出國報告（出國類別：參加國際會議）

2012 農業食品生物工程國際研討會
回國報告

服務機關：國立臺東專科學校

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摘要

2012 農業、食品、生物、工程國際研討會目的爲促進學界（學者、研究人員）及業界（工程師、專家）間之技術交流，主題涵蓋廣泛，農業類包括 Agricultural Biotechnology Regulations, Rules & Perceptions 等，食品類包括 Food Chemistry and Biotechnology 等，生物類包括 Biological Data Mining 等，醫藥類包括 Drug screening and pharmaceutical synthesis 等，工程類包括 Electronics and Instrumentation in Food Iindustry 等，計算類包括 Mathematical and Quantitative Models of Cellular and Multicellular Systems 等，基因工程類包括 Gene Sstructure, Regulation and Modeling 等。

本人主要目的爲參與工程類主題之議程，主要聚焦於綠能方面之研究探討，希望能在生物技術與能源技術之整合上有所斬獲，例如利用微渦輪發電機之直接沼氣發電、利用 BIO MASS 之生物廢棄物發電、利用生物技術產出氫氣之生物氫能等。

會議自 5 月 11 日至 5 月 13 日於廣州南洋大酒店舉行，本人前一日出發，與本校同仁於桃園機場會合，11 日排定行程爲報到及口頭報告登記，晚間參加歡迎晚宴，12 日早上爲開幕典禮，典禮由 Malaya 大學 Jennifer Ann Harikrishna 教授主持，隨後聆聽兩場專題演講（Keynote Speech），第一場由台灣清華大學 Cheng-Hsien Liu 教授主講，第二場由韓國 Handong Global 大學 Wilhelm Holzapfe 教授主講。

12 日下午開始論文發表場次，論文發表議程分爲兩個 Session，Session A 主題爲農業、生物及食品技術（Agricultural, Biological, Food Technology），計 23 篇論文登記口頭報告， Session B 主題爲工程技術（Engineering Technology），計 20 篇論文登記口頭報告，本人參加 Session B 之場次，對於其中一篇有關超級電容改善容量之論文深感興趣，與作者有深入討論。

13 日早上繼續論文發表場次，Session A 計 22 篇論文登記口頭報告，Session B 計 18 篇論文登記口頭報告。本人仍舊參加 Session B 之場次，其中幾篇論文頗有吸引力，是有關溫室節能及水電效率改善之研究，本人與作者交換不少意見。本人並於本場次中發表 2 篇論文，分別探討電力品質問題及電弧爐運轉問題，會中與大陸學者專家交換許多心得，獲得相當迴響。13 日下午隨即整裝回國，14 日返抵學校。

能參與本次會議本人獲益良多，對生物科技之前景相當期待，會中雖然所期望的生物能方面之研討不如預期的多，但與會學者專家莫不認同生物能之潛力，尤其是生物技術與能源技術之整合技術，在未來勢必成爲產、官、學界共同的焦點。

目次

壹、目的

2012 農業、食品、生物、工程國際研討會旨在提供一個發表平台，讓學術界之科學家、學者、研究人員及工業界之工程師、專家之間交換研發心得、經驗，以促進國際學術交流及技術升等。會議主題涵蓋下列議題：

(01) Agricultural and Biological Engineering
(02) Agricultural biotechnology & developing countries
(03) Agricultural Biotechnology regulations, rules & perceptions
(04) Animal biotechnology
(05) Application of artificial intelligence in food engineering research and in industry
(06) Beverage and Fermentation Technology
(07) Bio-Agricultural Engineering Techniques
(08) Biocatalysis, organocatalysis and nanobiotechnology
(09) Biofuels and bioenergy biotechnology research
(10) Bioinformatics
(11) Biological and biomedical imaging
(12) Biological data mining
(13) Biological Systems Engineering
(14) Biomedical Computational drug discovery
(15) Bio-MEMS and microbioreactors
(16) Biomimetic and self-assembled materials
(17) Bioremediation of polluted sites
(18) Biosensors and molecular diagnostics
(19) Breeding and genetics
(20) Cell and tissue engineering
(21) Cellular and molecular biology
(22) Comparative genomics and annotation
(23) Composition of foods
(24) Computational and Systems Biology
(25) Computational drug discovery
(26) Computational ecology
(27) Computational neurobiology
(28) Computational proteomics
(29) Constraint satisfaction
(30) Control and system engineering for food industry
(31) Crop breeding, genetics & genomics
(32) Diet-related diseases
(33) Domestic animal breeding, genomics & biotechnology
(34) Drug screning and pharmaceutical synthesis

