

TECH POLICY

The US crackdown on Chinese economic espionage is a mess. We have the data to show it.

The US government's China Initiative sought to protect national security. In the most comprehensive analysis of cases to date, MIT Technology Review reveals how far it has strayed from its goals.

By Eileen Guo, Jess Aloe, & Karen Hao

December 2, 2021



SELMAN DESIGN

- The Department of Justice has no definition of what constitutes a China Initiative case.
- The initiative was supposed to focus on economic espionage, but it has increasingly charged academics with "research integrity" issues.
- Nearly 90% of the defendants charged are of Chinese heritage.

professor accused of lying to investigators about funding from China. And a man sentenced for organizing a turtle-smuggling ring between New York and Hong Kong.

For years, the US Department of Justice has used these cases to highlight the success of its China Initiative, an effort to counter rising concerns about Chinese economic espionage and threats to US national security. Started in 2018, the initiative was a centerpiece of the Trump administration's hardening stance against China.

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Now, an investigation by MIT Technology Review shows that the China Initiative has strayed far from its initial mission. Instead of focusing on economic espionage and national security, the initiative now appears to be an umbrella term for cases with almost any connection to China, whether they involve state-sponsored hackers, smugglers, or, increasingly, academics accused of failing to disclose all ties to China on grant-related forms. To date, only about a quarter of defendants charged under the initiative have been convicted, and about half of those defendants with open charges have yet to see the inside of an American courtroom.

Although the program has become a top priority of US law enforcement and domestic counterintelligence efforts—and an unusual one, as the first country-specific initiative—many details have remained murky. The DOJ has not publicly defined the initiative or answered many basic questions about it, making it difficult to understand, let alone assess or exercise oversight of it, according to many civil rights advocates, lawmakers, and scholars. While the threat of Chinese intellectual property theft is real, critics wonder if the China Initiative is the right way to counteract it.

Today, after months of research and investigation, MIT Technology Review is publishing a searchable database of 77 cases and more than 150 defendants. While likely incomplete, the database represents the most comprehensive accounting of the China Initiative prosecutions to date.

Our reporting and analysis showed that the climate of fear created by the prosecutions has already pushed some talented scientists to leave the United States and made it more difficult for others to enter or stay, endangering America's ability to attract new talent in science and technology from China and around the world.

Here's what we found:

- The DOJ has neither officially defined the China Initiative nor explained what leads it to label a case as part of the initiative.

forms.

- A significant number of research integrity cases have been dropped or dismissed.
- Only about a quarter of people and institutions charged under the China Initiative have been convicted.
- Many cases have little or no obvious connection to national security or the theft of trade secrets.
- Nearly 90% of the defendants charged under the initiative are of Chinese heritage.
- Although new activity appears to have slowed since Donald Trump lost the 2020 US presidential election, prosecutions and new cases continue under the Biden administration.
- The Department of Justice does not list all cases believed to be part of the China Initiative on its webpage and has deleted others linked to the project.

Two days after MIT Technology Review requested comment from the DOJ regarding the initiative, the department made significant changes to its own list of cases.

Lawmakers say our findings are “startling.”

The Justice Department is “intentionally obtuse with us and will not address specific cases,” said Representative Judy Chu, a Democrat from California. “Whenever we ask for data, they usually don’t give it back to us. What you have are numbers, and it is startling to see what [they] are.”

deleting 57 defendants previously connected to the China Initiative from its website. This included several instances where the government had announced prosecutions with great fanfare, only for the cases to fail—including one that was dismissed by a judge after a mistrial.

Our findings highlight “the disconnect between the theory behind the China Initiative and the prosecutions that are brought in practice,” said Ashley Gorski, a staff attorney with the American Civil Liberties Union’s National Security Project.

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They also demonstrate the “disproportionate impact on Asian Americans and the immigrant community,” said Gisela Kusakawa, a staff attorney at Asian Americans Advancing Justice | AAJC, an advocacy group. “Essentially, national security issues are being used as a pretext to target our community.

“This is resulting in a brain drain from and distrust towards the United States, which is counter-productive to national security.”

