

出國報告(出國類別：出席研討會)

出席 2017 年國際資訊及電腦安全會議 報告

服務機關：國家發展委員會檔案管理局

姓名職稱：林高級分析師傳義、陳設計師

嘉浩

派赴國家：新加坡

出國期間：106 年 7 月 3 日至 7 月 7 日

報告日期：106 年 9 月 28 日

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摘要

2017 年國際資訊及電腦安全會議(ICICS 2017: 19th International Conference on Information and Computer Security)於本(106)年 7 月 4 日、5 日舉行，由科學、工程暨技術之世界科學院(World Academy of Science Engineering and Technology，簡稱 WASET)主辦，會議地點安排於新加坡雅亭假日酒店(Holiday Inn Singapore Atrium)。議程公佈於該研討會官網(<https://www.waset.org/conference/2017/07/singapore/ICICS/program>)。該研討會旨在彙集資訊安全與密碼學等相關學術領域的研究成果，提供跨學科論壇，進行意見交流與經驗分享。與會者包括研究人員、從業人員以及教育工作者，討論最新創新技術、趨勢、關注議題、面臨的實際挑戰，以及資訊安全與密碼學領域解決方案等等。

藉由出席 2017 年國際資訊及電腦安全會議，汲取相關專家、學者發表之研究成果，有利於掌握趨勢發展，增進全國公文電子交換系統等資訊安全，並提升文書檔案電子化作業系統或平台之隱密性、身分識別、資料完整性及不可否認性。

出國期間並考察新加坡國家檔案館，瞭解其於 2013 年改隸於國家圖書館管理局之運作現況，適逢該館進行館舍翻新，雙方安排於國家圖書館管理局進行簡報及意見交流。

第一章 前言

配合行政院組織改造，國家發展委員會檔案管理局(以下簡稱本局)新增職掌，負責全國公文電子交換系統推動業務，另依行政院 103 年 12 月 31 日院臺安字第 1030158383 號函示，將公文電子交換系統列為國家關鍵基礎設施之一。為確保本系統資料及傳輸安全，規劃於本系統導入相關加解密機制，本局開發之全國共用公文電子交換系統亦即將試辦。又於機關推動公文線上簽核作業之際，除要求公文時效及節能減紙效益之外，更須兼顧線上簽核公文之完整性、可用性、鑑別性與不可否認性，完備的公開金鑰基礎建設 (Public Key Infrastructure, PKI) 有助提供線上加解密及身分鑑別技術。經由參與國際相關研討會，可汲取最新的資訊安全技術、應用及發展方向，有助於擴展國際視野，俾應用於資訊安全業務。

第二章 研討會及參訪行程

本次行程含括參加研討會、參訪新加坡國家檔案館及路程共計 5 日(如表 1)。

表 1 研討會及參訪行程表

日期	行程內容	所在地點	住宿地點
106/7/3(一)	啟程(臺北至新加坡)	臺北	新加坡
106/7/4(二)~7/5(三)	報到、出席會議	新加坡	新加坡
106/7/6(四)	1. 資料蒐集 2. 拜會新加坡國家檔案館 (National Archives of Singapore)	新加坡	新加坡
106/7/7(五)	回程(新加坡至臺北)	新加坡	

第三章 研討會重點

2017 年國際資訊及電腦安全會議係由 WASET 主辦。WASET 期許本會議為發表資訊及電腦安全領域最先進研究成果發表之重要跨學門平臺，希望世界各地在資訊及電腦安全等學術領域領先之科學家、研究人員及學者等藉由本會議共聚一堂，透過論文之發表，交換與分享其研究成果與經驗。會前徵稿之主題如下，但不以此為限：

1. Assurance and integrity of service
2. Computer crime prevention/detection, computer forensics and security
3. Confidentiality protection, cryptography and data protection
4. Database and data security, denial of service protection
5. E-commerce security, e-surveillance
6. Fraud/hacker/terrorism detection/prevention, information warfare, national security
7. Information ethics
8. Information privacy issues, information systems/information security, sharing
9. Internet abuse, network intruder prevention, internet/network security
10. Malicious code/unauthorised access protection, transaction security, virus/worm controls
11. Risk management, safety-critical systems
12. Secure communications technology and computer systems
13. Security control measures, policy models and mechanisms
14. Software and hardware architectures

15. Wireless/mobile network security

會議地點原為新加坡河景酒店（River View Hotel, Singapore），後因故改至新加坡雅亭假日酒店(Holiday Inn Singapore Atrium)舉辦。本次會議包含不同學門組織之特定會議議題，論文接受之比率為五分之一。

會議現場於 7 月 4 日早上 7 時 30 分開始報到。研討會議程摘要如表 2，係由多個研討會一起合辦，橫跨多個學術領域。議程除資訊相關領域外，還包括生化醫療、健康照護、環境資源、運動科學、奈米材料、航太科技等議題；計收錄學術論文 83 篇(詳附錄一)，其中 2 篇為專題演講，56 篇口頭發表，25 篇海報發表。二天的會議都在同一個場地進行，而海報發表亦安排以口頭發表方式進行，現場無論文以海報形式發表。本次大會實際安排 42 篇論文於會場口頭發表(議程詳附錄二)，也有部分論文的作者缺席。根據大會的簽到紀錄，本次研討會論文發表參與者共計 18 人次。

表 2 研討會議程摘要表

廳別	Seletar 廳
日期	2017 年 7 月 4 日
第 1 節時間	7:40~8:30
主持人	Azwin Lubis, Che Hsiu Chen
論文篇數	6
第 2 節時間	8:30~9:50
主持人	Danielle Slomberg, Shimola Kannan
論文篇數	7
第 3 節時間	9:50~10:25
主持人	Martin Adlington
論文篇數	3
中場休息及 與會人員合照	10:25~10:40
第 4 節時間	10:40~11:40
主持人	Youtao Gao
論文篇數	6
第 5 節時間	11:40~12:55
主持人	K.H. Yang, Bireswar Paul
論文篇數	7
午餐	12:55~13:30
第 6 節時間	13:30~15:40
主持人	Philemon Rakoto, K. Suganya Devi
論文篇數	10
日期	2017 年 7 月 5 日
第 1 節時間	7:45~8:10
主持人	Kyo-Sun Lim
論文篇數	3

