



CONCEPT

There is a near-unanimous consensus that we are currently witnessing a pivotal era of technological evolution, driven by rapid advances in both software (e.g. neural networks and deep learning) and hardware (e.g. semiconductors and cloud computing). These innovations are, in turn, fuelling unprecedented progress in artificial intelligence (AI). However, this transformative phase must be seen in a broader context of geopolitical change, in which major powers – notably China and the United States (US), but also the European Union (EU), Russia, India and others – are actively striving to strengthen their foothold in the AI race. Their efforts are focused not only on improving their own capabilities but also on preventing or hindering rival nations' access to and control of critical AI technologies.

What makes these AI-driven developments particularly interesting is the intricate interplay between digital and physical infrastructures. AI relies on an extensive network of data centres, advanced semiconductors, and critical raw materials, among other components. Additionally, private companies are at the forefront of AI innovation, with a select few firms controlling the largest clusters of AI processors, the best algorithms and the most advanced computers. Nonetheless, the centrality of AI to geopolitical competition has led governments to closely monitor progress and investment in this strategic sector, and to intervene heavily in market dynamics. As a result, AI inevitably raises pressing questions about the integration of software and hardware capabilities, the relationship between public and private entities and the ways in which nations compete in their quest for dominance over AI resources and expertise.

This workshop on 19 June 2025 in Brussels delves into these topics through four panels: 1) AI infrastructure and its ecosystem; 2) AI and Big Tech; 3) the geopolitics of AI; and 4) CODE meets AI. It is organised as part of the European Research Council (ERC) project *Competition in the Digital Era: Geopolitics and Technology in the 21st Century* (CODE - Grant agreement No. 101116328).

PROGRAMME

Private event

08:30 – 09:00 WELCOME COFFEE

09:00 – 09:05 **WELCOME REMARKS**

Antonio Calcara

Head, Geopolitics and Technology, Centre for Security, Diplomacy and Strategy - VUB

09:05 – 10:35 **PANEL I – AI INFRASTRUCTURE AND ITS ECOSYSTEM**

This panel will examine the foundational infrastructure that powers AI, beginning with its physical components, such as semiconductors, data centres and critical raw materials, before transitioning to the digital layer and the ways in which AI providers integrate hardware and software. Special attention will be given to the concept of innovation ecosystems, exploring their key enablers and core pillars within both hardware and software domains.

Moderator

Riccardo Bosticco

PhD Researcher, Centre for Security, Diplomacy and Strategy – VUB

Panelists

Jonata Anicetti

Postdoctoral Researcher, Centre for Security, Diplomacy and Strategy – VUB

Guillaume Beaumier

Assistant Professor, l'École nationale d'administration publique - ENAP

Linda Monsees

Senior Researcher, Institute of International Relations Prague

10:35 – 10:45 COFFEE BREAK

10:45 – 12:15 **PANEL II – AI AND BIG TECH**

This panel will address the role of Big Tech platforms in driving AI innovation processes, with a focus on the relationship between public and private actors, the function of Big Tech as gatekeepers in the digital economy and the ways in which these tech giants leverage AI to appropriate innovation from smaller players while also shaping developments in the security and defence sector.

Moderator

Mahmoud Javadi

PhD Researcher, Centre for Security, Diplomacy and Strategy – VUB

Panelists

Antonio Calcara

Head, Geopolitics and Technology, Centre for Security, Diplomacy and Strategy – VUB

Raluca Csernatoni

Professor, Centre for Security, Diplomacy and Strategy – VUB and Research Fellow, Carnegie Europe

Marijn Hoijtink

Associate Professor, University of Antwerp

12:15 – 13:15 LUNCH

13:15 – 15:00 **PANEL III – THE GEOPOLITICS OF AI**

Building on discussions about the digital and physical infrastructures underpinning AI, as well as the role of Big Tech as gatekeepers and key players in AI-related domains, this panel will seek to reflect on the geopolitical implications of these dynamics. It will investigate how countries, particularly China and the US, are simultaneously seeking to strengthen their own innovation ecosystems and capitalise on Big Tech's influence, while also deploying measures such as sanctions and export controls to undermine the technological advancements of their adversaries.

Moderator

Thao Pham

PhD Researcher, Centre for Security, Diplomacy and Strategy – VUB

Panelists

Wendy Chang

Analyst, Mercator Institute for China Studies – MERICS

Hans Jørgen Gåsemyr

Senior Researcher, Norwegian Institute of International Affairs – NUPI

Luis Simón

Director, Centre for Security, Diplomacy and Strategy – VUB

Moritz Weiss

Assistant Professor, Ludwig Maximilian University of Munich

15:00 – 15:15 **COFFEE BREAK**

15:15 – 16:45 **PANEL IV – CODE MEETS AI**

This final session invites panellists and participants to engage directly with the early-career researchers behind the CODE project. It features three work-in-progress papers that address different facets of the intersection between technology and geopolitics.

Moderator

Jonata Anicetti

Postdoctoral Researcher, Centre for Security, Diplomacy and Strategy – VUB

Panelists

Riccardo Bosticco

PhD Researcher, Centre for Security, Diplomacy and Strategy – VUB

Mahmoud Javadi

PhD Researcher, Centre for Security, Diplomacy and Strategy – VUB

Thao Pham

PhD Researcher, Centre for Security, Diplomacy and Strategy – VUB

16:45 – 16:50 **CLOSING REMARKS**

Antonio Calcara

Head, Geopolitics and Technology, Centre for Security, Diplomacy and Strategy – VUB

19:00 **DINNER**