



RESEARCH BOOKLET

2017

Research Center for
softam
Software Technology and Management
Faculty of Information Science and Technology



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FTSM, UKM, Malaysia

<http://www.ftsm.ukm.my/softam>

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About SOFTAM

The Research Center for Software Technology and Management (SOFTAM) is positioned to be in the research stream of the rapidly changing computing technology. Consisting of 8 research labs concentrating in various areas of computing research, SOFTAM looked into the whole spectrum of research, beginning with ideas experimentation, creating the technology, deployment and studying the impact of the results in the real world.

Whether they are technical users, business users, young users or users with other special needs, at SOFTAM users and users' experience are central to its research.

SOFTAM is driven by three research groups and one research unit as follows:

- Programming and Software Technology Research Group led by Prof. Dr. Abdullah Mohd Zin
- Strategic Information Systems Research Group led by Assoc. Prof. Dr. Kamsuriah Ahmad
- Multimedia Software and Usability Research Group led by Prof. Dr Nor Azan Mat Zin
- Service Science Research Unit led by Assoc. Prof. Dr. Muriati Mukhtar

SOFTAM has more than 100 postgraduate students, and most of the research activities are funded by Malaysian Ministry of Higher Education, Ministry of Science, Technology and Innovation as well as the Research University Grant Scheme.

We believe that ideas should be welcomed, experimented and shared.

This is described in our mission:

"To create software innovation and to discover a new knowledge as well as to be at a frontier of knowledge in the area of software technology and management through consultation, technology training and research steered by UKM philosophy"

Inspired by SOFTAM vision:

"To be recognized as a center of excellence in software technology and management"

We strive hard to fulfill the following objectives:

- To provide facilities and infrastructure to carry out research in software technology and management
- To carry out research for the enrichment of knowledge in software technology and management
- To develop experts in the field of software technology and management through teaching and research.
- To manage the process of knowledge transfer through training and consultation.
- To develop various type of software technology that can aid in software development activity.
- To generate intellectual property in the area of software technology and management that has value for commercialization.
- To be a center of reference, training as well as technology transfer in the area of software technology and management in Malaysia.



Research Groups

Programming and Software Technology Research Group

Programming and Software Technology is one of the research groups under SOFTAM that focuses in the following research areas:

- Algebra of Programming
- End-user Programming
- Object-oriented Technology
- Teaching of Programming
- Formal Specification and Verification
- Software Development Methodology
- Mobile and Distributed Programming
- Program Understanding and Program Debugging

Researchers

Prof. Dr. Abdullah Mohd Zin (Head of Group)
 Assoc. Prof. Dr. Rosilah Hassan
 Assoc. Prof. Dr. Elankovan A. Sundararajan
 Dr. Dahlila Putri Dahnii Sikumbang
 Dr. Noorazeen Mohd. Ali
 Dr. Nor Effendy Othman
 Ms. Syahanim Mohd Salleh
 Ms. Marini Abu Bakar
 Ms. Norleyza Jailani
 Ms. Rodziah Latih

Strategic Information Systems Research Group

Strategic Information Systems focuses on the management, business and organizational issues associated with the introduction and utilization of information systems as a strategic tool, and considers these issues in a global context. The focus areas are Database, Information Systems, Knowledge Management and Strategic Planning which are:

- IS Audit
- IS Evaluation
- IT Strategic Planning
- Business Process Modelling
- Information Governance
- Knowledge Management
- Software Certification and Management
- Database and Data Warehouse
- Geographical Information System

Researchers

Assoc. Prof. Dr. Kamsuriah Ahmad (Head of Group)
 Assoc. Prof. Dr. Dalbir Singh Valbir Singh
 Assoc. Prof. Dr. Jamaiah Yahaya
 Assoc. Prof. Dr. Maryati Mohd Yusof
 Assoc. Prof. Dr. Nurhizam Safie Mohd Satar
 Assoc. Prof. Dr. Rozilawati Razali
 Dr. Dian Indrayani Jambari
 Dr. Ibrahim Mohamed
 Dr. Noor Hasrina Binti Bakar
 Dr. Zulkefli Mansor
 Ms. Hazilah Mohd Amin
 Ms. Zaihosnita Hood



Multimedia and Usability Research Group

Multimedia and Usability Research Group (MURG) is involved in research which covers various areas of multimedia and HCI domains such as technology for instructions (serious games, adaptive systems, e-learning), usability evaluation, computer algebra system (CAS), user/usage centered design (UCD). Fields of research:

- Digital Games
- Social Computing
- Interaction Design
- Computer Algebra
- e-Learning Technology
- Multimedia Application
- User interface and Usability

Researchers

Prof. Dr. Nor Azan Mat Zin (Head of Group)
 Assoc. Prof. Dr. Noraidah Sahari @ Ashaari
 Dr. Amirah Ismail
 Dr. Siti Fadzilah Mat Noor
 Dr. Fadhilah Rosdi
 Dr. Tengku Siti Meriam Tengku Wook
 Dr. Yuzita Yaacob
 Dr. Zurina Muda
 Ms. Aidanismah Yahya
 Ms. Hairulliza Mohamad Judi

Service Science Research Unit

The Service Science Research Unit focuses on taking an interdisciplinary approach to study, design, implement and innovate service systems which involves human and technologies that requires specific arrangements and actions that provide values for others based on the concepts of value co-creation and service dominant logic.