茲將本次研討會與資訊系統、資訊安全、密碼學等相關論文，摘述如下。

一、利用資訊隱藏及視覺密碼防護線上支付系統

Secure E-Pay System Using Steganography and Visual Cryptography

今日網路世界不斷受到各類型之攻擊，其中為害最大的莫過於網路釣魚攻擊，駭客會建立一些容易與正常網站混淆的假網站來欺騙使用者。作者提出一套利用資訊隱藏(Steganography)及視覺密碼(Visual Cryptography)為基礎之圖像化身分認證技術以防止網路釣魚攻擊。本文展示一套可用於全彩影像之安全資訊隱藏處理技巧，並透過離散餘弦轉換(Discrete Cosine Transform)壓縮經資訊隱藏處理過後的影像。這套方法除了將要保密的資料利用資訊隱藏技術隱藏於掩護影像(Cover Image)中，並且利用視覺密碼技術將掩護影像分解為兩份看起來與該掩護影像無關之分享影像(Shares)，由客戶及銀行各執其中一份。每當客戶欲進行交易付款時須將自己的分享影像傳送給銀行，由銀行利用視覺密碼技術及資訊隱藏技術還原客戶識別資料以確認客戶身分並進行付款程序，以強化線上支付之安全認證作業。

二、一套用於解釋行動商務採用意願之修正式科技接受度模式

Revised Technology Acceptance Model Framework for M-Commerce Adoption

行動商務(M-Commerce)是繼電子商務(E-Commerce)後下一個在科技應用的趨勢。本文嘗試提出一套修正式科技接受度模式(Technology Acceptance Model, TAM)探討促使印度的消費者採用行動商務相關科技及服務之幾項主要因素，這些因素包含：服務客製化程度(Customization)、行動裝置之資料輸入操作方式(Input Mechanism of mobile device)、便利性(Convenience)、即時連結性(Instant Connectivity)、相容性(Compatibility)、安全性(Security)及行動商務服務的資料下載速度(Download speed of M-Commerce)。經問卷統計分析結果顯示其中服務客製化程度、便利性、即時連結性、相容性、安全性及行動商務服務的資料下載速度對於消費者採用行動商務的態度有顯著影響。

三、發展一個使用於 Android 應用程式認證的安全存取模組

Secure Access Module Development for Android Application Authentication

近來駭客發展了許多能自我變種之Android惡意程式，以規避一些以特徵值為基礎(Signature-based)之偵測機制。目前有些研究人員利用沙箱(Sandbox)技術，透過於模擬環境中觀察變種惡意程式運作，以發展偵測該等惡意程式之方法。但現今惡意程式之偽裝變種技巧不斷推陳出新，故僅依靠沙箱技術學習惡意程式行為，已不足以因應這樣的攻擊手法。為發展更進一步之防範措施，本文作者從加強應用程式真實性辨識方法著手，提出了一個以智慧 IC 卡(Smart IC)為基礎之雙因子認證模組，用以辨識 Android

應用程式之真實性。

四、FCNN-MR：一套以快速濃縮式最近鄰居法為基礎之平行樣本選取法

FCNN-MR: A Parallel Instance Selection Method Based on Fast Condensed Nearest Neighbor Rule

樣本選取法(Instance Selection)係一種減少資料處理量以增進資料探勘效率之方法。近年來為了分析處理大量數據資料，許多利用樣本選取法處理自大量數據資料分解而來之多個互斥之資料群的處理方法陸續被提出。本文作者分析這些方法的特性及限制，並基於 MapReduce 軟體框架提出一套採用快速濃縮式最近鄰居(Fast Condensed Nearest Neighbor, FCNN)法之平行樣本選取方法。本文研究表示該法除可降低 MapReduce 框架流程中分群輸出結果合併(Aggregation)階段所需運算量外，其運算結果經驗證與一般循序式 FCNN 法所得結果一致。

五、一套可強化上下文敏感控制流完整性之改良式靜態二進位碼分析

An Improved Method on Static Binary Analysis to Enhance the Context-Sensitive CFI

程式的控制流完整性(Control Flow Integrity, CFI)技術是防護源碼重用攻擊(Code-Reuse Attacks, CRAs)技術。傳統的 CFI 及近年提出之上下文敏感 CFI(Context-Sensitive CFI)僅利用粗略的控制流程圖(Control Flow Graphs, CFG)來分析程式的控制流是否被劫持，因而仍給駭客留下相當大的間接攻擊面。在目前的 CFI 技術中，要產出百分之百精確的控制流程圖仍是一個無法達成的目標。本文提出一個在二進位程式碼中找出較其他現行研究更精確之控制流程圖的方法。

六、有關馬偕博士在臺足跡之空間比較分析

Spatial Comparative Analysis on Travels of Mackay in Taiwan

馬偕博士自西元 1871 年 12 月 30 日抵達臺灣高雄後，在台灣傳教及醫療方面扮演重要角色並致力於教育達 30 年。過去已有許多有關馬偕博士旅臺的相關研究，了解其在臺期間對臺灣教育、醫藥和傳教影響。本文根據馬偕博士的日記，利用地理資訊系統(GIS)映射出其在臺宣教的路線，並以空間的概念串連馬偕博士所到之處的時間維度事件。透過解析出來的時空資訊，與現今留存的教會、學校及醫院與實地田野訪查做比對，使整個實體的史料成為線上虛擬實地探訪的導覽。本文之時空資訊依傳教、醫學和教育三大部分展現馬偕博士對臺不同地區的相關貢獻，提供未來有志研究馬偕博士在臺傳教相關主題者豐富的參考資料。

七、研討會照片



研討會會場



研討會報到情形(1)



研討會報到情形(2)



研討會參加者簽到冊



研討會會議資料



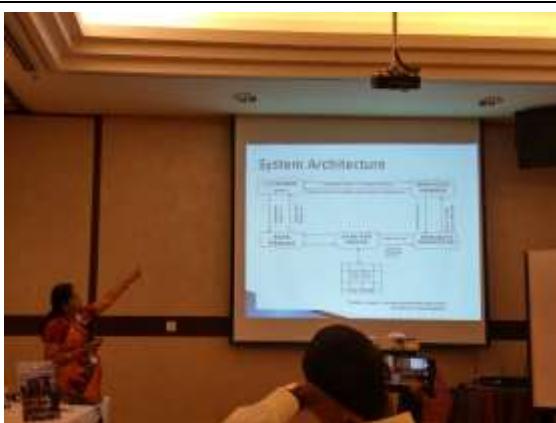
研討會場外長廊及廳別指示標幟



研討會情形



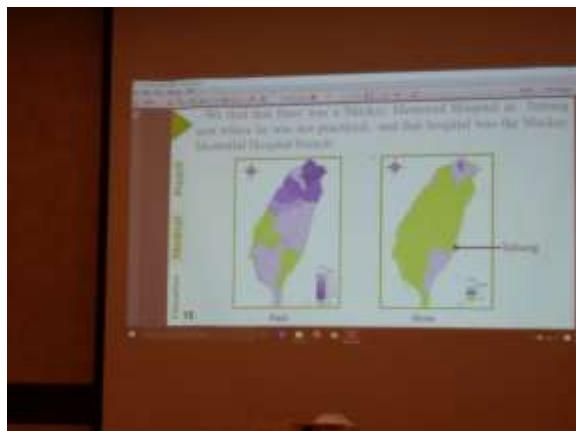
研討會情形



研討會情形



研討會情形



研討會情形



研討會情形



研討會情形



研討會情形



研討會參加者合照(右3、4為筆者)