What our data show

Our database of China Initiative cases draws primarily on the press releases that have been added to the DOJ’s China Initiative webpage over the last three years, including those recently removed from its public pages. We supplemented this information with court records and interviews with defense attorneys, defendants’ family members, collaborating researchers, former US prosecutors, civil rights advocates, lawmakers, and outside scholars who have studied the initiative.

It is also worth noting our disclosures, including cases involving MIT, which owns this publication, and the personal experiences of our reporters with government investigations. You can read [a full report on our methodology here](#), which includes a detailed [transparency statement](#).

Here's what we've learned from our analysis:

The China Initiative has no official definition

Though considered one of the DOJ's flagship efforts, the department has never actually defined what constitutes a China Initiative case. Wyn Hornbuckle, the deputy director of the DOJ public affairs office, said it had "no definition of a 'China Initiative' case other than the goals and priorities we set out for the initiative in 2018."

Goals and Priorities of the China Initiative

A fact sheet the Department of Justice released on November 1, 2018, states that these were the China Initiative's priorities:

- Identifying, resourcing, and completing priority trade secret cases.
- Developing an enforcement strategy on what the government has termed "non-traditional collectors," referring to anyone—not just traditional spies—who could collect sensitive information on behalf of China, including, in the DOJ's words, "researchers in labs, universities, and the defense industrial base."
- Educating colleges and universities about "influence efforts on campus."
- Applying and enforcing the Foreign Agents Registration Act (FARA).
- Equipping the nation's attorneys to properly counter the China threat.
- Implementing the Foreign Investment Risk Review Modernization Act.
- Address supply chain threats in telecommunications, especially with regard to 5G.
- Identify Foreign Corrupt Practices Act cases.
- Improve China's collaboration on Mutual Legal Assistance Agreement requests.

A former senior DOJ official, who we are not naming so as to share their full perspective, said the China Initiative was an attempt to tell law enforcement that “these are the types of crimes we’re seeing run rampant” and that “these are important crimes to investigate, these are worthy of your time and resources.”

Former US Attorney for the District of Massachusetts Andrew Lelling, a founding member of the initiative’s steering committee, said his interpretation was that “all cases involving researchers got in,” and that, “if the tech was going to China, I’m certain they would categorize that as in the China Initiative.”

There's a decreasing focus on economic espionage

The China Initiative claims to be centered on countering economic espionage, yet our database finds that only 19 of the 77 cases (25%) include charges of violating the Economic Espionage Act (EEA). The EEA covers both theft of trade secrets, which can benefit any outside entity that does not own the intellectual property, and economic espionage, which has additional burden of proof requirements that the theft is ultimately for the benefit of a foreign government.

Eight of the 19 China Initiative cases specifically charged economic espionage, while the remaining 11 alleged only theft of trade secrets.

The number of charges filed under the EEA has remained steady each year, but the increasing focus on other areas means that the proportion of economic espionage charges has decreased over time: In 2018, 33% of new cases (four out of 12) announced included violations of the EEA. By 2020, only 16% of new cases (five out of 31) included EEA violations.

Research integrity cases grew to dominate China Initiative

In addition, some of the project’s stated goals have never been met. When announcing the initiative in 2018, then-Attorney General Jeff Sessions said it would also focus on countering

inance chairman of the Republican National Committee. He pleaded guilty to acting as an unregistered agent of a foreign government in October 2020. President Donald Trump pardoned Broidy three months later, on his last day in office—the only China Initiative defendant who has been pardoned to date.

There's an increasing focus on "research integrity"

While the proportion of EEA cases has decreased, 23 of the 77 cases (30%) have involved questions of “research integrity.” Most of these involve prosecutors accusing academics of failing to fully disclose all Chinese affiliations and sources of income in various forms—although whether these were deliberate attempts to hide Chinese ties or the result of unclear rules has been heavily contested by defense attorneys and outside critics.

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The US is unfairly targeting Chinese scientists over industrial spying, says report

A new study of economic espionage cases in the US says people of Chinese heritage are more likely to be charged with crimes—and less likely to be convicted.