Research areas covered are as follows (but not limited to):

- Methodologies for Service Systems Design
- Theoretical models of service and innovation
- Service Oriented Architecture
- Service Supply Chains
- Service Evaluation Models

Researchers

Assoc. Prof. Dr. Muriati Mukhtar (Head of Unit)
 Assoc. Prof. Dr Yazrina Yahya
 Dr. Hazura Mohamed
 Dr. Nur Fazidah Elias
 Dr. Ruzzakiah Jenal
 Ms. Norleyza Jailani
 Ms. Siti Aishah Hanawi

Associate Researchers

Assoc. Prof. Dr. Jamaiah Yahaya
 Dr. Ibrahim Mohamed



Agent Mediated E-Commerce & Service Science Research Lab

Laboratory Outline

With the advancement in technologies, it is realized that the capacities and scope of services have expanded beyond their traditional realms. Thus, the Agent Mediated E-Commerce and Service Science Research Lab focuses on taking an interdisciplinary approach to study, design, implement and innovate service systems based on concepts of value co-creation and service dominant logic.

Using agent-based technology, focusing on an e-commerce system, the research conducted in this lab aims to develop agent-based framework, system architecture, economic model, business model, negotiation protocols, and security protocols. It also addresses legal and syariah compliancy issues in an e-commerce system. Besides e-commerce, this lab also delves into e-learning, e-government and e-supply chains. In these areas, the research is focused on investigating the evolution, design and evaluation of innovative service systems.

Principal Researchers

Assoc. Prof. Dr. Muriati Mukhtar (Leader)

Assoc. Prof. Dr. Yazrina Yahya *

Assoc. Prof. Dr. Jamaiah Yahaya *

Dr. Hazura Mohamed

Dr. Ibrahim Mohamed*

Dr. Nur Fazidah Elias

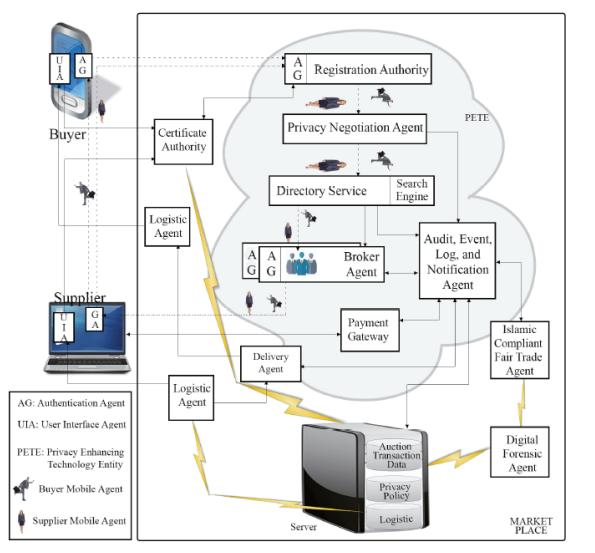
Dr. Ruzzakiah Jenal

Ms. Hairulliza Mohamad Judi

Ms. Norleyza Jailani

Ms. Siti Aishah Hanawi

(* Associate Researcher)



Current Research

- Syariah compliant Online Auction Models and Architectures.
- Value co-creation approach for service systems design and evaluation
- E-service quality
- Tools and methods for s-service evaluation
- Design and implementation of ubiquitous services.
- T-shaped entrepreneur models.
- E-service performance models.
- Service supply chains.
- Tools and methods for service visualization.