(35) Electronics and instrumentation in food industry
(36) Environmental Biotechnology
(37) Enzyme Engineering
(38) Evolution and phylogenetics
(39) Food & dairy agricultural biotechnology
(40) Food and Nutritional Science
(41) Food bioavailability
(42) Food biotechnology
(43) Food Chemistry and Biotechnology
(44) Food fortification and supplementation
(45) Food microstructure development and characterization
(46) Food Nutrition and Evaluation
(47) Food Packaging, Materials and Equipments
(48) Food processing, preservations and packaging
(49) Food properties including thermal, chemical and mechanical properties
(50) Food safety and hygiene
(51) Food Sensory and Flavours
(52) Food Texture and Rheology
(53) Functional Food and Bioactive Factors
(54) Functional foods, nutrition, nutraceuticals & bioactives
(55) Functional genomics
(56) Gene expression databases
(57) Gene regulation
(58) Gene structure, regulation and modeling
(59) Genetic variation
(60) Heat, mass transfer and fluid flow in food processing
(61) High performance biocomputing
(62) Industrial Biotechnology
(63) Marine & algal biotechnology
(64) Marine Biotechnology
(65) Mathematical and quantitative models of cellular and multicellular systems
(66) Mathematical modeling and software development for food processing purposes
(67) Measuring cellular metabolism and cellular signaling
(68) Meat science
(69) Medical and biological devices
(70) Medical Biotechnology
(71) Micro RNA and RNAi
(72) Microarray data analysis

(73) Microbial community analysis
(74) Microbiology
(75) Microorganism technology
(76) Molecular pharming in plants & animals
(77) Nano Biotechnology
(78) Nanoparticle sequestration in biomolecules
(79) Nanoparticles, nanocomposites, and nanoporous materials for bio-applicationss
(80) Non-ruminant nutrition
(81) Non-thermal food processing
(82) Nutrition and health of the public
(83) Nutrition for people with special needs
(84) Nutritional status of various ages
(85) Ontologies and semantic web systems for biology
(86) Pharmaceutical Biotechnology
(87) Physiology and endocrinology
(88) Plant biotechnology
(89) Plant design using conceptual design techniques
(90) Promoter analysis and discovery, recognition of regulatory elements
(91) Protein and gene delivery systems
(92) RNA and DNA structure and sequencing
(93) Role of ag-biotech innovation for national and international competitiveness
(94) Ruminant nutrition
(95) Seed, fruit & reproductive plant biotechnology
(96) Separation and purification processes for food production
(97) Sustainable Agriculture
(98) Synthetic biological systems
(99) The future of plant genetic engineering
(100) Therapeutic applications of computational biology
(101) Thermal processing

二、過程

5 月 10 日：

本人提前一日由台東搭自強號火車經南迴線到高雄，準備出國文件（包括拿取由雄獅旅行社代購之機票及高鐵票）及發表論文所需物品（包括投影片檔案、海報及書面論文）。

5 月 11 日：

早上搭乘高鐵由高雄到桃園，直接在高鐵站長榮櫃台 check in，再搭乘統聯客運接泊巴士到桃園國際機場，在機場與本校同仁（包括校長、副校長及總務主任）會合。

長榮班機直飛廣州，抵達後搭乘地鐵到市區，再步行約 20 分鐘到達南洋酒店（Nanyang King's Gate Hotel），報到櫃台就設在酒店大廳，由於報到者眾多，報到時間耗費了將近一小時，隨後至酒店櫃台 check in，手續及等待時間也差不多一小時。

報到時領取研討會資料，包括研討會介紹、論文發表議程及專題演講摘要，論文集及論文光碟則會後補寄。

晚間 6 點於 1 樓西式餐廳參加歡迎晚宴。

5 月 12 日：

早上 8 點半在 3 樓太和殿參加開幕典禮，典禮由 Malaya 大學 Jennifer Ann Harikrishna 教授主持，隨後聆聽兩場專題演講（Keynote Speech），第一場由台灣清華大學 Cheng-Hsien Liu 教授主講，第二場由韓國 Handong Global 大學 Wilhelm Holzapfe 教授主講。

專題演講主題爲生物科技之發展，台灣及南韓兩國對生物科技產業之重視非常相近，近十年來兩國均投入大量人力物力於生物科技產業，期望以之作爲繼半導體電子產業後之國家重點發展產業，因此，未來台灣及南韓在國際市場上將不只是鋼鐵及晶圓代工之爭，農產、食品及醫藥等生物科技產品之爭也將陸續白熱化，台灣面臨的挑戰才正要開始。

下午兩點開始論文發表，分爲兩場，Session A 主題爲農業、生物及食品技術（Agricultural, Biological, Food Technology），計 23 篇論文登記口頭報告，於皇廷 1 主樓舉行，Session B 主題爲工程技術（Engineering Technology），計 20 篇論文登記口頭報告，於皇廷 2 主樓舉行。本人參加 Session B 之場次，對於其中一篇有關超級電容改善容量之論文深感興趣，與作者有深入討論。各論文內容摘要如下：

