

# Science and Security Resources

Concerns over national security and science have existed prior to the Cold War. 9/11 created new concerns about who is conducting research on campuses. Since that time, universities have become more vigilant over security of research facilities and research programs and taken additional measures to ensure compliance with rules relating to export controls, dual use research, and classified information. Additionally, foreign students and faculty now face stricter scrutiny from the federal government before they are admitted into the U.S.

**Key Terms and Background Information** 

Federal Security Agency Briefs

**Relevant Reports** 

Tools, Experts, and Compliance Resources

Case Study Examples Involving Security Concerns





# **Key Terms and Background Information**

<u>Export Controls:</u> seek to *control* access to specific types of technology and the associated data and services. A *deemed export* is the export or release of <u>information</u> about a "controlled technology" to a foreign national in the U.S. or abroad for which a government export license is required.

Many universities have designated staff such as security officers and/or export control officers to comply with the export control laws and regulations. Three government organizations have jurisdiction for enforcement of export controls:

- Bureau of Industry and Security, U.S. Department of Commerce oversees the Export
  Administration Regulations (EAR) which control dual-use technology on the Commerce Control
  List (CCL).
- Directorate of Defense Trade Controls, U.S. Department of State oversees the International Traffic in Arms Regulations (ITAR) which controls items designed and developed for military use on the U.S. Munitions List.
- Office of Foreign Assets Controls in the Department of Treasury controls interactions with nations in which the U.S. has trade embargos, e.g. Cuba, Iran, Syria, North Korea, Myanmar and Sudan.
- More: Export Controls: ITAR and EAR; DOJ's China Initiative

<u>Fundamental Research Exclusion</u>: Excludes most campus-based research at U.S. universities from export controls. Applies to: unrestricted publicly available technology and software arising during or resulting from fundamental research undertaken at U.S. universities where the resulting information is ordinarily published and shared broadly.

<u>Deemed Exports:</u> Deemed exports was added to the export regulations in 1994 and is the export or release of information about a "controlled technology" to a foreign national in the U.S. or abroad for which a government export license is required. Defines "Technology" as specific information necessary for the "development", "production", or "use" of a product.

National Security Directive (NSDD) 189: Issued in 1985 by the Reagan Administration and reaffirmed in November 2001 by then-National Security Advisor Condoleezza Rice, established a "fundamental research" classification as the appropriate means for protecting national security while encouraging necessary research. Declared fundamental research should remain unrestricted.

More: Secretary Condoleezza Rice's 2001 reaffirmation of NSDD-189

<u>Controlled Unclassified Research (CUI)</u>: Established by Executive Order 13556, the Controlled Unclassified Information (CUI) program standardizes the way the Executive branch handles unclassified information that requires safeguarding or dissemination controls pursuant to and consistent with law, regulations, and Government-wide policies.

More: CUI Categories; Official CUI Policy Documents; Additional Background Documents



Dual Use Research of Concern (DURC): Life sciences research that, based on current understanding, can be reasonably anticipated to provide knowledge, information, products, or technologies that could be directly misapplied to pose a significant threat with broad potential consequences to public health and safety, agricultural crops and other plants, animals, the environment, materiel, or national security.

2010 DOD Memo on Fundamental Research Policy: Signed by then Under Secretary of Defense Ashton Carter, provides clarifying guidance and reinforces earlier guidance, to ensure DOD will not restrict disclosure of the results of fundamental research, unless such research efforts are classified for reasons of national security or as otherwise required by applicable federal statutes, regulations, or executive orders.

Classified Research and Information, Presidential Executive Order 13526: 2009 Executive Order signed by President Obama that prescribes a uniform system for classifying, safeguarding, and declassifying national security information, including information relating to defense against transnational terrorism.

#### Additional Background Reading Material

- "Beyond Fortress America;" Report Summary, National Academies, 2009.
- "Science and Security in a Post 9/11 World," Committee on New Government-University Partnership for Science, 2007.
- "Security Controls on Scientific Information and the Conduct of Scientific Research," Center for Strategic and International Studies, 2005.
- "Science Communication and National Security," The Corsen Report, National Academies, 1982. This report helped to result in NSDD-189.