Research Projects

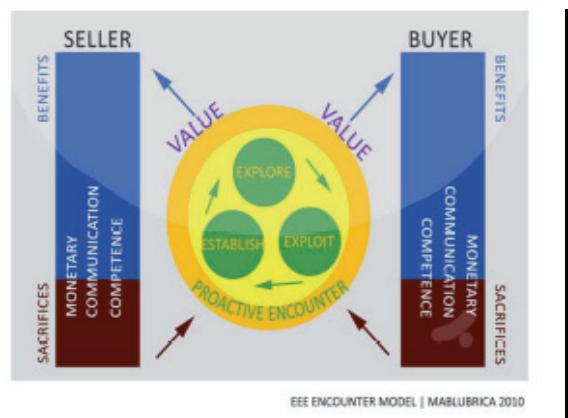
- A service dominant requirements elicitation approach for designing value centered e-services.
- Bidding Agent Algorithm Using Islamic Utility Function Based On The “Wustdo” Concept.
- A comparative Study Toward the Use of Effective Travel Websites: Empirical Research in Malaysia and Indonesia.
- *Pembangunan pakej perkhidmatan rumah pintar melalui pendekaran DART.*
- *Maklum Balas Berkesan Berasaskan Mantik Dominan Khidmat (service dominant logic) untuk Pengajaran-Pembelajaran Bermakna.*

Location of Lab

Level 3, Block H, FTSM

Contact

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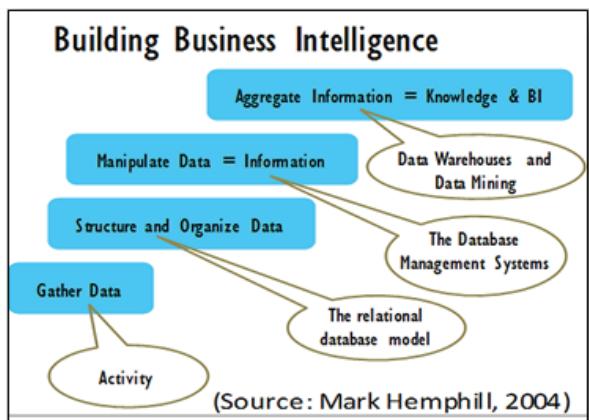
Business Intelligence Research Lab

Laboratory Outline

Business Intelligence (BI) Research Laboratory focuses on both theoretical and empirical perspectives that look into the management, business and technology factors. The aim of the research is to provide the decision makers with valuable information and knowledge through variety of sources of data (internal and external), and with structured and unstructured information. With the identified aim the research activities are divided into two main areas: using BI as a process in making business decision and improving business activities, and using BI as an investigative tool.

The study on business process modeling is to emphasize that the business activities should follow the real business flow, thus meet the business objectives of the organization. The research also focuses on analyzing various types of data where each of these data comes with its own concepts and semantics, data formats and access format (includes data warehouse and Big Data).

These analyzes are important during integration of data from diverse sources and producing quality and comprehensive data. The end product will be evaluated and assessed to ensure the quality standard is achieved throughout the organizations.



Current Research

- Database Technology
- Schema and Data Integration
- Business Intelligence framework
- Big Data
- Data Warehouse
- Business Process Modeling
- Software Quality Assessment
- Software Architecture and Modeling
- Accounting Information Systems
- Information Systems Auditing
- Software Certification Model
- Environmental Monitoring System



Research Project

- Heterogeneous Data Integration for Business Analytics in Big Data Using Clustering Techniques.
- Development of Meta-Metric Evaluation Model Based on User Centricity Approach for Medical Application Systems, Uni-Indystri.
- Schema Matching Using Lexical And Structural Similarity In Heterogeneous Schema Integration
- Heterogeneous Data Integration For Business Analytics In Big Data Using Clustering Techniques
- Architecture and Modelling of Environmental Quarry System Based on Integrated Data Object and Big Data Analytics
- MySTA: A Cloud-Based Business Process HUB
- A New SDLC Methodology Based on Islamic Concept of Human Development Life Cycle
- The Development of an Integrated Self-Assessment and Certification System Prototype
- Development of Metametric Evaluation Model Based on User Centricity Approach For Medical Application System
- A Software Anti-Ageing Model and Rejuvenation Index Based on Software Evolution Dynamics

Principal Researchers

Assoc. Prof. Dr. Kamsuriah Ahmad (Leader)