AF5488：本文探討退火溫度對 Pd–B/γ-Al2O3 之影響。

AF5130：本文探討智慧、省能建築之設計。

AF5674：本文探討芒果包裝材料之比較。

AF5744：本文探討影響居民走路行爲之環境變數。

AF5977：本文以實驗及有限元素模擬整合方法探討皮膚性質。

AF5416：本文探討近紅外線波長之選擇以偵測蘋果之碰傷。

AF5994：本文以雙層堆疊法製作超級電容以縮小包裝並改善容量。

AF5892：本文提出熱流驅動微動器之簡易磨擦技術。

AF5862：本文提出由甘蔗渣提煉 Fe2O3-SiO2 奈米複合物。

AF6143：本文探討 Al/APC-2 奈米複合板於高溫下之製造及機械行爲。

AF5483：本文探討建物奈米材料對健康之關聯。

AF5269：本文提出 RAID 與智慧手機整合之行動護理資訊系統。

AF5447：本文應用 C4.5 學習程式以作爲 Tw-DRGs 之分類。

AF5775：本文提出以 Adaptive SlidingWindow、BP 及 RBF 類神經網路爲基礎之農產品價格預測方法。

AF6167：本文探討衝擊壓力下偏向微懸臂樑之可靠度。

AF5995：本文探討低密度多孔奈米碳之製備。

5 月 13 日：

今日早上延續論文發表，仍分兩場進行，Session A 計 22 篇論文登記口頭報告，Session B 計 18 篇論文登記口頭報告。本人一樣參加工程技術場次，其中幾篇論文頗有吸引力，是有關溫室節能及水電效率改善之研究，本人與作者交換不少意見。各論文內容摘要如下：

AF5638：本文對附設於學校建物之雨水收集系統作評估。

AF5839：本文探討無線感測網路中感測資料型態對群性能評估之影響。

AF5536：本文提出利用永磁同步發電機之渦輪發電機組的機電整合等效模型，能協助解決渦輪發電機組之機電交互作用。

AF5226：本文提出以基因演算法設計多感測器機器人。

AF5227：本文提出 Android 機器人之全方位控制系統。

AF5956：本文提出以電化學技術產生二氧化氯之方法。

AF5748：本文提出利用 Intelligent Quality Prediction 於烘焙店。

AF5749：本文提出以雲端運算爲基礎之智慧型 E-Pedigree 系統應用於食品工業。

AF5586：本文探討應用生物陶瓷材料重生紙漿。

AF5612：本文應用無限技術於智慧型溫室農場之節能。

AF5779：本文探討溫室之水電效率改善技術。

AF5783：本文探討永續農業題材於學校之發展。

AF5453：本文探討奈米顆粒於流場之速度分析。

AF5961：本文探討三維稼接之數值模擬。

本人發表之兩篇論文也分配到本場次，第一篇題目爲「分析電力品質引起之汽機振動」，編號爲 AF5437，第二篇題目爲「電弧爐操作對汽機之影響作用分析」，編號爲 AF5431。內容摘要如下：

AF5437：本文針對 5 種電力品質因素：HVDC 次諧波電流、電弧爐負載、電力系統不平衡、電壓驟降、卸載，探討其對汽機扭轉振動及疲勞壽命之影響，結果發現必須特別留意 HVDC 次諧波電流、電弧爐負載及負序不平衡電流，其均有可能對汽機結構造成傷害。

（In this paper, it is studied the impact of five kinds of disturbances relating to power quality on the torsional torques and fatigue life expenditure induced in turbine-generator shafts and blades. It is found we should pay more attention on the HVDC subharmonic currents, arc furnace load, and unbalance negative current. It is possible for them to cause trouble on turbine generator mechanism.）

AF5431：電弧爐是大型負載之一，其運轉時會產生大量的諧波及不平衡電流，這些電流擾動會引起汽機轉軸及葉片之扭轉振動。本文即採用現場實測數據以探討諧波及不平衡兩種擾動之作用，結果發現電弧爐諧波不足以引發共振，因其擾動時間不足，而電弧爐不平衡電因其持續的作用，有可能造成相當大的衝擊。（The Electric Arc Furnace (EAF) is one of the large scale loads in a power system. It would produce an enormous amount of harmonics and unbalance in currents while operating. These current disturbances might cause significant torsional vibrations on turbine shafts. In the two cases studied, field measured data were used to study the effects of EAF induced harmonics and unbalance on turbine shafts torsional vibrations. It is found that the harmonics won’t induce severe resonant responses due to the insufficient excitation time. However, the unbalance would induce quite significant torsional torque on shafts due to the persistent impact.）

午餐後步行 20 分到地鐵站，搭地鐵至白雲機場，再搭長榮長榮班機直飛桃園機場，抵達後隨即搭高鐵至高雄，夜宿高雄。

5 月 14 日

本日搭乘台鐵自強號列車，高雄出發，經南迴線到台東，立即返校。

參、心得與建議

一、心得一：

綠能是近年來各個學術領域研發的重點項目，本次研討會綠能也是討論主題之一，其中有一些提出相當不錯的概念。

1. 直接沼氣發電：以往沼氣發電必須經過許多道純化手續，相當煩複，最近提出利用微渦輪發電機之改良方案，即可直接利用沼氣發電。
2. 生物廢棄物發電：生物廢棄物型態很多，但共同特點是量大，因此統稱爲 BIO MASS，對這類生物廢棄物之利用，現在正形成熱潮，台灣許多農業縣正適合發展相關產業。
3. 生物氫能：氫能的應用隨著燃料電池的出現逐漸受重視，但是氫的來源及儲存仍待解決，最近有許多研究提出生物技術產出氫氣之技術，迴異以往，爲氫能應用再開闢另一途徑。

