# PAUL USAMA

## STUDENT, MASTER OF INFORMATION SYSTEMS SECURITY AND ASSURANCE

# OBTAINING IMSI/SUPI USING ATTACK TREE MODELLING

In this research, an attack tree was modelled to show various attacks that can be carried out in the proposed 5G implementation by 3GPP. The tree also showed how to leverage some of the flaws in legacy networks to achieve certain outcomes. The modelled tree shows attacks that are obtainable due to poorly implemented cryptographic and authentication schemes in both 5G and 4G. Based on possible exploits carried out by various research groups, the modelled tree shows enabling factors that makes these attacks feasible. The base of each attack tree branch shows the possible solutions to these exploits.

*Research Advisors: Dr. Pavol Zavarsky, Prof. Ron Ruhl*