(來源：<https://www.waset.org/downloads/14/photos/ee83eb4b-4c56-418b-8545-d8f1c1f60e86.jpg>)

CERTIFICATE OF ATTENDANCE

This certificate is awarded to

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for oral and technical presentation, recognition and appreciation of research contributions to ICICS 2017 ; 19th International Conference on Information and Computer Security

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出席會議證書

第四章 考察與拜會活動

藉本次研討會之利，特別規劃於研討會閉幕翌日前往考察新加坡國家檔案館，承蒙我國駐新加坡代表處(Taipei Representative Office in Republic of Singapore)居間協助聯繫、安排，本局人員始能順利於本年 7 月 6 日上午拜會新加坡國家檔案館人員，由於該館自本年 5 月起開始進行館舍翻修，故當日館方不克安排本局人員參訪新加坡國家檔案館，因館員工作地點分散各處，特別安排於新加坡國家圖書館管理局會議室以訪談方式，增進雙方之瞭解。本局曾於 2010 年(民國 99 年)派員前往參訪，本次訪視該館與前次拜訪之主要的差異在於機關屬性的改變，該館於上次拜訪時原隸屬國家文物局(National Heritage Board)，於 2013 年(民國 102 年) 3 月 28 日配合政府組織調整與國家圖書館整併，改隸於國家圖書館管理局(National Library Board)，以下簡述訪談經過。

一、訪談時間：106 年 7 月 6 日上午 10:00

二、訪談地點：新加坡國家圖書館管理局 Gnosis 會議室(位於新加坡國家圖書館 14 樓)

三、參加人員：

(一)新加坡國家檔案館：高級檔案館員葉進泉先生、助理檔案修復師王麗萍小姐、助理檔案館員白才君小姐

(二)本局：林高級分析師傳義、陳設計師嘉浩

四、訪談紀要：

(一)訪談方式

首先由本局與新加坡國家檔案館與會人員交換名片，接著由該館助理檔案修復師王麗萍小姐進行約 50 分鐘之簡報，讓我方參訪人員對該館業務有初步的認識後，雙方進行約 60 分鐘的意見交流，最後由本局人員致贈館方紀念品。

(二)新加坡國家檔案館簡介

1. 地址：

(1)本館：1 Canning Rise, Singapore

(2)國家檔案第二庫房(舊福特車廠)：351 Upper Bukit Timah Rd, Singapore

2. 主要法令

(1)國家檔案與文件中心法(1967 年)

(2)國家圖書館法(2013 年)

(3)檔案管理相關規定：規定於政府辦公手冊(IM)，包括IM4L(檔案登記與檔案管理)、IM8F(政府電子檔案保存和管理)

3. 歷史沿革

(1)1968年依據國家檔案與文件中心法成立，隸屬於文化部之國家檔案文書中心。

(2)1993年將口述歷史中心納入，改隸於國家文物局。

(3)2013年3月28日改隸通訊及新聞部下之國家圖書館管理局。

(三)簡報內容摘要

新加坡國家檔案館依據新加坡「國家圖書館法」規定，負責以下事務：

1. 為公部門文件管理標準程序提供建議。
2. 監護從公部門移交的檔案文件，並履行官方保管人的義務。
3. 透過寄存方式徵集已在新加坡播出或公開的聲像紀錄。
4. 收集與新加坡歷史有關的口述歷史。
5. 透過收購、捐贈、遺贈或其他方式徵集具有歷史意義的文件書籍或其他文物史料。
6. 透過出版刊物、舉辦展覽和文化遺產活動以提高人們對檔案資料的認識。

該館除管理新加坡國家檔案，也負責指導新加坡政府所轄16個部會、9個地方機關及64個法定委員會之檔案管理業務。另外指導該國部分未將檔案移轉至該館而自設檔案館之機關檔案管理業務，包括新加坡國防部、新加坡貪污調查局及內部安全部。

新加坡政府平均約有百分之十的機關檔案經鑑定具有長期保存之價值而移轉成為國家檔案。這些國家檔案並非都以原件保存，其中僅約百分之一依其固有價值保存原件，除一般紙本形式檔案，尚有影音形式檔案。影音檔案館藏年份最早可追溯至1950年代，主要分類如下：

1. PSB格式之檔案(檔案來源包括政府機關及媒體，包含新傳媒(MCS)、新加坡報業控股(SPH)及文化部)。
2. 國會會議紀錄。
3. 電視教育節目。
4. 新加坡及亞洲地區國家的電影。

新加坡國家檔案館亦透過徵集私人檔案充實館藏內容，如李氏兄弟照相館(Lee Brothers Studio)、新加坡著名肖像攝影師 P.S Teo、首任總統尤索夫(Yusof Ishak)及二戰女英雄蔡楊素梅(Elizabeth Choy)之私人檔案。

口述歷史為新加坡國家檔案館業務的一項特色，口述歷史中心(Oral History Centre)於 1979 年設立，於 1993 年與國家文物局整併。早期主要訪談對象為開國元勳，截至目前為止計有 20 多項口述歷史主題，如公共服務史、表演藝術、消失中的行業、教育、交通、日本侵占新加坡、以及新加坡社區史。

有關新加坡政府之電子檔案管理，新加坡國家檔案館於 2006 年啟用電子檔案登記系統，整合 Microsoft Outlook 及 Lotus Note 軟體，透過該系統將電子郵件轉為正式公文，系統依照職員身分進行權限管控，將政府檔案進行一站式的檔案生命週期(從檔案產生、管理到銷毀)管理。有關館藏檔案描述工作，新加坡國家檔案館除由館員進行相關作業，亦透過公民檔案館員計畫(The Citizen Archivist Project)借助全民的力量描述國家檔案以利相關檔案管理作業。本計畫係由檔案館公開館藏檔案影像，由民眾上網協助提供有關檔案的描述內容，由館方召集專家學者審查，並整理檔案描述內容，以提供後續檔案整理編目及應用參考(計畫網站位址：<http://www.nas.gov.sg/CitizenArchivist>)。

The screenshot shows the homepage of The Citizen Archivist Project. At the top, there are links for HOME, UPDATES, and HELP. On the right, there is a search bar, a LOG IN button, and a SIGN UP button. The main feature is a large black and white photograph of a racing car with the number 32, with the text "Racing in Singapore" and "Describe this photo collection". Below this, there are two sections: "DESCRIBE PHOTOGRAPHS" and "TRANSCRIBE DOCUMENTS", each with four thumbnail images. At the bottom, there are three columns: "About This Project", "Latest Updates", and "Recent Activity".