二、心得二：

大陸最近幾年大力推展學術發展，在電機電子領域，除了承辦 IEEE 研討會以外，本身也主辦數量龐大的國際研討會，其中不乏 IEEE 協辦的會議，在量的方面已有凌駕美國的趨勢，其企圖心可見一般，但是在質的方面則仍有不少缺點尚待改進：

1. 主題不明確：歐美舉辦研討會，都有極明確的主題，參與者研究領域大致相近，確實能藉由研討會討論一致的議題。大陸的研討會則大都主題不甚明確，有的範圍太大、有的結合數個主題、有的甚致不相關的研討會一起舉辦，因此參與者之專長南轅北轍，宛如大拜拜一樣，毫無實質意義。
2. 審查寬鬆：歐美舉辦研討會，雖也希望大家共襄盛舉，但仍維持相當的審查制度，審查時間長達半年，篩選掉不適合的文章，使發表的論文都是真正值得研討或重視的。大陸則不然，研討會截稿日期很多都在會期前不到一個月，而且一延再延，毫無章法可言，徨論嚴謹之審查。
3. 斂財之嫌：歐美對研討會論文及期刊論文是有其明確定義的，對個案所作之探討會被歸類爲好的研討會論文，但不適合作爲期刊論文，若研究成果具有放諸四海皆準之一般性者才會被歸類爲好的期刊論文。現在大陸很多研討會以接受即刊登於期刊爲號召來吸引投稿，完全是拿學術開玩笑，而且依期刊之等級收取不同的註冊費，明顯是把刊登費灌在裏面，尤有甚者，其合作之期刊竟然答應將研討會高達數百篇之所有文章刊登出來，斂財之甚莫過於此。
4. 議程不周：歐美舉辦研討會，必要求至少有一位作者與會，以真正達到研討之目的。大陸舉辦研討會竟然首創只要繳交註冊費、可以不用與會之陋規，這算什麼研討會，令人費解。本人報到時適遇一位外籍人士也在報到，他就完全不能理解，爲何他從七千公里外飛過來會場，議程上卻找不到他的名字，工作人員當然有跟他解釋必須先聲明要報告才有排入議程，但「如果我不報告，我爲什麼要參加研討會？如果我不發表，我爲什麼要來這裏？」，這是他無奈的回答。

三、心得三：

大陸的食衣住行等日常生活也有一些令人驚訝的地方，與我們熟知的觀念大不相同：

1. 世界各國早已消失的壓金制度竟然還在大陸普遍流行，甚致連本次研討會場的五星級飯店亦然，令人不解。
2. 一般咸認大陸物價低於台灣，事實卻非如此，麥當勞大麥克套餐價格普遍能反應某地物價（稱爲大麥克指數），大陸（至少是廣州及南昌）的大麥克指數即高於台灣。
3. 一般咸認大陸生活水準低於台灣，事實卻也不盡然，許多我們不敢買的奢侈品，只見當地人出手闊綽，毫不見遲疑，其財力（至少其對金錢之觀念）恐怕早已遠遠超過我們。
4. 大陸已實施現代化，但未聞其放棄共產主義，本人所見卻完全沒有絲毫共產主義跡象，感覺上倒是一片追求金錢的資本主義社會，是錯覺嗎？

四、建議事項

1. 大陸舉辦的研討會良莠不齊，建議選擇 IEEE 主辦或協辦者才參加，以免受騙上當。
2. 建議不要被「研討會接受即刊登於期刊」這類宣傳所迷惑，很多期刊已經惡名昭彰，例如 Advanced Science Letters 原本爲 SCI 期刊，現在已經被除名。
3. 最近看到一些台灣舉辦的國際研討會也開始走大陸版路線，建議相關單位要及時制止，以免攪髒台灣學術環境。

五、攜回資料：研討會議程檔案。

肆、附錄：研討會議程

2012 International Conference on Agricultural, Food and Biological Engineering (AFBE 2012)

Organized by:

Hong Kong Industrial Technology Research Centre

Sponsored by:

National Tsing Hua University, Taiwan
The University of Auckland, New Zealand
Handong Global University, South Korea
University of California-Davis, USA
University of Malaya

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Prof. Hassan A. M. El. Demerdash, King Saud University

Local Organizing Chairman

Dr. Mark Fong, Hong Kong Industrial Technology Research Centre

ConferenceWebsite

http://www.icafbe.org

SCHEDULE OF THE CONFERENCE

May 11 (Friday)

14:00—21:00
Registration, Sequence Hall, Nanyang King's Gate Hotel
18:00—19:30
Dinner, Western Restaurant, 1/F

May 12 (Saturday)

8:30—8:40
Open Ceremony
8:40—9:30
Keynote Speeches
9:30—9:50
Tea Break
9:50—11:30
Keynote Speeches
12:00—
Lunch,Western Restaurant, 1/F
14:00—15:30
Parallel Sessions (A, B)
15:30—15:50
Tea Break
15:50—17:30
Parallel Sessions (A, B)
18:00—19:30
Dinner, Western Restaurant, 1/F

May 17 (Sunday)

8:30—10:00
Parallel Sessions (A, B)
10:00—10:20
Tea Break
10:20—12:00
Parallel Sessions (A, B)
12:00—
Lunch,Western Restaurant, 1/F

Morning, May 12, 2012

Plenary Session (8:30 AM—11:30 AM)

Taihe Palace, 3/F (太和殿)

8:30—8:40 Opening Speech

Dr. Mark Fong, Hong Kong Industrial Technology

Research Centre.