### **Federal Security Agency Briefs**

"Academic Engagement Report on China PLA," FBI (June 2020)

"China: Risks to Academia," FBI (March 2019)

"Huawei," FBI (March 2018)

"Preventing Loss of Academic Research," FBI (June 2015)

"Chinese Talent Programs," FBI (Sept. 2015)

"The Targeting of Sensitive, Proprietary and Classified Information on Campuses of Higher Education," FBI (April 2011)

"Foreign Visits," Defense Security Service and National Counterintelligence and Security Center

"Academic Solicitation," Defense Security Service and National Counterintelligence and Security Center

"A Trend Analysis of Cleared Industry Reporting," Defense Security Service

"How China Operates on Campus," National Counterintelligence and Security Center (NCSC)





### **Relevant Reports**

#### **Association Reports**

- "Framework for Review of Individual Global Engagements in Academic Research," Council on Governmental Relations, January 2020.
- "National Defense Education and Innovation Initiative (NDEII)", AAU Report on Meeting America's Economic and Security Challenges in the 21st Century, 2006.

#### China & U.S. Higher Education

- "America Challenges China's National Talent Programs," Center for Strategic and International Studies (CSIS), May 2020.
- "Cascading Economic Impacts of the COVID-19 Outbreak in China," U.S.-China Economic and Security Review Commission, April 21, 2020.
- "Threats to the U.S. Research Enterprise: China's Talent Recruitment Plans," Permanent Subcommittee on Investigations Staff Report, November 2019.
- "2019 Report to Congress," U.S.-China Economic and Security Review Commission, November 2019.
- "Looking Before We Leap: Weighing the Risks of US-China Disengagement," Brookings Institute, July 2019.
- "Resisting Chinese Government Efforts to Undermine Academic Freedom Abroad: A Code of Conduct for Colleges, Universities, and Academic Institutions Worldwide," Human Rights Watch, March 2019.
- "Checklist for Collaboration with Chinese Universities and Other Research Institutions," The Hague Center for Strategic Studies, January 2019.
- "Chinese Influence & American Interests: Promoting Constructive Vigilance," The Hoover Institution, December 2018.
  - Summary of Report Recommendations for Universities
- "A Preliminary Study of PRC Political Influence and Interference Activities in American Higher Education," The Wilson Center's Kissinger Institute on China and the United States, 2018.

#### **Confucius Institutes**

- "Confucius Institutes in the United States: Selected Issues," CRS Report, April 15, 2019.
- "China's Impact on the U.S. Education System," Senate Permanent Subcommittee on *Investigations*, February 2019.
- "CHINA: Agreements Establishing Confucius Institutes at U.S. Universities Are Similar, But Institute Operations Vary," U.S. Government Accountability Office, February 2019.

#### **Federal Research Agencies**

- "National Science Foundation Response to the JASON Report 'Fundamental Science and Security," National Science Foundation, March 2020.
- "The State of U.S. Science and Engineering," National Science Board, January 2020.







- "Foreign Interference in NIH Research: Policy Implications," Congressional Research Service, December 19, 2019.
- "Fundamental Research Security," JASON Advisory Group, NSF, December 11, 2019.
- "Opportunities Exist for the NIH to Strengthen Controls in Place to Permit and Monitor Access to Its Sensitive Data," NIH Office of Inspector General, February 2019.

#### **Export Controls**

- "Export Controls: State and Commerce Should Improve Guidance and Outreach to Address University-Specific Compliance Issues," Government Accountability Office, May 2020.
- "Recommendations on Export Controls for Artificial Intelligence," Center for Security and Emerging Technology, February 2020.
- "Controlling U.S. Tech Exports to China: How to Get it Right," Information Technology and Innovation Foundation (ITIF), February 18, 2020.
- "How Stringent Export Controls on Emerging Technologies Would Harm the U.S. Economy," Information Technology and Innovation Foundation (ITIF), May 2019.

#### **International Perspectives**

- "Guidelines to Counter Foreign Interference in the Australian University Sector," University Foreign interference Taskforce, November 2019.
- "The China Defence Universities Tracker," Australian Strategic Policy Institute, November 25, 2019.
- "EU-China A Strategic Outlook," European Commission to the European Council, March 2019.
- "Picking Flowers Making Honey," The Australian Strategic Policy Institute, October 2018.
- "The Chinese Communist Party's Foreign Interference Operations: How the U.S. and Other Democracies Should Respond," The Hudson Institute, June 2018.
- "How China's Economic Aggression Threatens Technologies and Intellectual Property of the United States and the World," White House Office of Trade and Manufacturing Policy, June 2018.
- "China and the Age of Strategic Rivalry: Highlights from an Academic Outreach Workshop," Canadian Security Intelligence Service, May 2018.

