the commanding heights of science and technology is unprecedentedly fierce.”² Despite significant investments by the Chinese Communist Party to attract international science and engineering talent through its Thousand Talents Plan and other means, the United States remains the most desirable destination for the world’s best scientists and engineers³. The Chinese Communist Party recognizes this; Chinese sources have worried that expanded talent pipelines into the U.S. “would pose a huge challenge for China.”⁴

Bottlenecks in the U.S. immigration system endanger our national advantage by driving international science and engineering talent elsewhere. Indian STEM graduates can expect to wait for decades before being issued a green card.⁵ A recent study suggests about 80% of STEM master’s graduates leave the United States, largely as a result of policy restrictions.⁶ Inaction on resolving this bottleneck is already exacting a cost. In 2021, National Defense Industrial Association members identified the U.S. human capital gap as the single most vulnerable part of their supply chain.⁷ Recent studies show half of advanced STEM workers in the defense-industrial base were born abroad.⁸ These reports illustrate how efforts to onshore critical supply chains may not succeed unless we also onshore the talent necessary to compete.

China is aggressively growing its domestic STEM talent pipelines. It has doubled its higher education budget in less than a decade.⁹ Chinese universities are rapidly climbing global rankings. While the United States began this century with a comfortable lead, China now has double the annual U.S. STEM masters’ output and will double the number of U.S. STEM PhDs within the next three years.¹⁰ Much of this talent will be working in Pentagon-identified critical technology areas—such as AI, biotechnology, hypersonics, and space. None of these trajectories show signs of slowing down.

² May 28, 2021 [speech](#) translated by Zichen Wang.

³ Helen Toner, “[Foreign STEM Talent is the Key to Future U.S. Competitiveness](#),” Aspen Institute, 2022.

⁴ Remco Zwetsloot, “[Winning the Tech Talent Competition](#),” Center for Strategic and International Studies, 2021.

⁵ William A. Kandel, Jill H. Wilson, and Sarah A. Donovan, “[U.S. Employment-Based Immigration Policy](#),” Congressional Research Service, 2022.

⁶ Michel Beine, Giovanni Peri, and Morgan Raux, “[International College Students’ Impact on the U.S. Skilled Labor Supply](#),” NBER Working Paper Series, 2022.

⁷ “[Vital Signs 2022: The Health and Readiness of the Defense Industrial Base](#),” National Defense Industrial Association, 2022.

⁸ Jeremy Neufeld, “[STEM Immigration is Critical to American National Security](#),” Institute for Progress, 2022.

⁹ Ryan Fedasiuk, Alan Omar Loera Martinez, and Anna Puglisi, “[A Competitive Era for China’s Universities](#),” Center for Security and Emerging Technology, 2022.

¹⁰ Zwetsloot, “[Winning the Tech Talent Competition](#),” Center for Security and Emerging Technology, 2021.

Fixing the U.S. talent bottleneck goes hand in hand with ensuring that U.S. research is secure from theft or espionage. Drawing on the world's best and brightest allows us to accelerate scientific and technological advancement. Strengthening security standards ensures that sensitive information and intellectual property remain secure. The United States is fully capable of advancing both objectives.

We believe a security-conscious approach to strengthening our advanced STEM talent will help address the national security and global competition issues addressed in this letter. As the National Security Commission on Artificial Intelligence put it, such targeted STEM talent reforms are “a national security imperative.”¹¹

Preserving our ability to attract international STEM talent transcends political partisanship. The House G.O.P. China Task Force Report noted the U.S. “needs to continue to attract the best and brightest STEM talent from around the world, or risk falling behind in the global race for talent and losing its competitive advantage in innovation.”¹² Similarly, the Biden administration has argued “one of America’s greatest strengths is our ability to attract global talent to strengthen our economy and technological competitiveness.”¹³ A recent study of the National Security Innovation Base by the Reagan Institute found that current talent pipelines pose “ongoing major vulnerabilities.”¹⁴ The Future of Defense Task Force, a bipartisan initiative of the House Armed Services Committee, identified STEM immigrants’ contributions to U.S. leadership as “staggering” but concluded that “immigration policy hinders the U.S.’s ability to attract and retain foreign STEM talent that instead flows to other countries, including competitors.” The Task Force called for “aggressively expanding visas for STEM talent.”¹⁵ Such measures, along with vital security screening provisions, fit squarely within the spirit of this bipartisan committee’s purview as key levers that will determine the outcome of strategic competition with China.

China is the most significant technological and geopolitical competitor our country has faced in recent times. With the world’s best STEM talent on our side, it will be very hard for the United States to lose. Without it, it will be very hard for us to win.

Sincerely,

¹¹ [“Final Report,”](#) National Security Commission on Artificial Intelligence, 2021.

¹² [“China Task Force Report,”](#) 2020.

¹³ [“Biden-Harris Administration Actions to Attract STEM Talent and Strengthen our Economy and Competitiveness,”](#) 2022.

¹⁴ [“National Security Innovation Base Report Card,”](#) Ronald Reagan Institute, 2023.

¹⁵ [“Future of Defense Task Force Report 2020,”](#) House Armed Services Committee, 2020.

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