8:40—9:30 Keynote Speech

(Chairman: Chairman: Prof. Cheng-Hsien Liu)

Prof. Jennifer Ann Harikrishna, University of Malaya

9:30—10:10 Keynote Speech

(Chairman: Prof. Jennifer Ann Harikrishna)

Prof. Cheng-Hsien Liu, National Tsing Hua University,

Taiwan

9:30—9:50

Tea Break

9:50—10:40 Keynote Speech

(Chairman: Prof. Jennifer Ann Harikrishna)

Prof. Wilhelm Holzapfel, Handong Global University,

South Korea

12:00—

Lunch

Afternoon, May 12, 2012

14:00 PM—17:30 PM

Parallel Session A: Agricultural, Biological, Food Technology

2/F, Loyal 1, Main Building (主楼皇廷 1)

(12 minutes for each presentation, including 2-3 minutes of answering questions)

1. Layered Double Hydroxide As Carrier Of Herbicide, 2-Methyl-4-Chlorophenoxy Acetic Acid: Physicochemical Characterization And Controlled Release Properties (AF6018) *Syeikh Mohd Izaddin Sheikh Mohd Ghazali, Mohd Zobir Hussein, Siti Halimah Sarijo*

2. Azadirachta indicaExtract as Biopesticide for Controlling Golden Apple Snail, Pomacea canaliculata (AF5863) *Siti Noor Hajjar Md Latip, Maznah Mamat, Mohd Fahmi Keni*

3. Stress Analysis of Human Shoulder Using 2D and 3D Finite Element Models (AF5712) *Ching-Chieh Yang, Yun-Ting Hsieh, Meng-Kao Yeh*

4. Numerical Model Construction of AC Joint Complex for Human Shoulder by Finite Element Method (AF5716) *Ching-Chieh Yang, Chun-Lin Lu, Rongshun Chen, Meng-Kao Yeh, Jiunn-Jer Wu*

5. Prediction of Stress Upsurge in AC Joint with Subacromial Decompression and Its Clinical Relevance (AF5719) *Ching-Chieh Yang, Chun-Lin Lu, Jiunn-Jer Wu, Rongshun Chen, Meng-Kao Yeh*

6. The Hybrid LR-ANN and MARS-ANN Modeling Schemes for Heart Disease Classification (AF6134) *Yuehjen E. Shao, Chia-Ding Hou*

7. Integrated Use of Statistical-Based Approaches and Machine Learning Techniques for Tumors Classification Using Microarray Data (AF5684) *Chia-Ding Hou, Yuehjen E. Shao*

8. Soil Aggregates Features under Different Tillage Systems In North China Plain (AF5372) *Zhichen Yang, Yizhong Lv, Liandi Zhou, Hong Li, Danfeng Sun, Miao Yu*

9. Using Data Mining to Simulating the Impact of Implantation of Tw-DRGs on the Income of Medical Specialties (AF5405) *Yuan-Huei Huang, Che-Wei Chang*

10. Constructing a grey forecast model to analysis the impact of implantation Tw-DRGs on the income of orthopedics (AF5437) *Yuan-Huei Huang, Che-Wei Chang*

11. The Biological Effect of a Radix Dipsaci Combined with Ultrasound on the MG-63 Osteoblast-like Cells (AF5509) *Wen-Tao Huang, Ko-Nien Shih, Yi-Zhu Lin*

12. Tithonia Diversifolia Extract Induced DNA damage via ROS/p38MAPK Activating Cascade Involvement (AF5835) *Wen-Chieh Lin, Mei-Yu Huang,May-Hua Liao*

13. Study on Surface-hydrolyzed Poly(butylenes succinate)/Hydroxyapatite Composite Scaffolds for Cartilage Regeneration (AF5685) *Paweena Uppanan, Preyapan Meesap, Boonlom Thavornyutikarn, Wasana Kosorn, Wanida Janvikul*

14. Recycling of Cellulose Ethers from Skim Natural Rubber Recovery Process (AF5827) *Chaveewan Kongkaew, Chotiros Dokkhan, Surapich Loykulnant*

15. Use of Cellulose Ethers as Creaming Agents for Skim Natural Rubber Latex (AF5828) *Chotiros Dokkhan，Chaveewan Kongkaew, Surapich Loykulnant*

