SUCHINTHI FERNANDO D Eng, M Eng, B Sc (Hons.)

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EDUCATION

Doctor of Engineering – Information Science & Control Engineering
August 2014

Specialized in **Information Security Management**
Nagaoka University of Technology, Japan
GPA (Calculated) 4.0/4.0

Master of Engineering – Management & Information Systems Engineering
August 2011

Specialized in **Information Security Management**
Nagaoka University of Technology, Japan
GPA (Calculated) 3.87/4.0

Bachelor of Science (Honors) – Information Technology
January 2008

First Class Honors
University of Moratuwa, Sri Lanka
GPA 3.98/4.2

SKILLS

- Research
- Teaching
- Student Research Supervision, Evaluation & Assessment
- Student Mentoring
- Curriculum and Course Development
- Leading Multi-Cultural Teams
- Software Design & Development
- Analytical & Logical Problem Solving
- Communication & Presentation
- Organizing & Coordinating
- Data Collection & Analysis

Language Skills:

Fluent:
- English
- Sinhalese

Conversant:
- Japanese

TECHNOLOGIES

- JAVA
- PostGreSQL
- C#.NET
- C
- C++
- MySQL
- MS SQL
- PHP
- Python
- Prolog
- SPSS

EXPERIENCE SUMMARY

School of Communication & Information, RUTGERS UNIVERSITY, NJ:

Teaching Instructor
September 2017 – Present

- Conducting lectures, tutorials, evaluations, and assessments for the courses:
  - Information Security Management (online), for the Master of Information degree program
  - Database Design and Management (both on-campus and online sections), for the Master of

Information degree program
- Information Technologies for Libraries and Information Agencies (on-campus), for the Master of Information degree program
- The Internet and The Information Environment: A Quantitative Approach (on-campus), for the Bachelor's degree program in Information Technology and Informatics
- Curriculum Development and Course Material Development:
  - Develop the curriculum (syllabus and schedule) for a Special Topics course on Information Security Management for the Master of Information degree program:
    - As a course of 15-weeks duration
    - As a course of 8-weeks duration
  - Develop course content, lecture slides and recordings, project outline and guidelines, assignments (exercises and online discussions), and grading rubrics for the course Information Security Management
  - Develop the curriculum (syllabus and schedule) for the course on Database Design and Management for the Master of Information degree program
    - As a course of 6-weeks duration
- Coordinating the Database Design and Management Course:
  - Coordinating the course material, assessments and evaluation across all sections of the course
  - Interviewing potential candidates to teach further sections of the course and coordinating their course sections

Coadjunct Non-Teaching   July 2017 – August 2017
- Developed the Online Course for Database Design and Management:
  - Developed the curriculum (syllabus and schedule), course content, lecture slides and recordings, project outline and guidelines, sample database and practice questions, assignments (exercises and online discussions), and grading rubrics.
    - As a course of 15-weeks duration

Part-Time Lecturer (Adjunct)   January 2017 – June 2017
- Conducted lectures, tutorials, evaluations, and assessments, and preparing course material, assignments, exercises, and grading rubrics for the on- campus course:
  - Database Design and Management, for the Master of Information degree program
- Conducted lectures, tutorials, evaluations, and assessments for the courses:
  - Information Technologies for Libraries and Information Agencies, for the Master of Information degree program
  - The Internet and The Information Environment: A Quantitative Approach, for the Bachelor's degree program in Information Technology and Informatics

Senior Lecturer – Faculty of Information Technology, University of Moratuwa, Sri Lanka
January 2015 – June 2016
- Conducted research on information security.
- Supervised and assessed 3rd-year independent studies.
- Evaluated 4th-year (Final year) and 2nd-year Information Technology projects.
- Conducted lectures, tutorials, and prepared course material for courses:
  - Information Technology Quality Assurance
  - Social Aspects of Information Technology
  - Management of Sensitive Projects
  - Decision Management
- Conducted evaluations and assessments: prepared and assessed assignments, quizzes, and examination papers, prepared marking schemes.

- Conducted evaluations of Industrial Training / Externships of 3rd-year students.
- Compiled syllabi and course outlines for undergraduate courses at Faculty of Information Technology, University of Moratuwa, on:
  - Information Security Management
  - Information Technology Quality Assurance
  - Social Aspects of Information Technology
  - Management of Sensitive Projects
  - Decision Management
- Compiled syllabi and course outlines for undergraduate courses at College of Engineering, The Institute of Engineers Sri Lanka (IESL), on:
  - Software Engineering
  - Data Structures and Algorithms
  - Operating Systems
- Served as the Sponsorship Chair and as a member of the Organizing Committee of the International Symposium on IT for Sustainable Smart Cities, organized by the University of Moratuwa, held on June 20th 2016 at Colombo, Sri Lanka – handled fund raising, event planning, and compiling and editing of the abstract book.

