



PhD topic #11: Security and privacy in smart grid

Smart Grid is a system based on communication and information technology that offers more efficiency while generating, delivering, and consuming energy power. However cyber-attacks on Smart Grid system can be catastrophic and have big socio-economic impacts. The aim of this thesis is to conduct a study on smart grid security and privacy and to propose suitable security solutions in this context. To do so, the doctoral candidate must first perform an overview on advanced persistent threats in smart Grid in order to understand the process used by hackers to compromise smart grid systems, and to propose secure architectures to deal with these threats by using machine learning, behavioral network and advanced detection techniques. Furthermore, new secure algorithms are to be developed in order to be integrated in smart grid systems and to ensure confidentiality, integrity and privacy.

- The doctoral candidate will be supervised by Dr Mohammed Boulmalf and Dr Karim Zkik.
- Applicants must have a Master (or equivalent) in information system security, telecoms, computer science or equivalent field.
- Good skills in networking and security and a good command of English are required. Basic knowledge of machine learning and prior research experience are viewed positively but are not necessary.
- Applications should be emailed to ticladmin@uir.ac.ma and doctorat@uir.ac.ma