16. Study on Classification Methods in GenomeWide Association (AF6095) *Sofianita Mutalib, Azlinah Mohamed*

17. Properties of dry natural rubber produced by novel continuous process (AF6017) *Puripong Wannavilai*

18. A Bioinformatics Approach to Model and Analyze an Industrial Radiation Therapy System with Respiratory Compensation (AF5478) *Ka Lok Man, Tomas Krilavičius, Kaiyu Wan*

19. The Observation of Human Genetic Research Regulation in Taiwan (AF5125) *Fa-Chang Cheng*

20. Co-electrospinning with ethanol aqueous solution for preparing high quality Zein nanofibers (AF5746) *Deng-Guang Yu, Xia Wang, Zhi-Chao Liang, Zhi-Jie Chen*

21. Kinetics and Thermodynamics of Paralytic Shellfish Poisoning Adsorption on Chitosan (AF6045) *Wancui Xie, Xiaoli Liu, Xihong Yang, Chaohua Zhang, Zhongyuan Bian*

22. Protective Effect of Polysaccharide from Oolong tea against Streptozotocin induced diabetic rats (AF5676) *Zhi Yu, Yun Zhang, Jirong Zhou, Dejiang Ni, Yujie Ai*

23. Bacteriostasis Testing in Vitro of Several Common Chinese Medicinal Herbs upon Esherichia coli (AF5747) *Dehai Li, Lei Yang, Enling Hou, Chunyang Zuo*

Afternoon, May 12, 2012

14:00 PM—17:30 PM

Parallel Session B: Engineering Technology

2/F, Loyal 2, Main Building (主楼皇廷 2)

(12 minutes for each presentation, including 2-3 minutes of answering questions)

1. Effect of Annealing Temperature on Pd–B/γ-Al2O3 Activity and Selectivity for Palm Oil Hydrogenation (AF5488) *Abdulmajid Alshaibani，Zahira Yaakob，Ahmed Alsobaaib, Miskandar Sahri*

2. Sustainable Building Design Framework: Covering Intelligent Building, User Comfort and Energy Efficiency (AF5130) *M. Z. Abd. Majid, H. Lamit, A. Keyvanfar, A. Shafaghat, Izran Sarrazin Mohammad, T. A. Malik, M. Pirmohammadi*

3. Comparison Study of Mango Packaging Materials (AF5674) *Somchai Wongsuriyasaka, Panya Srichandrb*

4. The Path Walkability Index (PAWDEX) Model: To Measure Built Environment Variables Influencing Residents' Walking Behavior (AF5744) *H. B. Lamit, A. Shafaghat, M. Z. Abd. Majid, A. Keyvanfar, Mohd Hamdan Bin Ahmad, T. A. Malik*

5. Quantifying Skin Properties Using a Novel Integration of Experiment-Finite Element Simulation and Skin Pre-stretch Model (AF5977) *Jamaluddin Mahmud, Cathy A Holt, Sam L Evans, Nor Fazli Adull Manan*

6. Fragment Reweighting in Ligand-based Virtual Screening (AF5468) *Ali Ahmed, Naomie Salim, Ammar Abdo*

7. Wavelength Selection in Visible and Near Infrared Spectra for Detection of Bruises on Apples (AF5416) *Xuan Luo, Teruo Takahashi, Shuhuai Zhang*

8. Create an evolution of the Innovation model- A case study base on TRIZ theory (AF5514) *Yun-Tien Ma, Pei-Yu Hsieh*

9. Double Stacked Interdigital Ppy-PVA Supercapacitor for Compact Packaging and Improved Capacitance Performance (AF5994) *Hafzaliza Erny Zainal Abidin, Azrul Azlan Hamzah*, Burhanuddin Yeop Majlis, Jumril Yunas*

10. Simple fabrication technique of thermopneumatic driven microactuator for fluid transport purposes (AF5892) *Norihan Abdul Hamid, Jumril Yunas, Mimiwaty Mohd Noor, Burhanuddin Yeop Majlis*

11. Fe2O3-SiO2 nanocomposite derived from Bagasse Ash for Cr(VI) Removal (AF5862) *Patcharin Worathanakul, Panchana Mothong, Pimluck Engkawara*

12. Fabrication and Mechanical Behavior of Al/APC-2 Centrally Notched Nanocaomposite Laminates at Elevated Temperature (AF6143) *Ming-Hwa R. Jen， Yi-Chun Sung，Che-Kai Chang，Chun-Kan Liu，Feng-Chi Hsu*

13. Nano-toxicology in Engineering: Health Implication of Nano-materials in Building (AF5483) *Yee Lin Lee, Hamzah Abdul-Rahman, ChenWang*

14. The Integration of RAID and Smart Phone for Mobile Nursing Information System Development (AF5269) *Chen-ShuWang, Shiang-Lin Lin, Meng-Yuan Hsieh*

15. Simultaneous Organic Removal and Nitrification Using Calcium Dosed Aerobic Granular Sludge During SBR Star-up (AF6107) *Fenghao Cui, Inhwan Song, Moonil Kim*