Supervisor and Examiner – Faculty of Graduate Studies, University of Colombo, Sri Lanka
June 2015 – June 2016
- Supervised a graduate student reading for Master of Philosophy at Faculty of Graduate Studies, University of Colombo, Sri Lanka.
- Evaluated thesis and examined, through interview/viva, graduate students reading for Master of Information Systems Management at Faculty of Graduate Studies, University of Colombo, Sri Lanka.

Visiting Lecturer – Faculty of Graduate Studies, University of Colombo, Sri Lanka
October 2015 – January 2016
- Conducted lectures, prepared course material and assignments for Post Graduate Diploma in Information Systems Management at Faculty of Graduate Studies, University of Colombo, Sri Lanka, for the course:
  - Information Security Management

Lecturer – Faculty of Information Technology, University of Moratuwa, Sri Lanka
February 2008 – August 2009
- Conducted lectures and prepared course material for courses:
  - Internetworking
  - Software Engineering
  - Management Information Systems
  - Advanced Project Management
  - Introduction to Programming with LOGO
- Conducted evaluations and assessments: prepared and assessed assignments, quizzes, and examination papers, prepared marking schemes.
- Conducted tutorials and assessments for the course:
  - Computer and Network Security
- Supervised and assessed 4th-year (Final Year), 3rd-year, 2nd-year and 1st-year Information Technology projects.
- Supervised and assessed 3rd-year independent studies.
- Compiled syllabi and course outlines for undergraduate courses at Faculty of Information Technology, University of Moratuwa, on:
  - Internetworking

- Software Engineering
- System Analysis and Design (OOAD)
- Management Information Systems
- Coordinated with guest / visiting lecturers from the industry.
- Served as Academic Advisor for undergraduate students.
- Conducted evaluations of Industrial Training / Externships of 3rd-year students.
- Coordinated Information Technology exhibitions, and student mentoring programs.
- Coordinated student projects for display at national and school exhibitions.
- Helped to organize Information Technology symposiums, and student orientation programs and ceremonies.
- Compiled and presented project proposals for University-Industry interaction.
- Conducted assessments of computer literacy for performance evaluations and appraisals for promotions of non-academic staff of the University of Moratuwa.

Trainee Software Engineer – Thalassa Consultancy, Singapore   February 2006 – August 2006

Project LTA C4927: Speed Enforcement Camera System for the Kallang – Paya Lebar Expressway for the Land and Transport Authorities, Singapore:
- Back-End Computer System
- System Configuration GUI
- Conducted system analysis and design
- Conducted system development / implementation
- Met with client and presented interim system implementation
- Developed test cases and conducted testing (unit testing and system testing)
- Conducted debugging of the system
- Created documentation for system maintenance

Part-Time English Teacher – My Dream Academy, Japan   September 2011 – March 2014

- Conducted English classes for Japanese students:
  - Conducted both individual and group classes of up to 10 students
  - Students were of an age variance of pre-school children, to primary, junior-high, and high school children, to working adults
  - Educated students in English reading comprehension, listening comprehension, writing and composition, and speaking and recital
- Prepared course material, study aids, and quizzes
- Conducted assessments and evaluations
- Coordinated events and shows

Volunteer Worker – Ministry of Public Administration, Sri Lanka   January 2005

Prepared the Missing Persons database after the December 2004 Tsunami Disaster
- Conducted data entry
- Conducted validation of data

AWARDS, GRANTS & COMMENDATIONS

Monbukagakusho Japanese Government Scholarship – Nagaoka University of Technology, Japan   September 2009 – August 2014

Full Merit Scholarship and Stipend for:
- Doctoral Degree Course   September 2011 – August 2014
- Master's Degree Course   September 2009 – August 2011

Session Chair – World Congress on Engineering 2013, International Association of Engineers   July 2013

The 2013 International Conference on Information Security and Internet Engineering of The World Congress on Engineering 2013

Invited Speaker – Monthly Research Seminar of the Electronics and Telecommunication Engineering Department, University of Moratuwa   April 2015

ENTC Research Seminar of the Department of Electronics and Telecommunication Engineering, Faculty of Engineering, University of Moratuwa, April 2015

