

TUD Position Paper

Security-Related Research at TUD Dresden University of Technology

(as adopted by the Senate on July 8th, 2026)

Preamble

The security landscape in Europe and Germany has fundamentally changed. Military aggression, hybrid threats, and targeted attacks on critical infrastructure indirectly jeopardize our free and democratic way of life. In this situation, TUD Dresden University of Technology aims to contribute to protecting human dignity and the inalienable and inviolable human rights that form the foundation of every human community, as well as peace and justice in the world. (cf. Art. 1 (1) and (2) of the German Basic Law). In this spirit, TUD sees security-related research as part of its institutional mission. Its focus is guided by the vision of a peaceful, democratic, social, and sustainable society. From our perspective, security-related research serves to protect human lives and encompasses areas such as civil protection and civilian disaster relief, safeguarding critical infrastructure, protecting democratic institutions, crisis preparedness, and technological developments important for military defense.

TUD addresses the associated risks responsibly and with clear processes in place. It provides institutional frameworks that ensure security-related research is conducted reliably and in compliance with legal standards. In doing so, we combine scientific discovery with ethical reflection and a sense of social responsibility.

This paper serves as a position statement in a rapidly changing national and global context. It defines TUD's stance within the ongoing academic and research policy debate on the role of science in matters of security, resilience, and technological sovereignty. At the same time, it is part of an ongoing university-wide dialogue on security-related research.

1. A Changing Security Landscape

What was long taken for granted is now being called into question: illegal wars of aggression, the growing importance of interstate conflicts, the breakdown of established alliances, and the resulting struggle for technological sovereignty are having a lasting impact on the situation in Europe and Germany. At the same time, the essential foundations of society—such as water supply, energy infrastructure, food security, and digital communication networks—are directly threatened by increasingly hybrid forms of conflict.

These developments reflect a threat to liberal democracies, including the free and democratic order of our country, whose core values are now openly being challenged. As a public university, we are committed to contributing to the protection of this order. Furthermore—and equally important—we stand in defense of our own identity as an institution, which is shaped by academic freedom, university autonomy, and international cooperation in research and teaching. These are not merely additional features but fundamental characteristics of what a university represents in our view. When this democratic order erodes, the university erodes with it. That is why we see it as our responsibility to strengthen the resilience of our democratic society.

2. Principles of Security-Related Research at TUD

For us as a university, this means the following: While upholding high scientific and ethical standards, we contribute through research, teaching, and knowledge transfer to protecting human lives, defending the free and democratic order, reducing strategic dependencies, decreasing the vulnerability of critical infrastructure, and strengthening the resilience of our democratic institutions. Sustainable security is not

achieved solely through military defense capabilities but also requires scientific engagement with the root causes of conflicts, such as social inequality, resource scarcity, and climate change.

TUD is addressing the question of how science can responsibly engage with security-related topics. At TUD, security-related research is understood as research that strengthens the resilience of society, infrastructure, the economy, and the state. This includes areas such as civil protection and civilian disaster relief, crisis preparedness, the protection of critical infrastructure, cyber and information security, and technological developments that are important for defense and the protection of human lives. This broad understanding of security-related research prioritizes civilian and peace-oriented approaches but also considers the military dimension of security and defense.

Basic research in areas such as artificial intelligence, quantum computing and communication, propulsion technologies, or synthetic biology plays a role in both civilian and defense-related applications. These include healthcare, environmental protection, improving energy efficiency, and advancing digital education. In this sense, security-related research at TUD is not an isolated field, nor is it a singular priority. Instead, it is embedded across the wide spectrum of our disciplinary and interdisciplinary research activities.

3. Framework Conditions for Security-Related Research at TUD

Security-related research comes with risks, such as potential restrictions on academic freedom, challenges in international collaborations, or even the unlawful use of research results under international law. TUD takes these risks seriously and incorporates critical perspectives into its institutional practices. The goal is to enable security-related research while effectively managing its risks and ensuring alignment with the protection of our constitutional values. Unfortunately, categorizing research as "dual use" has proven less helpful than initially hoped, as it is neither possible to clearly and permanently distinguish between beneficial and harmful research nor between offensive and defensive applications. Therefore, it is essential to make case-by-case decisions, based on the principles outlined here, about which research projects should be conducted at TUD. This includes carefully weighing the potential purposes and impacts of the research. To support this process, TUD has established the Commission for Responsibility in Science (KVV).

The freedom of science, research, and teaching is the foundation of academic work at TUD. However, this freedom also comes with responsibility: each member of TUD decides for themselves whether they wish to engage in security-related research and, if so, how they assess the risks and potential consequences of their work. TUD provides supportive structures and frameworks to help with these decisions. Conducting security-related research at TUD must not compromise the openness of the campus. In this field, TUD prefers funding from public sources with democratic legitimacy over industrial funding. The KVV provides guidance, particularly—but not exclusively—on projects with industrial funding, focusing on ethical evaluations and risk assessments. Compliance with export control regulations ensures adherence to legal requirements, while information security measures protect sensitive research data and scientific infrastructure. To coordinate activities, TUD is establishing a networking platform for security-related research, serving as a central hub for information, guidance, and exchange. These structures ensure that security-related research at TUD is conducted reliably, transparently, and in compliance with legal standards.

Our aim is to balance academic freedom, social responsibility, and institutional capacity for action—positioning TUD as a thoughtful and effective university in an evolving security and research policy landscape.