Assoc. Prof. Dr. Jamaiah Yahaya

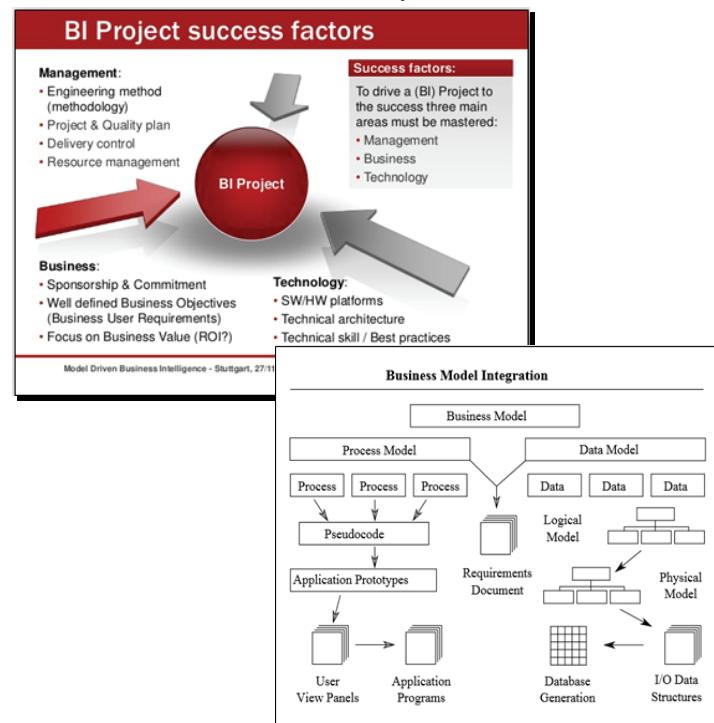
Dr. Ibrahim Mohamed

Contact

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Location of Lab

Level 3, Block H, FTSM



Information Systems Research Lab

Laboratory Outline

Information Systems (IS) Lab is part of Strategic Information Systems (SIS) research group. SIS focuses on the management, business and organizational issues associated with the introduction and utilization of information systems as a strategic tool, and considers these issues in a global context.

IS Lab carries out research related to Information Systems management, development of Socio-technical issues in supporting business processes and solve business problems in various domains including healthcare, education and the public service.

Major Research Area

Information Systems/ Health Informatics

- Evaluation, Adoption and Diffusion, Development
- Management
 - » Business/IT alignment/fit
 - » Project Management
 - » Business Process Management
 - » IT governance
- Cybernetics: Viable System Model

Collaborative Research: National Heart Institute, Ministry of Health

Current Research

- Data Quality and Error Management in Health Information Systems: A Rigorous and Lean Approach to Evaluation
- Data elements and characteristics of online personal health records for children
- Evaluation model of electronic health records implementation
- Web-based personal health records for children: a case study in Malaysia



Research Projects

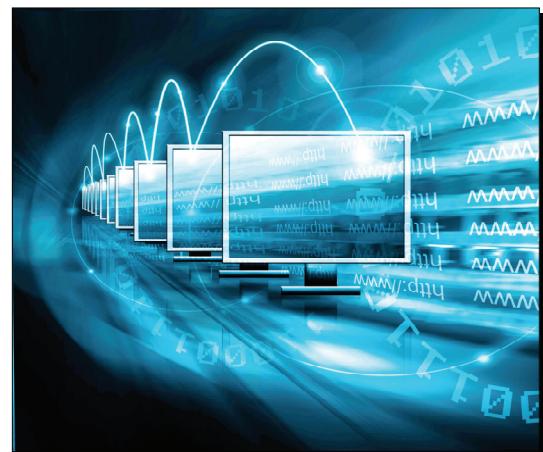
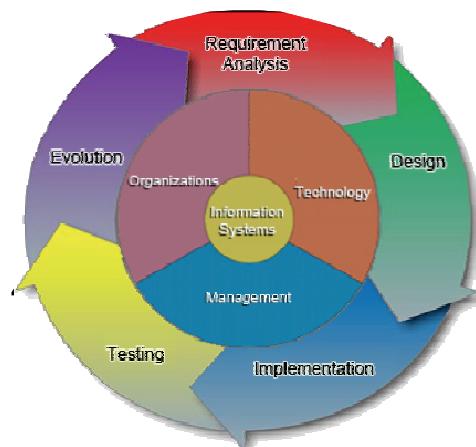
- Decision Support System (DSS) in ICT Strategic Planning (ISP) : A Case Study MOHR.
- A Framework for it Governance Best Practices in Public Sector.
- Faktor Sistem Maklumat Berintegrasi di Peringkat Organisasi: Ke Arah Pelaksanaan Kelestarian Sistem Maklumat Sektor Awam.
- Penilaian dan Pensijilan Produk Perisian Berasaskan Pengguna.

Location of lab

Level 3, Block H, FTSM

Contact

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Principal Researchers

Assoc. Prof. Dr. Maryati Mohd Yusof (Leader)
Dr. Dian Indrayani Jambari
Ms. Zaihosnita Hood

Distributed & Platform Technology Research Lab

Laboratory Outline

The emergence of grid and cloud computing has made distributed computing technology a hot research topic. It is well known that cloud has become a disruptive innovation which has transformed the way software is viewed. At DPTL we explore research opportunities ranging from parallel algorithms, cloud services for High Performance Computing (HPC), mobile-cloud applications, trusted computing and security issues in cloud.

We are keen to explore research opportunities in Engineering problems, Bioinformatics and Big Data Analytics. Members of DPTL also aim to develop distributed solution frameworks and models for various research areas and SMEs. One of our main goal is to utilize as many open source tools and libraries as possible.