Ad-hoc Reviewer – International Journal of Information Security and Privacy – IGI Global Publications   July 2018 – Present

International Journal of Information Security and Privacy (IJISP) – by IGI Global e-Editorial Discovery

Outstanding Performance in the Area of Thesis Presentation – Nagaoka University of Technology, Japan   August 2011

Graduate School of Management & Information Systems Engineering: Master's Degree Course

Dean's Honor List – University of Moratuwa, Sri Lanka   June 2003 – January 2008

Faculty of Information Technology: Bachelor's Degree Course:

- Semesters 2, 3, 4, 5, 6, 7, and 8

SIGNIFICANT PROJECTS

Internal Control of Secure Information and Communication Practices through Detection of User Behavioral Patterns – Doctoral Research Project   September 2011 – August 2014

- Analyzed the problem of improper information sharing by authorized insiders with outsiders and unauthorized insiders.
- Designed and implemented a system employing a mix of technological and social solutions to achieve internal control of information and communication within an organization through user behavioural profiling.
- Conducted testing, debugging, evaluation, and documentation of the implemented solution.
- System solution:
  - The levels of observance of secure practices by the organization's employees are monitored through both the automatic detection of their cyber activity by the security system, and the personal observance of their non-cyber activity and background checks.
  - Profiling of user behavioral patterns helps to identify employees whose actions could potentially lead to information security management problems and information security infractions, and to determine and schedule the level and type of security education and training to be given to each user.
  - The solution allows the information security officer to view automatically detected and personally observed data separately, and thereby recognize any personal bias towards employees and use their personal judgment.
  - The solution allows the configuration of security behavioral rules to be aligned with the business objectives and specific requirements of the organization.
  - The system provides summarized and detailed security behavioral profiles both textually and graphically in a convenient and user-friendly fashion to enable faster decision-making by information security officers and security managers.
- **Technology:** Java jdk 1.7.0, NetBeans IDE 7.4, jfreechart-1.0.16, jcalendar, PostGreSQL, pgAdmin III v1.14.3, JDBC

Project LTA C4927: Speed Enforcement Camera System for the Kallang – Paya Lebar Expressway – Project worked on during Industrial Training for BSc (Hons.) in IT

February 2006 – August 2006

- Client: Land and Transport Authorities, Singapore
- Thalassa Consultancy provided software solutions working in cooperation with SDi Networks Pte. Ltd. as a sub-contractor, to the main contractor Tyco Fire & Security (Integrated Systems Department)
- Developed the Back-End Computer System and the System Configuration GUI
- Full Software Development Life Cycle: conducted system analysis and design, system implementation, testing and debugging, and documentation
- Back-End Computer System of the Speed Enforcement Camera System:
  - File decryption
  - Watermark verification on an image file
  - Reading and processing data files from the Front-End Detection System – camera units
  - Interfacing to an OCR (optical character recognition) DLL
  - Cropping and stretching of image files
  - Preparing a data file in a defined format to be retrieved by the Traffic Police
- System Configuration GUI of the Speed Enforcement Camera System:
  - User security access
  - Development of different forms in data grid format for viewing of offence data, creating, editing, and deletion of locations, devices, and system parameters
  - Filtering of offence data based on different filters
  - Checking for mandatory fields for new record creation
- **Technology:** C#.NET on Windows 2003 server platform, MS SQL Server 2005, Microsoft CAPICOM DLL

RESEARCH & PUBLICATIONS

Journal Publications

- Senanayake, T., **Fernando, S.**, (2018), **Information Security Education: Watching Your Steps in Cyberspace**, *The Online Journal of Science and Technology,* 8 (2), 96-101. *Abstract Presented at: International Science and Technology Conference*, 16th to 18th August 2017, Harvard University, Massachusetts, USA.

- **Fernando, S.**, Yukawa, T., (2014), **Internal Control of Information Sharing through User Security Behavioral Profiling**, *Global Journal of Human-Social Sciences*, 14 (1), 10-22.

- **Fernando, S.**, Asai, T., Yukawa, T., (2012), **Common Features in Local Employees' Behavior concerning Information Security Management in Foreign Companies**, *Journal of Business and Management Research*, 1 (3), 95-107.

- Asai, T., **Fernando, S.**, Castillo, J. (2011), **Human-Related Problems in Information Security in Russian Cross-cultural Environments**, *International Journal of Japan Association of Management Systems*, 3 (1), 31-40.