DESCRIBE PHOTOGRAPHS

TRANSCRIBE DOCUMENTS

About This Project

What is this project about?
What happens to your contributions?
How do I contact you?

Latest Updates

144 Letters from Raffles added
300 pages transcribed
MITA collection added

Recent Activity

Srinivasan Thanikachalam described 19980003943.
BMGente
A Huang described 19980002113-0008
Srinivasan Thanikachalam described 19980002188-0008

圖 1 公民檔案館員計畫網站

L17: Raffles' Letters to Singapore (Farquhar)

These are letters written during Raffles' administration of Singapore. This includes instructions given to the Resident and Town Committee for the development of Singapore. This collection spans Jan to Jun 1819.

520

Pages in this
collection

L017_01470 - [Open] Displaying 1/4 of 50 Pages

Transcribe Document

No. 75 To Captain Flint Master Amsterdam
Sir,
I am directed to request you will state whether any and what general prohibitions were placed on the population of the settlement after the beginning of last year and at what time during the general prohibition any body of them was imported to this or elsewhere, and if any individual of the settlement was by labour and under whose authority.

Sam'l R. Raffles
Administrator

SAVE AS IN-PROGRESS SUBMIT FOR REVIEW

Previous Contributors

Be the first to contribute.

Background Information: NONE
Date: 1819
Media Number: L017_01470

圖 2 公民檔案館員計畫網站-檔案描述編輯介面

(四)意見交流

當日與新加坡國家檔案館與會人員意見交流內容重點如下：

1. 館方說明儘量以微縮片保存檔案，避免使用電子檔案保存檔案，主要考量為檔案數位化後，相關電子檔案之長期保存有相當程度之風險。
2. 雖然新加坡政府無類似國內之電子公文交換系統，但政府內部有規劃使用封閉式網路以確保資訊安全。
3. 本次館方修繕自本年 5 月起，預計明年下半年完工，館舍目前不對外提供參訪，主要修繕重點包含庫房設施、門禁及空調系統等。
4. 該館歡迎新加坡國人參與該館公民檔案館員計畫，館方會安排每年一次參與人員聚會以表謝意。

(五)參訪活動

藉訪談處所地利之便，順道參訪與檔案館同屬新加坡圖書館管理局所管轄之新加坡國家圖書館館舍。新加坡國家圖書館為 1 棟 16 層樓之建築，依該館樓層簡介所示，地下室為中央公共圖書館，5 樓為戲劇中心管理處(Drama Centre Management Office)所租用(附設劇場)，7 至 13 樓為李光前參考圖書館(Lee Kong Chian Reference Library)。

五、 參訪照片



新加坡國家圖書館外觀



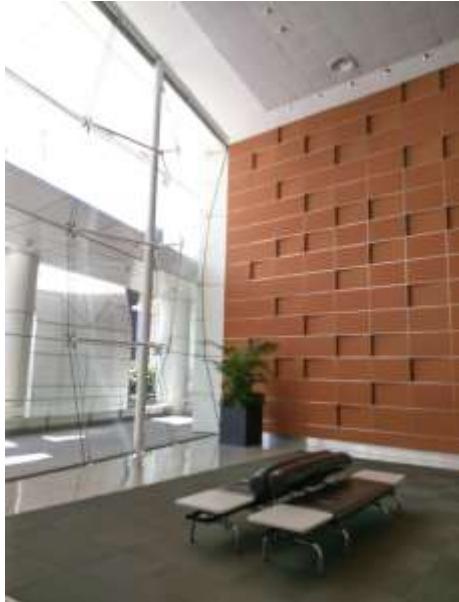
新加坡國家圖書館樓層介紹看板



新加坡國家圖書館入口



入口大廳之電子活動訊息看板



入口大廳一景(1)



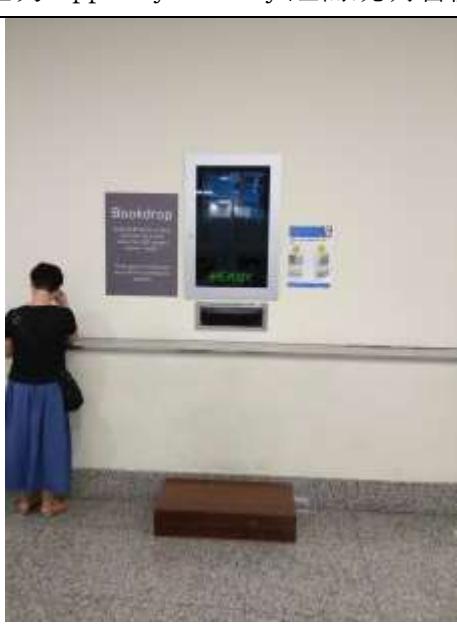
入口大廳一景(2)



新加坡國家圖書館管理局
官方 App—myLibrary 註冊說明看板



民眾舊書流通處



自助還書服務



自助還書服務—近照



本局參訪人員致贈本局紀念品予新加坡國家檔案館與會代表高級檔案館員葉進泉先生

第五章 心得與建議

繼 2014 年在泰國舉辦之密碼學與安全國際年會、2015 年在日本的國際資訊安全與加密技術研討會，本局於持續 2 年派員參加國際資訊安全相關之研討會後，今年繼續派員參加研討會。冀望藉由參加國際性之研討會，與世界各地之專家學者互動，汲取經驗，惟與前屆同仁參與研討會經驗相較，今年所探討資訊安全、密碼學相關之雲端運算安全、行動裝置管理、數位鑑識應用、網路安全及電子檔案管理等相關議題，相對少了一些。本次研討會並非專屬資訊安全與密碼學之單一性質研討會，而是綜合各領域研究成果的發表會，其議題範疇甚為廣泛，與會人員亦來自世界各地，例如：法國、馬來西亞、泰國、以色列、中國大陸、臺灣等，確實有利出國人員對於各國不同領域之發展，有初步之認識。