Major Research Interest

- High performance computing
- Parallel and Distributed Computing
- Parallel Algorithms
- Mobile-cloud applications
- Cloud services for Big Data Analytics
- Open source tools for distributed computing
- Performance model for parallel computation on WAN
- Trusted computing
- Security on cloud

Computing Resources

- Servers
 - » CPU:Intel Xeon® E5620 @2.4 GHz, RAM: 64 GB,HD: 1 TB,NIC: 2 Gigabit, 8 cores.
 - » CPU:Intel Xeon® E5620 @2.4 GHz, RAM:128 GB,HD: 12 TB,NIC: 2 Gigabit, 8 cores
- Cluster
 - » 16 nodes:CPU: Intel Core™ i3 M390 @2.67 GHz, RAM: 4 GB, HDD: 500 GB, NIC: Realtek Express Gigabit
- Lab PCs
 - » 200 nodes: AMD Athlon™ 64 X 2 Dual Core 5600 + CPU @ 2.91GHz , Intel(R) Core™ 2 Duo / Pentium Dual Core and Intel(R) Core™ 2, Quad + CPU Q8300 @ 2.50GHz, RAM: 1GB-4GB, HDD:200GB-400GB

Research Projects

- Conceptual Framework to Improve Productivity of Researcher through the Use of Mobile Cloud Computing
- Time and Cost Aware Cloud Computing Service Composition using Imperialist Competitive Algorithm
- Parallel Implementation of Apriori-Transaction Reduction on Cloud using Hadoop-Mapreduce
- A novel Plant Root-based Combinatorial Algorithm for

Solving Optimization Problem

- Audio Steganography
- Text Steganography Based on Fractal Coding

Current Research

- A Novel Plant Root-Based Evolutionary Algorithm To Solve Mobile Cloud Computing Workflow Scheduling Problem.
- Exploring Data Streams Association Rules Mining On Clouds
- Enhancing Secure Files Distribution Based on Digital Watermarking with Public Key Cryptosystems
- Developing a Problem-Based Visual Aspect-Oriented Programming Environment for Novice Programmers

Principal Researchers

Assoc. Prof. Dr. Elankovan A. Sundararajan (Leader)
Prof. Dr. Abdullah Mohd Zin
Dr. Mohd Rosmadi Mokhtar

Related Keywords

Distributed Technologies, High Performance Computing, Trusted Computing Platform

Location of

Level 2, Block D, FTSM.

Lab Contact

Email : elan@ukm.edu.my



E-Learning Technology & HCI Research Lab

Laboratory Outline

The laboratory is to contribute to development of new knowledge and new solutions in learning technology in correlation with the users. The approach is interdisciplinary, and it draws upon learning theory and participatory methods from technology, information and HCI design. Research in this lab is based on the concept of user-driven innovation in order to bring user mental model and behaviour into design. e-Learning design principles, cognitive science, educational psychology and human computer interaction are applied to develop an effective learning technology

Research Focus

- Learning Technology
- Interfaces for effective learning
- Design rules for interfaces
- Accessibility Model
- Mobile learning user interface
- Multimedia Information Retrieval

Current Research

- M-Learning Application Model for Technical and Vocational Training
- Cubic Type Virtual Reality Panorama Technique in Virtual Museum Environment
- Gamification-Based Programming Learning Framework
- Touch Movement Technique in Multimodal Interaction System for Children
- Serious Game for Slow Learner
- Interactive Video for Calculus Teaching and Learning
- Design and Usability Evaluation of Multimedia Systems
- Schema Matching Using Lexical and Structural Similarity in Heterogeneous Schema Integration
- User Characteristic Model for Measuring Engagement in E-Learning System
- Formative Evaluation Model in Teaching Environment and Web 2.0 Based Learning
- Statistical Learning Application with Feedback
- Designing Of Cognitive Stimulation Model For Children With Speech And Language Delay Using Serious Game Approach
- Researcher's Annotation Classification Framework

Location of Lab

Lab 6
Level 3, Block H, FTSMS.

Contact

Email : nsa@ukm.edu.my

Research Projects

- Rangka Kerja Teknik Gerakan Sentuhan Sistem Interaksi Multimodal untuk Kanak-Kanak.
- Medical Image Annotation Based on Spatial Relationship Extraction to Improve Image Retrieval
- Gamification-Based Learning for Technical Subjects
- User Engagement Model in e-Learning among Working Adult Worker
- Usable Interface of Bibliographic Software
- Cognitive Stimulation Model in Serious Games for Children with Speech and Language Delay
- Functionality and Usability Model for Postgraduate of Information System Management
- Model of Application M-Learning for TVET students
- Framework Model of Virtual Learning Environment using Cloud Computing Technique
- 3D e-Commerce.
- Game-Based Learning Using Leap Motion Controller.
- Gamification Framework in Educational Mobile Apps.