Our analysis shows a significant shift in focus toward academics beginning in 2019 and continuing through 2020. In 2018, none of the cases were about research integrity. By 2020, 16 of the 31 (52%) of newly announced cases were. (One research integrity case in 2020 also included a charge of violating the EEA.)

At least 14 of these research integrity cases began due to suspicions arising from links to “talent programs,” in which Chinese universities provide financial incentives for academics to conduct research, teach, or bring other activities back to the sponsoring institution, on a part- or full-time basis. (At least four cases of trade secret theft also involve alleged talent program participation.)

Federal officials have repeatedly said that participation in talent programs is not illegal—though they have also called them “brain gain programs,” in the words of Bill Priestap, former FBI

assistant director of counterintelligence, that “encourage theft of intellectual property from US institutions.”

Cases charged under the China Initiative by year

National security links are sometimes weak.

The initiative's increasing focus on research integrity has included several cases of academics working on topics such as artificial intelligence or robotics, which may have national security applications. But most of the work in these areas is basic research, and many disciplines in which cases have been brought have no clear links to national security.

Nine of 23 research integrity cases involve health and medical researchers, including people studying heart disease, rheumatoid arthritis, and cancer; six of those centered on researchers funded by NIH—a reflection of the institute's aggressive stance on countering “inappropriate influence by foreign governments over federally funded research,” said a representative of the NIH Office of Extramural Research. NIH's efforts predate the China Initiative, and the representative referred questions on the initiative to the Justice Department.

Funding agencies allegedly defrauded in research integrity cases

Instead, the national security implications seem to center around concerns that any individuals with links to China could serve as “non-traditional collectors,” which the China Initiative fact sheet describes as “researchers in labs, universities, and the defense industrial base that are being coopted into transferring technology contrary to US interests.” But as our database shows, only two of 22 researchers were ever accused of trying to improperly access information or smuggle goods into China. The charges were later dropped.

China Initiative cases aren't as successful as the DoJ claims

Three years after the program's start, less than a third of China Initiative defendants have been convicted. Of the 148 individuals charged, only 40 have pleaded or been found guilty, with guilty pleas often involving lesser charges than originally brought. Almost two-thirds of cases—64%—are still pending. And of the 95 individuals still facing charges, 71 are not being actively prosecuted because the defendant is in an unknown location or cannot be extradited.

In particular, many of the cases concerned with research integrity have fallen apart. While eight are still pending, seven cases against academics have ended in dismissal, one has ended in acquittal, and six in a guilty plea or conviction. That's a sharp contrast to the usual outcomes of federal criminal cases, where the vast majority end in a guilty plea, according to [a Pew Research Center analysis of federal statistics](#).

Outcomes for defendants charged under the China Initiative

Nearly 90% of all cases are against people of Chinese origin

One of the earliest and most persistent criticisms of the China Initiative was that it might lead to an increase in racial profiling against individuals of Chinese descent, Asian Americans, and Asian immigrants. DOJ officials have repeatedly denied that the China Initiative engages in racial profiling, but individuals of Chinese heritage, including American citizens, have been disproportionately affected by the initiative.

Our analysis shows that of the 148 individuals charged under the China Initiative, 130—or 88%—are of Chinese heritage. This includes American citizens who are ethnically Chinese and citizens of the People's Republic of China as well as citizens and others with connections to Taiwan, Hong Kong, and long-standing Chinese diaspora communities in Southeast Asia.

Defendants of Chinese heritage

These numbers are “really high,” said Margaret Lewis, a law professor at Seton Hall University who has written extensively about the China Initiative. “We knew that it’d be a majority,” she added, but this “just underscores that the ‘but we’re prosecuting other people too’ argument...is not convincing.”

New cases are still being brought under the Biden administration

The initiative was launched under the Trump administration, and while the number of cases explicitly linked to the China Initiative has fallen since President Joe Biden took office, they have not stopped.