謹以本次參與國際研討會與拜會新加坡國家檔案館之經驗，提出下列 5 點建議。

一、選擇參加更專業之組織所舉辦之國際研討會

WASET 為知名國際之組織，在會前有許多 WASET 所轄之組織擬於本年 7 月 3、4 日之相同地點開研討會。會議當天依據 WASET 說明，由社會科學與工程 (Social Science and Engineering)、生命科學與工程 (Life Science and Engineering) 及自然科學工程 (Natural Science and Engineering) 組織主辦，所以本次會議於這些學門之議題較多。然而資訊安全、密碼學相關之雲端運算安全、行動裝置管理、數位鑑識應用、網路安全及電子檔案管理等相關議題相對少很多，以致資安等相關專長之學者專家參與人數也因而少很多，會議討論顯得較為冷清。爾後可以評估其他知名之國際組織舉辦之國際研討會，例如，本局於 2014 年派員參加於泰國舉辦之密碼學與安全國際年會之主辦單位 ASSOCIATION OF SCIENTISTS DEVELOPERS AND FACULTIES (簡稱 ASDF) 專業協會，或是電機電子工程師學會 (Institute of Electrical and Electronics Engineers, IEEE) 所辦之國際研討會。

二、持續關注資訊隱藏技術之發展應用

資訊隱藏技術在本次會議及 2015 年於日本舉辦之國際資訊安全與加密技術研討會皆有相關論文發表，顯見資訊隱藏技術逐漸受到重視。近年該技術已應用於資安攻擊手法中，駭客可將惡意程式透過資訊隱藏技術隱藏於看似無害且吸引人之圖片檔案中，再搭配社交工程手法引誘使用者開啟檔案進而達到攻擊目的。臺灣近年

持續遭受的進階持續性滲透攻擊(Advanced Persistent Threat, APT)亦發展出結合社交攻擊與資訊隱藏技術之攻擊手法，不斷竊取政府機關及產業的機密資訊。為防範類似的資安攻擊手法以提升機關資安防護能力，資訊隱藏技術之發展應用值得我們持續關注。

三、地理資訊系統於國家檔案之應用

本次會議提出一篇結合 GIS 與馬偕博士日記內容之資訊系統應用研究，將日記內的地理資訊映射於 GIS 中，形成一項具知性且豐富之研究參考資源，本局國家檔案中亦有許多地理資訊(如本局檔案樂活情報部分期別之檔案瑰寶單元之檔案內容)，並於 105 年將檔案中含有的地理資訊彙整公布於政府資料開放平臺上，惟相關資訊多限於靜態的地標資訊，如能結合特定國家檔案主題將相關檔案之地理資訊映射於 GIS，可將國家檔案的內容作更生動的呈現。

四、行動裝置安全

近年駭客透過偽冒行動裝置程式以進行攻擊之資安風險增加，本次會議提出一篇行動裝置程式真實性認證技術之論文，而行動裝置在辦公室自動化也逐漸扮演重要角色，如無紙化會議系統及行動線上簽核。本局國家檔案典藏及服務建設計畫業奉核定，全場域資訊化運作規劃如有應用行動載具時，智慧型手機可作為優先規劃成為應用之行動載具，除功能性之考量，資訊安全風險亦不可忽略，本次會議有探討 Android 平台之應用程式安全性，但尚有相當大比率使用 iOS 平台，對此可持續蒐集不同平台之 App 程式安全性認證，以強化未來全場域資訊化運作時對駭客攻擊之防範作為。

五、口述歷史之應用

新加坡國家檔案館與本局組織架構上，其中一項之差異為新加坡國家檔案館下轄口述歷史中心，職司口述歷史之收集與管理，新加坡檔案館對於口述歷史資料及館藏檔案並重，目前本局雖然無類似的口述歷史中心，建議可與國家檔案相關之口述歷史之研究單位合作，或於檔案展場增闢口述歷史專區，藉由生動講述口述歷史，增加觀展民眾對檔案展內容之印象。

附錄一 2017 年國際資訊及電腦安全會議論文集

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3	Oral	A Comparative Study of Women's Participation in Korea's March First Movement and India's Non-Cooperation Movement Shyam Kumar Anand The Academy of Korean Studies Korea, Republic Of
4	Oral	Dividend Policy in Family Controlling Firms from a Governance Perspective: Empirical Evidence in Thailand Tanapond S. University of Wollongong Australia
5	Oral	A Stylistic Comparison of the Vajradhā Tu Māṇḍala within 11 th Century Western Tibetan Monasteries: Alchi and Tabo Arthi Sundararajan Rutgers University United States
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44	Oral	<p>Secure Access Module Development for Android Application Authentication</p> <p>M. Alimuddin</p> <p>Institut Teknologi Bandung Indonesia</p>
45	Oral	<p>Modern Pedagogy Techniques for DC Motor Speed Control</p> <p>Rajesh Kumar, Roopali Dogra, Puneet Aggarwal</p> <p>Maharishi Markandeshwar University, Mullana India</p>
46	Oral	<p>Computer-Aided Teaching of Transformers for Undergraduates</p> <p>Rajesh Kumar, Roopali Dogra, Puneet Aggarwal</p> <p>Maharishi Markandeshwar University, Mullana India</p>
47	Oral	<p>Rotor Side Speed Control Methods Using MATLAB/Simulink for Wound Induction Motor</p> <p>Rajesh Kumar, Roopali Dogra, Puneet Aggarwal</p> <p>Maharishi Markandeshwar University, Mullana India</p>
48	Oral	<p>Sparse Unmixing of Hyperspectral Data by Exploiting Joint-Sparsity and Rank-Deficiency</p> <p>Fanqiang Kong, Chending Bian</p> <p>Nanjing University of Aeronautics and Astronautics China</p>
49	Oral	<p>A Golay Pair Based Synchronization Algorithm for Distributed Multiple-Input Multiple-Output System</p> <p>Weizhi Zhong, Xiaoyi Lu, Lei Xu</p> <p>Nanjing University of Aeronautics and Astronautics China</p>
50	Oral	<p>Analysis of Autonomous Orbit Determination for Lagrangian Navigation Constellation with Different Dynamical Models</p> <p>Gao Youtao, Zhao Tanran, Jin Bingyu, Xu Bo</p> <p>Nanjing University of Aeronautics and Astronautics China</p>
51		<p>Existence of Nano-Organic Carbon Particles below the Size Range of 10 nm in the Indoor Air Environment</p>