Principal Researchers

Assoc. Prof. Dr. Noraidah Sahari @ Ashaari (Leader)
Assoc. Prof. Dr. Nurhizam Safie Mohd Satar
Dr. Amirah Ismail
Dr. Siti Fadzilah Mat Noor
Dr. Tengku Siti Meriam Tengku Wook
Ms. Hairulliza Mohamad Judi



**E-Learning
Technology**

**Human Computer
Interaction**

Games Research Lab

Laboratory Outline

We carry out research on game science, digital media, processing and multimedia application/system which covers theories and approaches 2D/3D modelling; framework and models; design and development; and evaluation.

Research Focus

- Game science and design; natural user interface games, edutainment and serious games design and evaluation, game development methods, culture in game interface, game system for rehabilitation, feedback algorithm in educational game and game for STEM education.
- Digital media processing; spatial image processing in various domains such as medical and tourism images
- Multimedia Applications/systems; 2D/3D animation; virtual & augmented reality; simulation and usability evaluation of multimedia applications/systems.

Principal Researchers

Prof. Dr Nor Azan Mat Zin (Leader)

Dr. Zurina Muda

Current Research

- Health-care related and general training serious games research.
- New Game-Based Technique For Measuring And Visualising The Effectiveness Of Computer-Aided Language And Speech Therapy (CLST)
- STEM Educational Game Framework using Participatory Design Approach to Facilitate Conceptual Understanding of Programming
- Game framework for training critical thinking skill for problem solving in STEM.
- Accessibility—guidelines and system design issues for users with autism/hearing problem
- Edutainment system
- Serious Games for Cognitive Rehabilitation System
- Medical Image Annotations Model Based On Spatial Semantic Algorithms And Image Processing Technique.
- Design and Evaluation of Emotionally Intelligent Virtual Agent (EIVA) Framework for Virtual Learning Environment.
- MyCommunity project—Ministry of higher Education Global Outreach; New Dimension

Research Projects

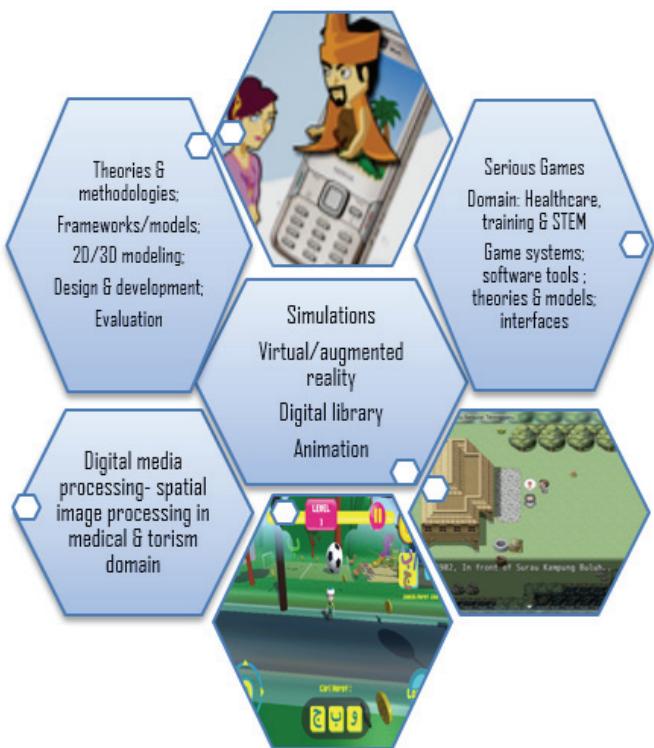
- *Pembelajaran Berbantuan Komputer / Multimedia untuk Pelajar Pendidikan Khas Berasaskan Animasi 2D.*
- Factoring Culture as Main Role in Designing Digital Game Based Learning.
- *Rekabentuk Sistem Pengurusan Pembelajaran Kolaborasi Pengetahuan (Ekolaborasi).*
- Brain Adaptive Web Based Educational System.
- *Alat Permainan Menulis Asas Jawi.*
- *The Extraction of Spatial Relationship Features for Lung Lesion Location in Chest X-Ray Images*
- *Model Intervensi Ketidak Patuhan dalam A.L.L.*
- Using Natural User Interface (NUI)'S Speech-Based Interface in Participatory Computer Game to Facilitate Speech Therapy for Children.
- Facial Expressions of Effective Virtual Agents in Virtual Learning Environment.