For example, Mingqing Xiao, a mathematics professor in Illinois, was charged in April 2021 with failing to disclose ties to a Chinese university on his application for a National Science Foundation grant. And an indictment against four Chinese nationals for hacking dozens of companies and research institutions was unveiled in July.

Meanwhile, federal attorneys have continued to push prosecutions forward. The trial of Charles Lieber, a Harvard chemistry professor accused of hiding his ties to Chinese universities, is scheduled to begin in mid-December. Prosecutors are planning to go to trial in cases against high-profile academics in Kansas, Arkansas, and elsewhere in the first few months of 2022.

New China Initiative cases brought in 2021

How it began

Concerns about Chinese economic espionage targeted at the US have been growing for years, with estimates of the cost to the American economy ranging from \$20 billion to \$30 billion to as high as \$600 billion. Enforcement began rising dramatically under the Obama administration: in 2013, when the administration announced a new strategy to mitigate the theft of US trade secrets, China was mentioned more than 100 times.

In 2014, the Justice Department filed cyberespionage charges against five hackers affiliated with the Chinese People's Liberation Army—the first time state actors had been prosecuted by the US for hacking. Then in 2015, the United States and China signed a historic agreement committing not to conduct commercial cybertheft against each other's businesses.

But it was not until 2018, as part of the Trump administration's far more confrontational approach to China, that the department formally launched its first country-specific program.

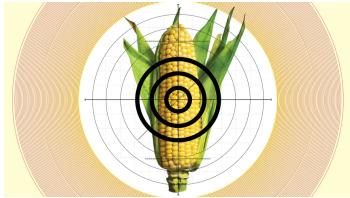
The effort was “data-driven,” according to the former Justice Department official, and “born out of the intelligence briefings to the attorney general and senior DOJ leaders from the FBI that, day after day, showed that the PRC and affiliated actors across the board [were] deeply involved in hacking, economic espionage, trade secret theft, subverting our export controls, and engaging in nontraditional collection methods.” He said this included Chinese consulates helping to “mask the actual backgrounds of Chinese visa applicants to avoid visa rejection based on their affiliations with the PRC military.”

Trump, however, had campaigned partly on anti-Chinese and anti-Communist rhetoric—infamously saying at one rally in 2016, “We can't continue to allow China to rape our country, and that's what they're doing.”

that comes over to this country is a spy.

This was the backdrop when Sessions announced the launch of the China Initiative on November 1, 2018.

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The FBI's decades-long fight against industrial espionage hasn't really worked

In the global economy, companies that steal trade secrets rarely face the consequences

“We are here today to say: enough is enough,” the attorney general told reporters, before announcing the unsealing of an indictment in a dramatic, years-long saga of high tech trade theft: three Taiwanese individuals who had been charged with allegedly stealing trade secrets from an Idaho-based semiconductor company, Micron, for the ultimate benefit of a Chinese state-owned enterprise.

The three worked for the Taiwanese chipmaker UMC, which had made a deal with a Chinese counterpart to jointly develop memory chips using a type of semiconductor technology known as dynamic random-access memory. UMC, which said it wasn't aware of its employees' actions, pleaded guilty to theft of trade secrets in October 2020 and agreed to pay a \$60 million fine.

The case against the three individuals has not yet been resolved.

The Micron case was meant to signal the types of trade theft the new initiative would focus on, but our data show that it was far from the norm.

Chilling effects

Only one research integrity case linked to the China Initiative has gone to trial, and it ended in a high-profile acquittal. Anming Hu, a professor of nanotechnology at the University of Tennessee-Knoxville, originally was accused of defrauding NASA by failing to disclose all of his overseas affiliations and was ultimately charged with six counts of wire fraud and false statements. After a mistrial, a judge threw out the government's attempt to retry Hu and acquitted him of all charges.

“Without intent to harm, there is no ‘scheme to defraud,’” the judge wrote in his decision, noting that NASA also received the research that it paid for. (NASA declined to comment for this story.) Hu's case was one of those removed from the China Initiative webpage after MIT Technology Review reached out with questions.

