## Centre for High Performance Computing 2019 National Conference



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## Cybers Security Threats - Is Our Research Data Safe?

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In a world where more and more people are connected every day, new systems pop up and access can be gained from any device anywhere, we need to ask if the data that we are working on (viewing, editing and manipulating) is original and safe? The value of data as an asset is increasing as well as the potential threat in its transformative and informative power. The concept and roll out of Institutional Repositories (IR) and Institutional Data Repositories (IDR) is fairly mainstream in South Africa, hosting large valuable and often invaluable sets of data. In a connected world, cyber threats are real and have to date caused harm to many organisations. Is our data really safe and trustworthy in South Africa? South Africa has seen a dramatic increase in the amount of cyber-attacks in 2019, with as much as a 22% increase in malware attacks compared to 2018 alone. Malware attacks only form part of an array of cyber threats that are carried out on a daily basis. In short, the answer is that no system is 100% safe against cyber attacks, there are however systems and processes in place to increase and safeguard our data.

Today's cybercriminal strategies target every link in the attack chain to gain access to resources and data, exploiting them relentlessly. Holding data for ransom, modifying data, defacing of data and selling of data are some of the perils that more and more organisations are facing when breached. The key to safeguarding data is to ensure that policies, systems and procedures are put in place to deal with the various links in the attack chain. This presentation will focus on what is happening on an international and national level with regards to cyber security threats and how it affects our research data. The presentation will also highlight the attack chain and what can be done at the various linkages to make systems and organizations more secure.

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