	Oral	Bireswar Paul, Amitava Datta Motilal Nehru National Institute of Technology Allahabad India
52	Oral	[Keynote Talk]: Water Resources Vulnerability Assessment to Climate Change in a Semi-Arid Basin of South India K. Shimola, M. Krishnaveni Malla Reddy Engineering College India
53	Oral	Impact of Integrated Watershed Management Programme Based on Four Waters Concept: A Case Study of Sali Village, Rajasthan State of India Garima Sharma, R. N. Sharma University of Rajasthan India
54	Poster	Deficiency of SNARE Protein Decrease Accumulation of Cesium in Rice (<i>Oryza sativa</i>) Soo Jin Kim, Il Lae Jung Korea Atomic Energy Research Institute Korea, Democratic People
55	Oral	Mineralogical and Geochemical Characteristics of Serpentinite-Derived Ni-Bearing Laterites from Fars Province, Iran: Implications for the Lateritization Process and Classification of Ni-Laterites S. Rasti, M. A. Rajabzadeh Shiraz University Iran, Islamic Republic Of
56	Oral	Antarctic Plate Motion: Constraints from GPS Measurements Sapna Ghavri, Joshi K. Catherine, V. K. Gahalaut Kurukshetra University India
57	Poster	Quantification of Effects of Shape of Basement Topography below the Circular Basin on the Ground Motion Characteristics and Engineering Implications Kamal, Dinesh Kumar, J. P. Narayan, Komal Rani Kurukshetra University India
58	Oral	Determination of Mercury in Gold Ores by CVAAS Method Ratna Siti Khodijah, Mirzam Abdurrachman Bandung Institute of Technology Indonesia
59	Oral	Revised Technology Acceptance Model Framework for M-Commerce Adoption Manish Gupta Motilal Nehru National Institute of Technology Allahabad India

60	Poster	The Effect That the Data Assimilation of Qinghai-Tibet Plateau Has on a Precipitation Forecast Ruixia Liu China Meteorological Administration China
61	Poster	The Effect of Improved Wind Fields on Radioactive Pollutant Dispersion Kyo-Sun Sunny Lim, Joo-Myoung Lim, Hyeyum Hailey Shin, Young-Yong Ji, Wanno Lee Korea Atomic Energy Research Institute Korea, Republic of
62	Oral	Effects of Net Height of Crab Entangling Nets on the Capture of Targeted Economically Important Portunid Species and Non-Target Species Rizalyn Gonzales, Harold Monteclaro University of the Philippines Visayas Philippines
63	Oral	Peristaltic Transport of a Jeffrey Fluid with Double-Diffusive Convection in Nanofluids in the Presence of Inclined Magnetic Field Safia Akram National University of Sciences and Technology (NUST) Pakistan
64	Oral	A Numerical Algorithm of an Ideal Incompressible Fluid through a Curved the Channel for Vortical Flow Piangpob Monnuanprang Phranakhon Rajabhat University Thailand
65	Oral	Performance of an Automotive Engine Running on Gasoline-Condensate Blends Md. Ehsan, Cyrus Ashok Arupratan Atis Bangladesh University of Engineering and Technology (BUET) Bangladesh
66	Oral	Performance Analysis on the Smoke Management System of the Weiwuying Center for the Arts Using Hot Smoke Tests K. H. Yang, T. C. Yeh, P. S. Lu, F. C. Yang, T. Y. Wu, W. J. Sung National Sun Yat-sen University Taiwan
67	Poster	Erythema Multiforme Exudativum Major Caused by Isoniazid Hypersensitivity in a Child Azwin Lubis, Rika Hapsari, Zahrah Hikmah, Anang Endaryanto, Ariyanto Harsono Airlangga University Indonesia

68	Poster	Smart Kids Coacher: Model for Childhood Obesity in Thailand Pornwipa Daoduong, Jairak Loysongkroa, Napaphan Viriyautsahakul, Wachira Pengjuntr Ministry of Public Health Thailand
69	Oral	Determinants of Walking among Middle-Aged and Older Overweight and Obese Adults: Demographic, Health, and Socio-Environmental Factors Samuel N. Forjuoh, Marcia G. Ory, Jaewoong Won, Samuel D. Towne, Suojin Wang, Chanam Lee Texas A&M Health Science Center United States
70	Oral	Parametric Regression Model for Data Hold on Lung Cancer Patients in Dr Kariadi Semarang Using Weibull Regression Model and Exponential Regression Devita Putri Mardyanti, Muhammad Ulinnuha Islamic University of Indonesia Indonesia
71	Oral	Qualitative Analysis of Emotional Thoughts in the Perspective of Nurses Who Have Been Working Experience in Pediatric Hematology-Oncology Unit Sevil Inal, Leman Yantiri, Meral Kelleci Istanbul University Turkey
72	Oral	Effects of Gamma-Tocotrienol Supplementation on T-Regulatory Cells in Syngeneic Mouse Model of Breast Cancer S. Subramaniam, J. S. A. Rao, P. Ramdas, K. R. Selvaduray, N. M. Han, M. K. Kutty, A. K. Radhakrishnan International Medical University Malaysia
73	Oral	Prevalence of Biofilms and Enterotoxins Produced by Staphylococcus Aureus-Inducing Pneumonia in South-South Geopolitical Zone, Nigeria Felix Enwa Delta State University Nigeria
74	Oral	Synthesis, Spectral, Thermal, Optical and Dielectric Studies of Some Organic Arylidene Derivatives S. Sathiyamoorthi, P. Srinivasan, K. Suganya Devi University College of Engineering, Panruti India
75	Oral	Secure E-Pay System Using Steganography and Visual Cryptography K. Suganya Devi, P. Srinivasan, M. P. Vaishnave, G. Arutperumjothi University College of Engineering, Panruti India

