

Networking



**FAKULTI
TEKNOLOGI DAN
SAINS MAKLUMAT**
*Faculty of Information Science and
Technology*

www.ftsm.ukm.my



CENTER FOR CYBER SECURITY

FACULTY OF INFORMATION SCIENCE AND TECHNOLOGY
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VISION

A reputable academic and frontier research center for cyber resilience that able to sustain communities and organization from modern cyber threat landscape.

MISSION

To develop cutting-edge models and solutions of cyber resilience through research, education and consultation.

OBJECTIVE

To drive strategic intervention on public and enterprise cyber security policies, procedures and best practices.

1

To develop innovations that focusing on the predictive, preventive, detective and responsive controls in cyber security.

2

To produce talents of professional and practitioner in cyber security.

3

To provide advisory service on the fundamental and practice aspects in relation to cyber security landscape.

4

CYBER is driven by 5 research labs focusing on the different aspects of software technology and management research :



INFORMATION GOVERNANCE RESEARCH LAB

Information governance (IG) is a holistic approach to managing information at organizational level in support of and comply with regulatory, legal risk, environmental and operational requirements. It implements policies, procedures, processes, roles, control, standards, metrics, technology and people where appropriate to treat information as a valuable business asset. The current area of interests in this lab are Long Term Digital Preservation, Content Management, ICT



Governance, Data Governance, Information Security, Data Privacy, Risks Management, Legal Compliance, Litigation Readiness and Records Management. This lab explores new policy and framework outlining acceptable behavior for managing, organizing, and sharing of information.

RESEARCHERS

- Assoc. Prof. Dr. Mohamad Shanudin Zakaria (Head)
- Dr. Umi Asma' Mokhtar
- Dr. Ahmad Tarmizi Abdul Ghani

CYBER INTELLIGENCE RESEARCH LAB

Meanwhile Cyber Intelligence focuses on the fundamental and applied research in cyber intelligence informatics, social media analytics, malware analysis and, penetration testing and ethical hacking. It has the capabilities of modelling the human in cyber security, social-media-based cyber-situational understanding, and intelligent information gathering and analysis. Cyber Intelligence is also interested to apply Artificial Intelligence, Machine Learning, and Natural Language Processing into new products to make the cyberspace more secure and trusted.

RESEARCHERS

- Assoc. Prof. Dr. Masnizah Mohd (Head)
- Ts. Dr. Wan Fariza Paizi @ Fauzi
- Ts. Mohd Zamri Murah



DIGITAL FORENSIC RESEARCH LAB

The word forensic is defined as a process of collecting, analysing and reporting about the data that may subsequently become evidence in the criminal justice system. Thus, digital forensic is about forensics involving the digital devices such as computers, CCTV, mobile phones, cameras and so on. With the proliferation of such equipment, the evidence is increasingly likely to be generated through such media. For example, in cases of paedophilia, incriminating evidence is often found on computers, laptops, mobile phones, server or cloud. With such examples, the needs for the research in digital forensics are required to help and ease the task of the law enforcement in handling, analysing and presenting the digital evidence for the criminal investigation.

Digital Forensics is responsible to overcome the problem in digital forensics area by involving with the latest research focusing on the digital forensic readiness, enhancing the current framework, developing forensics tools and towards big data and analytics of digital data.



RESEARCHERS

- Assoc. Prof. Dr. Siti Norul Huda Sheikh Abdullah (Head)
- Dr. Khairul Akram Zainol Ariffin
- Dr. Kok Ven Jyn



The Network and Communication Technology (NCT) group is actively engaged in various areas related to Information and Communication Technologies (ICT). We look on the innovative research in computer and communication networks toward Fourth Industrial Revolution (4IR).



NETWORK AND COMMUNICATION TECHNOLOGY RESEARCH LAB

NCT lab also explores new algorithms, methods, protocols, techniques and applications in Mobile Cellular Communications, Satellite and Space-based communications, Internet of Things (IoT), Internet of Vehicles (IoV), Network Mobility, Smart Grid Computing, Robotics, Embedded Sensors, Radio Frequency Identification (RFID) Applications, Information Centric Network (ICN), and Software Defined Network (SDN). We also focus on theoretical research in the interdisciplinary area between communications, networking, and social science. Currently we absorption research related on 5th Generation (5G) and Big Data too. Each of these areas has its own challenge; research advances are needed to ensure the continued evolution and enhancement of the solution and publish the research outcome in recognized academic publications. Besides that, the result will also be communicated during specific subjects offered by this lab.

RESEARCHERS

- Assoc. Prof. Dr. Rosilah Hassan (Head)
- Dr. Azana Hafizah Mohd Aman
- Ts. Dr. Mohamad Kamrul Hassan
- Ts. Dr. Khairul Azmi Abu Bakar



COMPUTER SECURITY AND SOFTWARE VERIFICATION RESEARCH LAB

The Computer Security and Software Verification Lab seeks to conduct cutting edge research in the specific areas of cyber security such as steganography, authentication, privacy, computational cryptography and security verification. Each of these areas has its own aims. To ensure that the results of the research will reach the relevant academic communities, we strive to disseminate them in recognized publications. Besides that, the results will also be communicated in specific subjects offered by this lab.



Computer Security & SOFTWARE VERIFICATION

RESEARCHERS

- Prof. Dr. Zarina Shukur (Head)
- Assoc. Prof. Ts. Dr. Ravie Chandren Muniyandi
- Dr. Rossilawati Sulaiman