Other cases have been dismissed more quietly. In the space of one week in July 2021, shortly after the collapse of Hu's trial, the government dismissed five cases against Chinese researchers accused of lying about their military affiliations on visa applications. The government did not explain in court filings why it dropped the cases, but the dismissals came after doubts arose about whether the forms' questions about military service clearly covered the defendants, who were civilians working at military universities.

On November 19, those cases were also removed from the China Initiative webpage, after MIT Technology Review submitted a list of questions to the Justice Department. Last year, the

“I am most concerned about how the initiative will deny the USA access to the world’s best science and technology talent.”

—Randy Katz, former vice chancellor of research, UC Berkeley

The effect of all these cases on Chinese, Chinese American, and scientific communities has been profound.

A member survey of more than 3,200 physicists carried out in September by the American Physical Society found that more than 43% of foreign early-career researchers now consider the United States to be unwelcoming for international students and scholars. Less than 25% believe that the US federal government does a good job of balancing national security concerns with the research requirements for open science.

Another survey of nearly 2,000 scientists at 83 research institutions carried out by the University of Arizona with the Committee of 100, an advocacy group that focuses on US-China issues, found that 51% of scientists of Chinese descent, including US citizens and noncitizens, feel considerable fear, anxiety, or both, about being surveilled by the US government. This compares to just 12% of non-Chinese scientists.

Some respondents in the University of Arizona study indicated that this climate of fear has affected how—or what—they choose to research. One said they were limiting their work to only use data that is publicly available rather than collecting their own original data; one indicated that they would no longer host visitors from China; another said they would focus on what they call “safer” topics rather than “cutting edge” research.

The effects of the initiative stretch even further. No one knows the exact number of scientists who have returned to China as a result of investigations or charges, but in late 2020, John Demers, then the assistant attorney general for national security, said that “more than 1,000 PLA-affiliated Chinese researchers left the country.” An additional group of 1,000 Chinese students and researchers had their visas revoked that September due to security concerns. How their security risks or affiliations with the People’s Liberation Army of China were determined, however, has not been explained.

Randy Katz, a computer science professor at UC Berkeley who served as the university’s vice chancellor for research until earlier this year, says the initiative will have a grave impact on US

“I am most concerned about how the initiative will deny the best access to the world’s best science and technology talent,” he said in an email. “Recently, as [many] as 40% of our international graduate students were from China. These students are heavily represented in the STEM fields, are highly competitively selected...and represent a critical component of our research workforce. We want them to come and we want them to stay and innovate in the USA.”

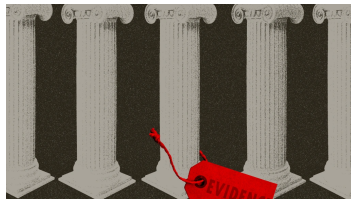
Changing course?

After three years of prosecutions and fear, the tide may be turning.

Criticism of the initiative has ramped up in recent months, particularly after Anming Hu’s acquittal and the decision to drop several cases against academics. In July, Representative Ted Lieu, a Democrat from California, and 90 members of Congress sent an [open letter](#) to Attorney General Merrick Garland urging him to investigate the “repeated, wrongful targeting of individuals of Asian descent for alleged espionage.”

A growing chorus of civil society groups and scientific associations have also made pleas for the program to be terminated, including a coalition of civil rights groups that [wrote an open letter to Biden in January](#) and more than [2,000 university professors](#) who signed a request to Garland in September to end the initiative.

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The FBI accused him of spying for China. It ruined his life.

Anming Hu’s case was meant to be a victory for the “China Initiative,” a US effort to root out spies. Instead, it turned more attention on the FBI.

Even former DOJ officials are advocating for a change in direction.

Demers [reportedly](#) considered a proposal for amnesty programs that would allow researchers to disclose previously undisclosed ties with no fear of prosecution—though this plan was quickly [shot down](#) by Republican lawmakers.

Meanwhile Lelling, the former Massachusetts prosecutor, said he also believes that “general deterrence has been achieved.” “If the message was, ‘Make sure you are utterly transparent about your foreign collaboration,’ all right, everyone gets it,” he said. “There’s no need to prosecute another 23 academics.”

