

CYBER SECURITY: SECURITY MODELS AND ARCHITECTURES, SECURITY SERVICES AND TECHNOLOGIES AND THEIR APPLICATIONS TO DISTRIBUTED SYSTEMS AND NETWORK INFRASTRUCTURES



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

The Advanced Cyber Security Engineering Research Centre (ACSRC) research primarily aims to address the challenges that arise in the design and analysis of secure and trusted systems in a heterogeneous distributed environment. This involves distributed systems, networks, Internet of Things (IoT), software defined architectures, mobile devices and industrial control systems. Our focus involves the development of techniques and their application to real world problems in business sectors such as finance, healthcare, smart infrastructures and defence.

COMPETITIVE ADVANTAGE

- ACSRC is internationally recognised for its research and has a long and successful track record in Cyber Security
- Expertise and ability to address security and trust challenges in distributed systems, network infrastructures, IoT, data applications and industrial control systems
- Expertise covering both theory and practice
- Capability to develop security solutions addressing security requirements in a range of sectors

SUCCESSFUL APPLICATIONS OF RESEARCH

- Distributed authorisation
- IoT security
- Cloud and virtualised systems security
- Software defined networks security
- Malware analysis and machine learning security

PARTNERS

- Defence Science and Technology
- Data61
- Microsoft
- Defence Innovation Network
- NSW Cyber Security Network
- Small to medium enterprise

IMPACT

- World class research achieving fundamental advances in security techniques
- Design of novel security and trust technologies leading to new product concepts
- Practical security solutions to real world applications in different business sectors
- Providing thought leadership in Cyber Security
- Enabling development of security policies to improve security in organisations

CAPABILITIES AND FACILITIES

- Cyber Security Research Labs
- Researchers in ACSRC with expertise in distributed system security, network security, malware analysis
- Trusted computing, software defined networks security, machine learning security and cyber physical systems security
- Master and PhD students in Cyber Security