16. Applying C4.5 learning program to classification of Tw-DRGs Medical Specialties (AF5447) *Yuan-Huei Huang, Hao-En Chueh,Che-Wei Chang,Kai-Sheng Chuang*

17. Week-ahead Price Forecasting for Agricultural Products Based on Adaptive SlidingWindow, BP and RBF Neural Network (AF5775) *Quanying Zhu, Yonghua Yin, Pei Zhou, Yunyang Yan, Sunqun Cao*

18. Study on Reliability of Slanted Micro-Cantilever under Shock Stress (AF6167) *Junyong Tao，Bin Liu，Xiaotao Li， Yun-an Zhang*

19. Pore Size Controllable preparation for low density porous nano-carbon (AF5995) *Yaning Feng, JuanjuanWang , Liling Ge , Bailing Jiang , Lei Miao, Masaki Tanemura*

20. Preparation and Characterization of Novel Chitosan-based Microcapsule Containing Patchouli Oil (AF5580) *Ziming Yang, Maofang Huang, Zheng Peng, Yuxin Pang, Lingxue Kong, Guangtao Han, Puwang Li*

Morning, May 13, 2012

8:30 AM—12:00 AM

Parallel Session A: Agricultural, Biological, Food Technology

2/F, Loyal 1, Main Building (主楼皇廷 1)

(12 minutes for each presentation, including 2-3 minutes of answering questions)

1. Synthesis of carbon nanotubes from fermented tapioca extract (AF6003) *I. Nurulhuda, R. Poh, M.Z. Mazatulikhma, M. Rusop*

2. Rapid microparticle pairing chip via hydrodynamics for cell fusion applications (AF5680) *Hungpo Chen, Cheng-Hsien Liu*

3. Bioavailability and bioremediation of diesel fuel-contaminated soil using organic wastes as supplement (AF5855) *Arezoo Dadrasnia, Agamuthu Pariatamby*

4. Micrometeorological Technique for Estimation of Nitrate dry deposition over Forest in Tropical Climatology (AF5569) *Kan Khoomsab，Pojanie Khummongkol*

5. Treatment of Cr(VI) using PVA-alginate Ferro Photo Gels under Different Types of Lamps (AF5590) *Ani Idris, Effaliza Misran, Noordin Mohd Yusof*

6. Effect of Photoperiod on the Growth of Unicellular Microalgae Nannochloropsis sp. (AF5413) *Suzana Wahidin, Ani Idris*

7. Distribution and Source of Polycyclic Aromatic Hydrocarbons in the Sediments of Northern Kaohsiung Harbor, Taiwan (AF6161) *Cheng-Di Dong, Chih-Feng Chen, and Chiu-Wen Chen*

8. Real-time Detection of Tannin Concentration of Crude Gall Using Dynamic Microfluidic Centrifugal-and-fluorescence Platform (AF5620) *Hsing-Cheng Chang, Jung-Chih Lin, San-Shan Hung, Chun-Han Li, Che-Ming Chang, Chern-Sheng Lin*

9. Detection of Real-time Tannic Acid Concentration Based-on Quasi-static Centrifugal-and-fluorescence Microfluid Technology (AF5550) *Hsing-Cheng Chang*, Jung-Chih Lin, San-Shan Hung, Chun-Han Li,Ya-Hui Chen, I-Nan Chang, and Che-Ming Chang*

10. Particle Swarm Optimization for Tissue Engineering Scaffold Parameters Design (AF5854) *Nattapon Chantarapanich,Puttisak Puttawibul,Kriskrai Sitthiseripratip,Sedthawatt Sucharitpwatskul,Pongnarin Jiamwatthanachai*

11. Automatic monitoring and Control for Green House Environment Base on Optimal Plant Growing Condition (AF5654) *San Shan Hung, Hsing Cheng Chang，Pao Ti Kao*

12. Improvement of Yields and Surface Areas of Biochar from Chicken Manure (AF5466) *Minh-Viet Nguyen, Byeong-Kyu Lee*

13. Critical Review on the Customer Satisfaction Metrics for project success in Construction (AF5686) *Pooria Rashvand, Muhd Zaimi Abd Majid*, Khairulzan Yahya, Rosli Mohamad Zin, Rozana Zakaria*

14. Development of Gel Electrophoresis Unit to Reduce DNA Separation Process Time – A Proof of Concept (AF5759) *Azli Yahya, Mohammed Rafiq, Razaudeen Zulkifli, Muhammad Arif, Trias Andromeda, Ameruddin Baharom*

15. Temperature Impact on Reforming ofWood Derived Pyrolysis Gas for Hydrogen Production and Tar Reduction (AF5427) *Thawatchai Wongchang, Suthum Patumsawad, Bundit Fungtammasan*

16. Quarter Milking Management System for Dairy Cow UsingWireless Sensor Technologies (AF6077) *Chien-Hsing Chen, Ming-Chih Chen, Chong-Yu Siang, Jung-Sheng Yang*

17. Development of a Coconut-Shell Stepping-Massage Prototype to Improve Sensations in the Feet of

Diabetic Patients (AF5731) *Dusanee Supawantanakul, Pichet Banyati, Thanawat Imsomboon, Laongtip Mathurasa*

