

March 25, 2025

Dr. Stephen Streiffer
Director
Oak Ridge National Laboratory
1 Bethel Valley Road
Oak Ridge, TN 37830

Dear Dr. Streiffer,

I write to express serious concerns regarding a recent report detailing how researchers at Oak Ridge National Laboratory (ORNL) have engaged in research collaborations leveraging PRC-based supercomputing resources, including those affiliated with Chinese military institutions.¹ These activities persist despite the 2015 U.S. sanctions on China's National Supercomputing Centers (NSCCs) and their inclusion on the Department of Commerce's Entity List due to their ties to China's military and strategic weapons programs.²

The report's analysis of Department of Energy (DOE)-funded research from 2016 to 2024 has identified multiple instances in which ORNL researchers have conducted studies utilizing sanctioned PRC supercomputing resources, including those at the NSCCs in Guangzhou and Tianjin. Some of these studies involve sensitive research areas with clear dual-use implications, fields directly relevant to national security, quantum materials, neutron scattering, and space sciences. Below is a notable example discussed in the report:

- **"Spin Excitations in Metallic Kagome Lattice FeSn and CoSn" (2021)** – ORNL researchers collaborated with Chinese institutions, including Beijing Normal University and Renmin University, and leveraged computing resources at the National Supercomputer Center in Guangzhou. The research explored magnetic properties of metallic kagome lattices, an area critical to developing quantum materials, advanced sensors, spintronic devices, and potential quantum computing applications, all of which have significant implications for next-generation defense and aerospace systems.³

This study, as well as other ORNL-affiliated studies listed in the report, indicates a pattern of collaboration that raises serious national security concerns, particularly with regard to China's military-civil fusion policy, which funnels civilian research to the Chinese military to support and enhance its capabilities. In her written testimony to the Senate Committee on Energy and

¹ Eads, LJ. *The Supercomputer Entanglement: Ongoing Use of PRC-Sanctioned Supercomputers by the Department of Defense and U.S. National Laboratories*. March 2025.

² Bureau of Industry and Security, U.S. Department of Commerce. "Addition of Certain Persons to the Entity List; and Removal of Person from the Entity List Based on a Removal Request." *Federal Register*, vol. 80, no. 32, 18 Feb. 2015, pp. 8502-8509.

³ Eads, *The Supercomputer Entanglement*, 9.

Natural Resources on February 20th, Anna Puglisi, a prominent research security analyst, noted China's military-civil fusion policy has "deep implications for the DOE complex."⁴ She stated, "China takes a holistic approach to [science and technology] development, blurring what is civilian, what is military, what is private and what is public... To the Chinese leadership, every civilian use is also a potential military use."⁵ Therefore, the involvement of ORNL researchers in utilizing PRC-based supercomputing resources for studies with clear defense applications necessitates increased scrutiny.

Additionally, the use of PRC supercomputers introduces cybersecurity risks, including potential interception or exfiltration of sensitive U.S. research data by Chinese state-backed actors. The report specifically highlights concerns over researchers' use of virtual private networks (VPNs) and Secure Shell (SSH) access to connect to PRC supercomputers. Such connections may expose sensitive U.S. research data to surveillance or cyber espionage, potentially allowing unauthorized access or malware insertion into ORNL's and broader U.S. research networks.⁶

To better understand ORNL's oversight and compliance regarding this issue, I request that you provide answers to the following questions no later than April 8, 2025:

1. Does ORNL currently require researchers to disclose their use of foreign supercomputing resources, particularly those tied to PRC-based institutions on the U.S. Entity List?
2. Has ORNL conducted any internal reviews to assess whether federally funded research has violated U.S. export control laws or sanctions? If so, what were the findings?
3. What steps has ORNL taken to prevent its researchers from engaging in collaborations with PRC-based supercomputing centers, or to prevent inadvertently contributing to China's military advancements?
4. Will ORNL commit to implementing mandatory disclosure requirements for all research utilizing foreign supercomputing resources?

Given the serious national security implications of these activities, I urge ORNL to take immediate steps to implement enforcement mechanisms, conduct internal audits, and establish clear reporting requirements for any use of foreign computational resources in taxpayer-funded research. I appreciate your prompt attention to this matter and look forward to your response.

Sincerely,



Mike Lee
Chairman

⁴ Puglisi, Anna B. *Testimony Before the Senate Committee on Energy and Natural Resources on "Examining Research Security Risks Posed by Foreign Nationals from Countries of Risk Working at the DOE's National Laboratories and Necessary Mitigation Steps."* U.S. Senate, 20 Feb. 2025, www.energy.senate.gov/services/files/4FB0285A-55E1-4C2B-88E2-CC475C69FAD5.

⁵ Id.

⁶ Eads, *The Supercomputer Entanglement*, 10.