Location of lab

Level 3, Block H, FTSM

Contact

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Network & Communication Technology Research Lab

Laboratory Outline



We aim to be a leader in networking and we welcome students who desire to learn more about Networking, Information Technology, and Computer Science. At NCT lab we carry out research that are related to network such as IPv6, network installation, monitoring, and performance. We are also doing research on Virtual Lab and Mobile Ad Hoc Network (MANET). Other than that, we are actively doing research in android based mobile applications. Basically, two techniques that we used in this lab are simulation and testbed. Most of the researchers in NCT are using simulation tools such as MATLAB, OMNET, NS-2, OPNET, and Qualnet.

Mission

- To be a leader in networking and we welcome students who desire to learn more about networking, information technology and computer science,
- To carry out research those are related to network such as IPv6, network installation, and monitoring, Wireless Sensor Networks and Big Data,
- To do research on mobile Ad Hoc Network (MANET). Other than that, we are actively doing research in android based mobile applications.

Current Research

- Balancing Security and Performance for IPV6 Neighbour Discovery
- Data Transmission Assessment Framework For Big Data Environment In Malaysian Public Sector
- Performance evaluation and QoS enhancement of VOIP Over wireless Local area networks
- Optimizing Spectrum Assignment in Wireless Communications Through Dynamic Spectrum Allocation in Malaysia
- A Computational Intelligence Routing Protocol for Vehicular Ad Hoc Network
- A New QoS Routing Mechanism for Mobile Ad Hoc Wireless Network
- Makmal Elektronik Atas Talian (MEaT)
- Quality of Service: Multicasting in Mobile Ad Hoc Networks
- Adaptive Generic Algorithm Position-Based Routing Protocol For Mobile ad Hoc Network

Principal Researchers

Assoc. Prof. Dr. Rosilah Hassan (Leader)

Dr. Nor Effendy Othman

Dr. Dahlila Putri Dahnill

Dr. Khairul Azmi Abu Bakar

Research Projects

- A Novel Adaptive on Demand Routing Protocol for Manets.
- Slowpan Routing Protocol for Monitoring Greening Technology.
- A Computational Intelligence Prediction-Based Protocol for Vehicular Ad-Hoc Network.
- Enhancing Security for IPV6 Neighbor Discovery Protocol using Digital Signature.

Related Keywords

Networking, mobile application, IPv6

Location of Lab

Level 1, Block H, FTSMS.

Contact

Email : rosilah@ukm.edu.my

Website : <http://www.ftsm.ukm.my/network>



Network
& Communication
Technology

Programming Education & Methodology Research Lab

Laboratory Outline

Our laboratory aims to promote research within the field of Programming Education and Computer Science in general. Our goal is to understand how we can improve the teaching and learning of computer programming, and how contemporary issues in higher education, such as the use of new technologies can impact upon the teaching and learning environment. To achieve our goal, we are involved in research which covers various areas of programming education and software development methodology.

Research Focus

Programming Education Methodologies

- Adaptive learning
- Constructive learning
- Competitive learning
- Persuasive learning
- Programming aptitude & understanding

Programming Education Tools and Services

- Online learning environment on the cloud
- Student centered learning environment
- Mobile learning environment
- Collaborative learning environment
- Code similarity checker tool
- Programming competency assessment tool
- Automatic programming marking tool

Serious Games Development

- Learn programming through games
- Novice coder games apps
- Programming game engine

Advanced Software Development Technologies

- Object-oriented approach
- Aspect-oriented approach
- Block-based development methodology
- Service-oriented development methodology



Current Research

- Educational game to facilitate programming understanding. (in collaboration with Games Research Lab).
- Implementation of scaffolding technique in computer programming.
- Student centered learning environment for competitive learning.
- Student centered learning approaches for teaching of computer programming.

Principal Researchers

Ms. Marini Abu Bakar (Leader)
 Assoc. Prof. Dr. Muriati Mukhtar*
 Dr. Noorazean Mohd Ali
 Ms. Rodziah Latih
 Ms. Syahanim Mohd Salleh
 (* Associate Researcher)