- Asai, T., **Fernando, S.**, (2011), **Human-Related Problems in Information Security in Indian Cross-cultural Environments**, *Journal of Japan Society of Security Management*, 25 (2), 3-14.

- Asai, T., **Fernando, S.**, (2011), **Human-Related Problems in Information Security in Thai Cross-cultural Environments**, *International Journal of Contemporary Management Research*, 7 (2), 117-141.

Book Chapters

- **Fernando, S.** (2018), **The Different Aspects of Information Security Education**, *Handbook of Research on Information and Cyber Security in the Fourth Industrial Revolution*, Chapter 7, Fields, Z. Eds. Hershey, PA: IGI Global, 182-204.

- **Fernando, S. A.**, Yukawa, T., (2014), **Securing Information Sharing Through User Security Behavioral Profiling**, *Transactions on Engineering Technologies: Special Volume of the World Congress on Engineering 2013*, Chapter 47, Yang, et al. Eds. Springer Netherlands, 655-670.

Conference Publications

- **Fernando, S.**, Yukawa, T., (2014), **Profiling System for Predicting Information Security Behaviour**, *in Proc: International Conference on Advanced Technology & Sciences*, 12th to 15th August 2014, Antalya, Turkey, 430-435.

- **Fernando, S.**, Yukawa, T., (2013), **Internal Control of Secure Information and Communication Practices through Detection of User Behavioral Patterns**, *in Proc: World Congress on Engineering, International Conference of Information Security and Internet Engineering*, 3rd to 5th July 2013, London, UK, 1248-1253.

- **Fernando, S.**, Asai, T., (2011), **Human-Related Information Security Problems Faced by British Companies in Economically Rising Countries**, *in Proc : 9th Australian Information Security Management Conference*, 5th to 7th December 2011, Perth, Western Australia.

- **Fernando, S.**, Asai, T., (2011), **Information Security Problems Faced by American Companies in Economically Rising Countries**, *in Proc : 10th Annual Security Conference,* 4th to 6th May 2011, Vegas, USA.

- **Fernando, S.**, Asai, T., (2010), **Human-Related Problems in Information Security in Cross-Cultural Environments in Foreign Companies – The Case of Thailand –**, *in Proc : Business And Information Conference 2010,* 5th to 7th July 2010, Kitakyushu, Japan.

- **Fernando, S.**, Das, S., Asai, T., (2010), **Human-Related Problems in Information Security in Cross-Cultural Environments – The Case of India –**, *in Proc : Japan Socienty of Security Management 24th Annual Conference,* 24th June 2010, 115-118, Kanagawa, Japan.

- **Fernando, S.**, Firdhous, M.F.M., (2008), **Intellectual Property in Information Technology – A Sri Lankan Case**, *in Proc : 11th International Conference on Humans and Computers,* 20th to 22nd November 2008, Nagaoka, Japan, 255-260.*

Dissertations

- **Fernando, S.**, (2014), **Internal Control of Secure Information and Communication Practices through Detection of User Behavioural Patterns**, *Doctor of Engineering Graduation Dissertation (submitted to Nagaoka University of Technology, Japan)*.

- **Fernando, S.**, (2011), **Information Security Management in Cross-Cultural Environments – Economically Rising Countries**, *Master of Engineering Graduation Thesis (submitted to Nagaoka University of Technology, Japan)*.

- **Fernando, S.A.**, Jayasnghe, K.S., Liyanage, S.A.H., (2008), **Lecture Mate System**, *Bachelor of Science (Hons.) in Information Technology Graduation Thesis (submitted to University of Moratuwa, Sri Lanka)*.

PERSONAL INTERESTS

Martial Arts

- **Shodan** (1st Dan) Black Belt – **World Okinawan Shorin-Ryu Kyudokan Karate-Do Federation** 2009
- **Shodan** (1st Dan) Black Belt – **International Seishinkai Shitoryu Karate-Do** 2012
- **Top Athlete – Nagaoka, Japan** 2013
- **Award – NPO Corporation Award Ceremony of the Sport Association of Mitsuke City, Japan** 2012
- **Silver Medal – Japan Karate-do Association Hokushin-Etsu 10th Block Karate-Do Championship, Japan**: Female Kata – Black Belt 2012
- **Silver Medal – National Karate-Do Championship, Sri Lanka**: Female Kata – 1st-2nd Kyu (Brown Belt) 2008

Music

- Piano, guitar, vocals

Drawing

Traveling

REFERENCES

Available upon request