# Tools, Experts, and Compliance Resources

AAU-APLU Effective Practices Summary: Effective practices universities are employing to ensure the security of research, protect against intellectual property theft and academic espionage, and prevent actions or activities by foreign governments and/or other entities that seek to exert undue foreign government influence or infringe on core academic values (e.g. free speech, scientific integrity, etc.). Updated May 2020







# **Science and Security Resources** continued

Science and Security Experts List: List developed by AAU of experts who can speak to various science and security topics including: China, Export Controls, and National Security and Technology Policy. Updated October 2019.

Red Flags and Watch Lists on Export of Sensitive U.S. Technology, U.S. Department of State: Includes DHS Shield America Brochure, Dept. of Commerce Red Flag Indicators, and State, Commerce, and Treasury Watch Lists.

Department of Commerce Bureau of Industry and Security (BIS) 'Entities' List: List of names of certain foreign persons – including businesses, research institutions, government and private organizations, individuals, and other types of legal persons – that are subject to specific license requirements for the export, reexport and/or transfer (in-country) of specified items.

More: CSIS Backgrounder on Understanding the Entities List

Current Security Controls of Research: Includes a list of current federal regulations, security requirements, and agency contract clauses that control university research. The chart was compiled by COGR.

Categories of Controlled Unclassified Information (CUI): NARA's comprehensive listing of the 122+ CUI categories that currently exist.

Technology Alert List (TAL): The list was created by the federal government in 2000 as a guideline for consular officials to use in reviewing visa applications. The purpose of this guideline is to prevent the export of "goods, technology, or sensitive information" through activities such as "graduate-level studies, teaching, conducting research, participating in exchange programs, receiving training or employment..."

More: Visas Mantis & Extreme Vetting

# **Case Study Examples Involving Security Concerns**

#### **DOJ Indictments & Verdicts**

- "Former Emory University Professor and Chinese "Thousand Talents" Participant Convicted and Sentenced for Filing a False Tax Return," May 11, 2020
- "University of Arkansas Professor Arrested for Wire Fraud," May 11, 2020
- "Former Cleveland Clinic Employee and Chinese "Thousand Talents" Participant Arrested for Wire Fraud," May 14, 2020
- "Former West Virginia University Professor Pleads Guilty to Fraud that Enabled Him to Participate in the People's Republic of China's "Thousand Talents Plan," March 10, 2020
- "Researcher at University Arrested for Wire Fraud and Making False Statements About Affiliation with a Chinese University," February 27, 2020
- "Harvard University Professor and Two Chinese Nationals Charged in Three Separate China Related Cases," January 28, 2020
  - "Affidavit in Support of Application for Criminal Complaint," January 28, 2020







- "New Indictment: KU Researcher Concealed Being Recruited for Chinese 'Talent' Program," January 15, 2020
- "Department of Justice Reaches \$5.5 Million Settlement with Van Andel Research Institute to Resolve Allegation of Undisclosed Chinese Grants to Two Researchers," December 19, 2019
- "Chinese National Who Worked at Monsanto Indicted on Economic Espionage Charges," November 21, 2019
- "Chinese National Sentenced to 40 months in Prison for Conspiring to Illegally Export Militaryand Space-Grade Technology from the United States to China," October 18, 2019
- "Couple Who Worked at Local Research Institute for 10 Years Charged with Stealing Trade Secrets, Wire Fraud," September 16, 2019
- "Chinese Government Employee Charged in Manhattan Federal Court with Participating in Conspiracy to Fraudulently Obtain U.S. Visas," September 16, 2019
- "Former Virginia Tech Professor Sentenced for Grant Fraud, False Statements, Obstruction," September 9 2019
- "U.S. Files Criminal Charges Against Chinese Professor Linked to Huawei," The Wall Street Journal, September 9, 2019
- "University of Kansas Researcher Indicted for Fraud for Failing to Disclose Conflict of Interest with Chinese University," August 21, 2019
- "Electrical Engineer Convicted of Conspiring to Illegally Export to China Semiconductor Chips with Missile Guidance Applications," July 2, 2019
- "U.S. Nuclear Engineer Sentenced to 24 Months in Prison for Violating the Atomic Energy Act," August 31, 2017
- "Manhattan U.S. Attorney and FBI Assistant Director-in-Charge Announce Criminal Complaint Against Three New York-Based University Researchers for Conspiring to Receive Bribes From a Chinese Company and a Chinese Government-Supported Research Institute," May 20, 2013
- "Defendant Charged With Attempting to Damage a Protected Computer," April 11, 2013