Location of Lab

Level 2, Block H, FTSM

Contact

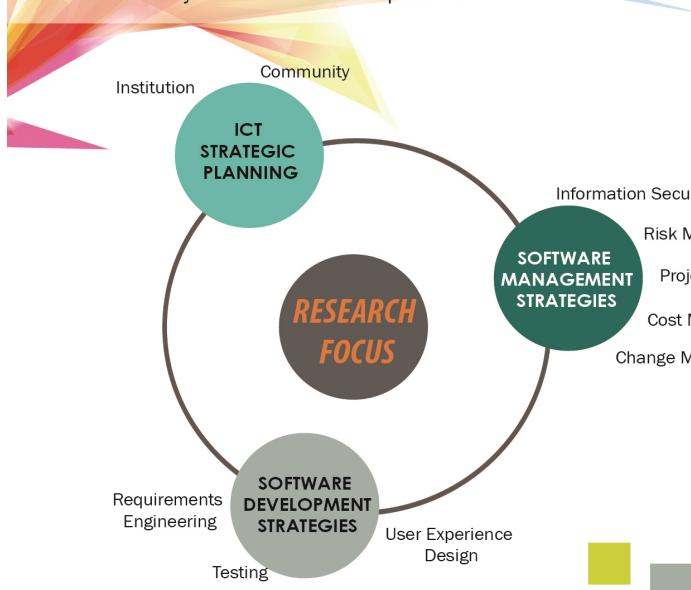
Email : marini@ukm.edu.my



Strategic Planning & Management Research Lab

OVERVIEW

The Strategic Planning and Management (SPM) Laboratory supports research activities concerning software systems as a strategic tool to achieve organisational vision, mission and goals. It aims to produce high quality research products that emphasize on strategic management theories for addressing practical information and communications technology (ICT) concerns. Its products involve the formulation of ICT strategies for planning, developing and managing large scale software systems from both theoretical and empirical perspectives. Its primary objective is to conduct research consistently with institutional and public interests.



INSPIRE TO LEAD, STRATEGISE FOR THE FUTURE

PRINCIPAL RESEARCHERS

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Assoc. Prof. Dr. Dalbir Singh
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CONTACT US

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Faculty of Information Science and Technology
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STRATEGIC Planning AND MANAGEMENT

SPM@COLLOQUIUM
SPM@RESEARCH DAY

SPM@OUTDOOR ACTIVITIES

RESEARCH PROJECTS

ICT STRATEGIC PLANNING

1. Acceptance and Adoption Model of Mobile Commerce
2. Information Culture Model for Information Systems Adoption in Public Health Sector
3. Executive Information Systems Development Framework for Education Domain
4. Electronic Government Systems Interoperability Framework
5. Drug Rehabilitation Treatment Monitoring Framework
6. Cultural Model on Electronic Learning
7. Case Method Framework in Teaching and Learning Software Engineering
8. Problem-based Learning Framework for Computer Programming Courses

SOFTWARE DEVELOPMENT STRATEGIES

1. Stakeholders and Techniques Selection Framework for Requirements Elicitation
2. Requirements Prioritisation Model based on 6S Approach for Agile Development
3. Design Profile of Accessible Requirements Modelling Techniques
4. Multicultural Interface Design Framework for Malaysian E-Government Services
5. Culture-centered Design for Computerised Cognitive Behavioural Therapy
6. Military Human Resource Information Systems Framework
7. Performance-oriented Interface Design Model for Web Applications
8. Contextual Usability Model for Mobile Executive Information Systems
9. Usability Guidelines of User Interface Design for Mobile Government Systems
10. Usability-based Framework for Electronic Government Systems Development
11. Information Security-based Framework for Electronic Government Systems Development
12. Legacy Systems Assessment Model for Public Sector
13. Risk-based Agile Testing Framework

SOFTWARE MANAGEMENT STRATEGIES

1. Collaborative Spectrum Management Systems
2. Risk Assessment Framework for Requirements Change
3. Agile Project Manager Competency Model
4. Agile Methods Selection Framework for Software Projects
5. Cost Management in Agile-based Software Development Framework
6. Software Testing Outsourcing Project Management Framework
7. Customer Relationship Management Framework for Loan Financing Institutions
8. Information Security Management Framework for Public Sector
9. Client Organisation Readiness Assessment Model for Software Outsourcing Projects
10. Successful Factors in Adopting Scrum in Software Projects
11. Vendor Assessment Metric Model for IT Project in Banking Sectors

Researchers

**Prof. Dr. Abdullah Mohd Zin**

Research Interests:

Computer Science & Programming Education, Software Tools & Advanced Software Development Methodology, Formal Method, Network & Mobile Applications
Email : amzftsm@ukm.edu.my

**Prof. Dr. Nor Azan Mat Zin**

Research Interests:

Multimedia Technology for Education, E-learning
Email : azan@ukm.edu.my

**Assoc. Prof. Dr. Dalbir Singh Valbir Singh**

Research Interests:

Geographic Information System, Human Factor for Information System, E-Government
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**Assoc. Prof. Dr. Elankovan A. Sundararajan**

Research Interests:

Cloud Computing, Parallel Programming, High Performance Computing
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**Assoc. Prof. Dr. Jamaiah Haji Yahaya**

Research Interests:

Software Quality and Certification, Software Engineering, Software Management
Email : jhy@ukm.edu.my

**Assoc. Prof. Dr. Kamsuriah Ahmad**

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