18. Controller Design for Cancer Chemo-Immunotherapy with Switched Model (AF5225) *Chi-Jo Wang, Juing-Shian Chiou*

19. Quality of Treatment Planning Evaluation for Nasopharyngeal Carcinoma Using Artificial Neural Networks Intelligence System (AF6013) *Tsair-Fwu Lee, Tsung-I Liao, Pei-Ju Chao, Hui-Min Ting, Li-Fu Wu, Shih-Yao Lin, Jia-Ming Wu, Wen-Pen Chen*

20. Simulation of Ventilatory Responses to Dead Space and CO2 Inhalation with Optimal Respiratory Control Model (AF5903) *Shyan-Lung Lin, Nai-Ren Guo*

21. The effect of bioplastic mixed in organic fertilizer on corn growth and soil properties (AF6055) *Rochana Tangkoonboribun, Suriya Sassanarakkit, Rattana Tantisiriwit, Preecha Rungkvae, Prasit Bumrungsuk*

22. Assessment the Environmental Impacts of PLA/Starch and PET Boxes Using LCA Methodology : Cradle toWaste Treatment (AF6019) *Unchalee Suwanmanee, Thanawadee, Leejarkpai, Thumrongrut Mungcharoen*

Morning, May 13, 2012

8:30 AM—12:00 AM

Parallel Session B: Engineering Technology

2/F, Loyal 2, Main Building (主楼皇廷 2)

(12 minutes for each presentation, including 2-3 minutes of answering questions)

1. The Assessment on the Rain Water Harvesting System Attached in School Building, Taiwan (AF5638) *Li Zone Chang, Jen Chun Wang, Yih Feng Chang*

2. Impact of Sensor Data Patterns on Performance Evaluation of Clustering Schemes in Wireless Sensor Networks (AF5839) *Dongmin Choi, Sangman Moh, Ilyong Chung*

3. Electro-mechanical Integrated Models of the PMSG-based Turbine Generator Units (AF5536) *Chi Hsiang Lin*

4. Design of Multi-Sensory Integrated Interactive Robot with Genetic Algorithm (AF5226) *Ming-Yuan Shieh, Juing-Shian Chiou*

5. Omni-directional Control System for Android Robot with Genetic Algorithm (AF5227) *Ming-Yuan Shieh, Juing-Shian Chiou*

6. Choquet integral with respect to high order extensional L-measure and its application (AF5971) *Shang-Ling Ou, Yih-Chang Ou, Hsiang-Chuan Liu*

7. The generation of chlorine dioxide by electrochemistry technology (AF5956) *Yi-Tze Tsai, Chen-Yu Chang, Yung-Hsu Hsieh*

8. The Intelligent Quality Strategy of Baking Stores by Using Intelligent Quality Prediction (AF5748) *Chung-Lin Huang, Cong-Hui Huang, Chung-Chi Huang*

9. Development of Cloud Computing Based Intelligent E-Pedigree System with Quality Assessment and

Auto Foolproof in Food Industry (AF5749) *Chung-Chi Huang, Cong-Hui Huang, Chung-Lin Huang*

10. Oseto tissue regeneration on PCL with biomedical ceramic materials (AF5586) *Ming-Jyh Chern, Yung-Kang Shen,, Jia-Hsiang Hung*

11. Application of Intelligent Energy Saving in Smart Greenhouse Farm with Wireless Technique (AF5612) *Cong-Hui Huang, Chung-Chi Huang, Chung-Lin Huang*

12. Technologies for Water and Electricity Efficiencies in Greenhouse (AF5779) *Ming-Rong Lee, Cong-Hui Huang*

13. Multi-response Surface Optimization of a Cryogenic Freezing Process via Variable Neighborhood Modified Simplex Search (AF5682) *Rapeepat Uporn, Pongchanun Luangpaiboon*

14. Effect of Crowning on Differential Pinion Shaft Contact in the Patial Elasto-hydrodynamic Lubrication (AF6184) *Young Whan Park, TaeWan Kim*

15. Development of Sustainable Agriculture Subjects in Secondary Academic Schools: A Comfirmatory Factor Analysis (CFA) Approach (AF5783) *Asnul Dahar Minghat, Ruhizan M.Yasin, Yahya Buntat, Yusri Kamin, Adnan Ahmad*

16. Nano-Particles in the Flow Field Velocity Analysis (AF5453) *Ming-Chi Chiou , Wen-Zong Hsu*

17. Numerical Study of a Three-dimensional Modified Graft for the End-to-Side Anastomosis (AF5961) *Jyh-Haw Tang*, Bo-Chun Wu*

18. Immobilisation capacity of cement hydration against the hexavalent chromium (AF6108) *Ki Yong Ann, Min Sun Jung* 19. Post Occupancy Evaluation Assessment Model for Low Energy Office Buildings (AF5957) *M. Z. Abd. Majid, H. Ganjbakhsh, A. Abdullah, Izran Sarrazin Mohammad*