This fall, a group of lawmakers sat down with Garland to discuss the China Initiative as well as the rise in anti-Chinese hate during the pandemic. Garland did not commit to ending the project, but he did promise that he would restart the implicit bias trainings at the DOJ that had stopped under Trump.

Garland has also indicated in [Congressional testimony](#) that Matt Olsen, the newly confirmed assistant attorney general of the DOJ’s national security division, is planning a review of all programs under his portfolio, as Hornbuckle, the DOJ spokesperson, shared when MIT Technology Review first reached out for comment. Hornbuckle did not, however, respond to a follow-up question on whether the review was intended to address specific criticisms of the China Initiative.

Trump-era presidential directive on strengthening the security of federally funded research.

In the meantime, the people caught up in the China Initiative have been left to deal with the damage done to their lives and careers—even if their cases were ultimately thrown out.

Hu, the professor who was acquitted after a mistrial, has been offered his old job at the University of Tennessee-Knoxville; he is a Canadian citizen, however, and it is still unclear whether he will be allowed to remain and work in the United States. MIT Technology Review found that some American and Chinese citizens who intended to stay in the US have moved overseas, primarily to China, and some who were fired by their US employers are now conducting their research elsewhere—in some cases leading the laboratories to which they were once accused of hiding their affiliation.

Yasheng Huang, a professor at MIT Sloan School of Management who has spoken about many China Initiative cases, says that the long-term costs of these investigations is only starting to be felt.

“We’ve heard stories of young PhD students who are not thinking at all of applying to jobs in the United States: they want to go to Europe, they’re going to Asia,” he said. “They don’t want to stay in the United States. Some of these people are the best and brightest in their fields.”

“The US is losing some of its most talented people to other countries because of the China Initiative,” he said. “That’s bad for science, and that’s bad for America.”

Do you have more information, or questions you’d like answered, about the China Initiative? Please reach out to us at tips@technologyreview.com.

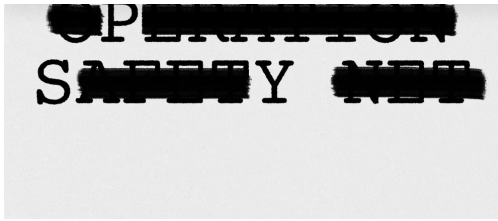
Additional reporting by Tate Ryan-Mosley, Bobbie Johnson, Patrick Howell O’Neill, Alyssa Wickham, and John Emerson.

*This story previously misstated that “seven cases against academics have ended in dismissal or acquittal.” Seven cases ended in dismissal, and one ended in acquittal. It also erroneously attributed a University of Arizona and Committee of 100 study to Arizona State University. The story has been updated. This story has been also been updated at the request of the Department of Justice to specify that the DOJ shared statements from Attorney-General Merrick Garland when first contacted for comment. **T***

by Eileen Guo, Jess Aloe, & Karen Hao

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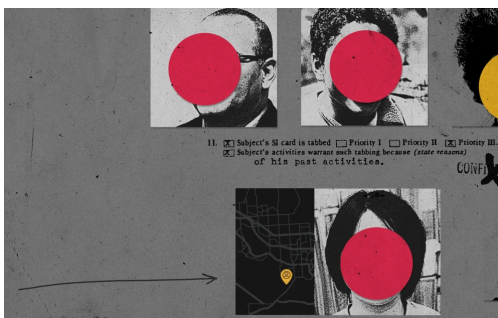
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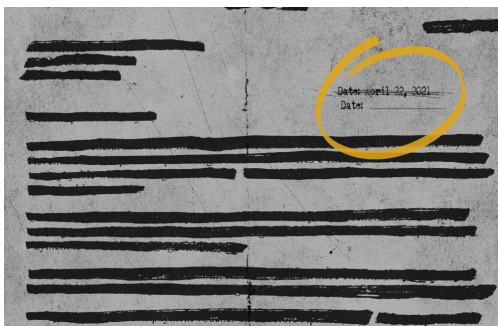
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