Investigating Nation State Cyber Attacks Against Space Infrastructure

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Space infrastructure is fundamental for many aspects of our lives

Weather forecasting  Navigation  Public transport  Finance  Electricity  Agriculture

However, it is increasingly under threat

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Cyber threats against space infrastructure:

Ground Segment
- Data tampering
- Malware
- Unauthorised access
- Communication link attacks

User Segment
- Spoofing
- Jamming
- Uplink jamming
- Replay attacks

Space Segment
- Satellite-to-satellite
- Denial of service
- ASAT weapon systems

Sophisticated cyber attacks against space infrastructure would disrupt critical infrastructure and affect users on a global scale.

I combine technical and political analysis of cyber attacks against space infrastructure in order to fully understand the threat.

I aim to increase knowledge on the technical and political implications of cyber attacks against space infrastructure, including how they happen and their evolution. My research is broadly divided into three sections:

1. Analysing attacks and incidents within ground infrastructure of satellite systems in order to develop a theory to help understand this phenomenon.
2. Analysis of geopolitical implications when a nation state conducts an attack against another state’s space infrastructure
3. Consider how the threat against space infrastructure may evolve considering the technical patterns and geopolitical implications.

What are your thoughts?

Please contact me via email or LinkedIn (details right) if you would like to discuss anything further.