76	Oral	<p>Study of Effective Atomic Numbers of Bioactive Glasses for Photon Interaction</p> <p>Anil Shantappa, S. M. Hanagodimath</p> <p>Guru Nanak Dev Engineering College India</p>
77	Poster	<p>The Acute Effects of a Warm-Up Including Different Dynamic Stretching on Hamstring Stiffness, Flexibility, and Strength</p> <p>Che Hsiu Chen, Kuo Wei Tseng, Zih Jian Huang, Hon Wen Cheng</p> <p>National Taiwan University of Sport Taiwan</p>
78	Poster	<p>Effect of Two Bouts of Eccentric Exercise on Knee Flexors Changes in Muscle-Tendon Lengths</p> <p>Shang-Hen Wu, Yung-Chen Lin, Wei-Song Chang, Ming-Ju Lin</p> <p>National Chiayi University Taiwan</p>
79	Oral	<p>Road Accidents in Urban and Rural Areas in Dar Es Salaam, Tanzania</p> <p>Bruno Kinyaga</p> <p>Sensys Gatso Group Tanzania, United Republic Of</p>
80	Poster	<p>Using SNAP and RADTRAD to Establish the Analysis Model for Maanshan PWR Plant</p> <p>J. R. Wang, H. C. Chen, C. Shih, S. W. Chen, J. H. Yang, Y. Chiang</p> <p>Tsinghua University Taiwan</p>
81	Oral	<p>Web Based Information System of Employee Performance Management for Government Organizations</p> <p>Angga Erwina Bayu, I. G. B. Baskara Nugraha</p> <p>Bandung Institute of Technology Indonesia</p>
82	Poster	<p>An Improved Method on Static Binary Analysis to Enhance the Context-Sensitive CFI</p> <p>Qintao Shen, Lei Luo, Jun Ma, Jie Yu, Qingbo Wu, Yongqi Ma, Zhengji Liu</p> <p>National University of Defense Technology China</p>
83	Oral	<p>FCNN-MR: A Parallel Instance Selection Method Based on Fast Condensed Nearest Neighbor Rule</p> <p>Lu Si, Jie Yu, Shasha Li, Jun Ma, Lei Luo, Qingbo Wu, Yongqi Ma, Zhengji Liu</p> <p>National University of Defense Technology China</p>

附錄二 2017 年國際資訊及電腦安全會議論文發表議程表

ICICS 2017 : 19th International Conference on Information and Computer Security

PROGRAM CHAIR

Assoc. Prof. Dr. Shimola Kannan
Malla Reddy Engineering College
India

July 04, 2017
Seletar Room, Level 3
Session I: 07:40-08:30
Chair: Azwin Lubis

篇名	作者
Effects of Gamma-Tocotrienol Supplementation on T-Regulatory Cells in Syngeneic Mouse Model of Breast Cancer	S. Subramaniam, J. S. A. Rao, P. Ramdas, K. R. Selvadurai, N. M. Han, M. K. Kutty, A. K. Radhakrishnan
Angiomotin Regulates Integrin Beta 1-Mediated Endothelial Cell Migration and Angiogenesis	Yuanyuan Zhang, Yujuan Zheng, Giuseppina Barutello, Sumako Kameishi, Kungchun Chiu, Katharina Hennig, Martial Balland, Federica Cavallo, Lars Holmgren Karolinska Institutet, Sweden
Erythema Multiforme Exudativum Major Caused by Isoniazid Hypersensitivity in a Child	Azwin Lubis, Rika Hapsari, Zahrah Hikmah, Anang Endaryanto, Ariyanto Harsono Airlangga University, Indonesia (e-Poster)
Smart Kids Coacher: Model for Childhood Obesity in Thailand	Pornwipa Daoduong, Jairak Loysongkroa, Napaphan Viriyautsahakul, Wachira Pengjuntr Ministry of Public Health, Thailand (e-Poster)

篇名	作者
The Acute Effects of a Warm-Up Including Different Dynamic Stretching on Hamstring Stiffness, Flexibility, and Strength	Che Hsiu Chen, Kuo Wei Tseng, Zih Jian Huang, Hon Wen Cheng National Taiwan University of Sport, Taiwan (e-Poster)
Effect of Two Bouts of Eccentric Exercise on Knee Flexors Changes in Muscle-Tendon Lengths	Shang-Hen Wu, Yung-Chen Lin, Wei-Song Chang, Ming-Ju Lin National Chiayi University, Taiwan (e-Poster)

July 04, 2017
 Seletar Room, Level 3
 Session II: 08:30-09:50
 Chair: Danielle Slomberg, Shimola Kannan

篇名	作者
Milk Production and Milk Composition of Dairy Cows in Response to Calcium Salt of Palm Oil Fatty Acids Supplementation	Wisitiporn Suksombat, Tanawat Phonkert, Chayapol Meeprom Suranaree University of Technology, Thailand
Using Sea Cucumber for Mitigation of Marine Pollution	A. Al-Yaqout, A. Al-Alawi, T. Al-Said, E. Al-Enezi, M. Al-Roumi Kuwait Institute for Scientific Research, Kuwait (e-Poster)
Report of the Sea Cucumber <i>Stichopus hermanni</i> from Umm Al-Maradim and Qaruh Islands in Kuwait	M. Al-Roumi, A. Al-Yaqout, A. Al-Baz Kuwait Institute for Scientific Research, Kuwait (e-Poster)
Electrochemical Determination of Morin in Kiwi and Strawberry Fruit Samples Using Vanadium Pentoxide Nano-Flakes	Ragu Sasikumar, Mani Govindasamy, Shen-Ming Chen, Yu Chieh-Liu, Palraj Ranganathan, Syang-Peng Rwei national taipei university of technology, Taiwan (e-Poster)

篇名	作者
Surpassing Antibiotic Resistance through Synergistic Effects of Polyethyleneimine-Silver Nanoparticle Complex Coated Mesoporous Silica Trio-Nanoconstructs	Ranjith Kumar Kankala, Wei-Zhi Lin, Chia-Hung Lee National Dong Hwa University, Department of Life Science, Taiwan (e-Poster)
Environmental Fate and Toxicity of Aged Titanium Dioxide Nano-Composites Used in Sunscreen	Danielle Slomberg, Jerome Labille, Riccardo Catalano, Jean-Claude Hubaud, Alexandra Lopes, Alice Tagliati, Teresa Fernandes Aix-Marseille University, France
Core-Shell Type Magnetic Nanoparticles for Targeted Drug Delivery	Yogita Patil-Sen University of Central Lancashire, United Kingdom
[Keynote Talk]: Water Resources Vulnerability Assessment to Climate Change in a Semi-Arid Basin of South India	K. Shimola, M. Krishnaveni Malla Reddy Engineering College, India

Seletar Room, Level 3

July 04, 2017

Session III: 09:50-10:25

Coffee Break: 10:25-10:40

Chair: Martin Adlington

篇名	作者
Mineralogical and Geochemical Characteristics of Serpentinite-Derived Ni-Bearing Laterites from Fars Province, Iran: Implications for the Lateritization Process and	S. Rasti, M. A. Rajabzadeh Shiraz University, Iran, Islamic Republic Of
Seismic Design Approach for Areas with Low Seismicity	Mogens Saberi NIRAS A/S, Denmark, Denmark
A Review of Critical Framework Assessment Matrices for Data Analysis on Overheating in Buildings Impact	Martin Adlington, Boris Ceranic, Sally Shazhad University of Derby, United Kingdom (e-Poster)

Seletar Room, Level 3

July 04, 2017

Session IV: 10:40-11:40

Chair: Youtao Gao

篇名	作者
Flexible 3D Virtual Desktop Using Handles for Cloud Environments	J. K. Lee, S. L. Lee Soongsil University, Korea, Republic Of (e-Poster)
FCNN-MR: A Parallel Instance Selection Method Based on Fast Condensed Nearest Neighbor Rule	Lu Si, Jie Yu, Shasha Li, Jun Ma, Lei Luo, Qingbo Wu, Yongqi Ma, Zhengji Liu National University of Defense Technology, China
An Improved Method on Static Binary Analysis to Enhance the Context-Sensitive CFI	Qintao Shen, Lei Luo, Jun Ma, Jie Yu, Qingbo Wu, Yongqi Ma, Zhengji Liu National University of Defense Technology, China (e-Poster)
Sparse Unmixing of Hyperspectral Data by Exploiting Joint-Sparsity and Rank-Deficiency	Fanqiang Kong, Chending Bian Nanjing University of Aeronautics and Astronautics, China
A Golay Pair Based Synchronization Algorithm for Distributed Multiple-Input Multiple-Output System	Weizhi Zhong, Xiaoyi Lu, Lei Xu Nanjing University of Aeronautics and Astronautics, China
Analysis of Autonomous Orbit Determination for Lagrangian Navigation Constellation with Different Dynamical Models	Gao Youtao, Zhao Tanran, Jin Bingyu, Xu Bo Nanjing University of Aeronautics and Astronautics, China

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July 04, 2017

Session V: 11:40-12:55

Lunch: 12:30-13:30

Chair: K. H. Yang, Bireswar Paul

篇名	作者
A Numerical Algorithm of an Ideal Incompressible Fluid through a Curved the Channel for Vortical Flow	Piangpob Monnuanprang Phranakhon Rajabhat University, Thailand
A Study on Temperature and Drawing Speed for Diffusion Bonding Enhancement in Drawing of Hot Lined Pipes by FEM Analysis	M. T. Ahn, J. H. Park, S. H. Park, S. H. Ha Dong-a University, Korea, Republic Of (e-Poster)
A Study on the Relationship between Shear Strength and Surface Roughness of Lined Pipes by Cold Drawing	Mok-Tan Ahn, Joon-Hong Park, Yeon-Jong Jeong Dong-a University, Korea, Republic Of (e-Poster)
Performance Analysis on the Smoke Management System of the Weiwuying Center for the Arts Using Hot Smoke Tests	K. H. Yang, T. C. Yeh, P. S. Lu, F. C. Yang, T. Y. Wu, W. J. Sung National Sun Yat-sen University, Taiwan
Using SNAP and RADTRAD to Establish the Analysis Model for Maanshan PWR Plant	J. R. Wang, H. C. Chen, C. Shih, S. W. Chen, J. H. Yang, Y. Chiang Tsinghua University, Taiwan (e-Poster)
Existence of Nano-Organic Carbon Particles below the Size Range of 10 nm in the Indoor Air Environment	Bireswar Paul, Amitava Datta Motilal Nehru National Institute of Technology Allahabad, India
Synthesis, Spectral, Thermal, Optical and Dielectric Studies of Some Organic Arylidene Derivatives	S. Sathiyamoorthi, P. Srinivasan, K. Suganya Devi University College of Engineering, Panruti, India

Seletar Room, Level 3

July 04, 2017

Session VI: 13:30-15:40

Chair: Philemon Rakoto, K. Suganya Devi

篇名	作者
Spatial Comparative Analysis on Travels of Mackay in Taiwan	Shao-Chi Chien, Ying-Ju Chen, Chiao-Yu Tseng, Wan-Ting Lee, Yi-Wen Cheng Aletheia University, Taiwan
Language Processing of Seniors with Alzheimer's Disease: From the Perspective of Temporal Parameters	Lai Yi-Hsiu National University of Kaohsiung, Taiwan (e-Poster)
Linking Theory to Practice: An Analysis of Papers Submitted by Participants in a Teacher Mentoring Course	Varda Gil, Ella Shoval, Tussia Mira University of Haifa, Israel (e-Poster)
Features of Formation and Development of Possessory Risk Management Systems of Organization in the Russian Economy	Mikhail V. Khachaturyan, Inga A. Koryagina, Maria Nikishova Plekhanov Russian University of
Relative Composition of Executive Compensation Packages, Corporate Governance and Financial Reporting Quality	Philemon Rakoto HEC Montreal, Canada
Bestination: A Sustainable Approach to Conflict Management for Buddhist Entrepreneurs	Navarat Sachayansrisakul, Nattawat Ponnara Bangkok University, Thailand
Survival and Growth Factors of Korean Start-Ups: Focusing on the Industrial Characteristics	Hanei Son Science and Technology Policy Institute, Korea, Republic Of
Examining the Predictivity of Tourism Demand on a Country's Macroeconomic Indexes: A Simple Predictive Regression Approach	Min Kyung Song, Young C. Joo, Sang Hyuck Kim, Sung Y. Park Chung-Ang University, Korea, Republic Of

篇名	作者
Revised Technology Acceptance Model Framework for M-Commerce Adoption	Manish Gupta Motilal Nehru National Institute of Technology Allahabad, India
Secure E-Pay System Using Steganography and Visual Cryptography	K. Suganya Devi, P. Srinivasan, M. P. Vaishnave, G. Arutperumjothi University College of Engineering, Panruti, India

Seletar Room, Level 3
July 05, 2017
Session VII: 07:45-08:10
Chair:Kyo-Sun

篇名	作者
Effects of Net Height of Crab Entangling Nets on the Capture of Targeted Economically Important Portunid Species and Non-Target Species	Rizalyn Gonzales, Harold Monteclaro University of the Philippines Visayas, Philippines
The Effect That the Data Assimilation of Qinghai-Tibet Plateau Has on a Precipitation Forecast	Ruixia Liu China Meteorological Administration, China (e-Poster)