

### Research Outputs 2010

No.	Research Title	Researcher	Division	Remark
1	A COMPARATIVE STUDY ON LONG-TERM VOCABULARY RECALL: WORLD LISTS AND A VOCABULARY TRAINER	Thomas Krey	Humanities and Language	National Publication
2	A REVIEW OF FRANÇOIS' LEAF MONKEY TRACHYPITHECUS FRANCOISI (SENSU LATO) IN LAO PDR	Duckworth, J.W., Boonratana, R., Robichaud, W.G., and Timmins, R.J.	Travel Industry Management	International Publication
3	A SONNET TO OLD LOVE	Mariejoy Buenaventura	Humanities and Language	Academic Product
4	A THEORY OF BANKING REGULATION	Jun Jiang	Business Administration	International Publication
5	ALPHA AMYLASE INHIBITION AND ROASTING TIME OF LOCAL VEGETABLES AND HERBS PREPARED FOR DIABETES RISK REDUCTION CHILI PASTE	Vareerat Jaiboona , Jaruntorn Boonyanupahapa , Sajee Suwansria , Puntarika Ratanatraiwonga and Chanida Hansawasdib	Science	International Publication
6	AN INTERGRATIVE REVIEW OF KEY DETERMINANTS AFFECTING FAMILY BUSINESS SUCCESSION	Vanvisa Chaimahawong Atthaphong Sakunsriprasert	Business Administration	National Publication
7	AN INVESTIGATION OF TRAVEL MOTIVATION AS A FACTOR IN INTERNATIONAL STUDENTS' CHOICE OF A FOREIGN UNIVERSITY: A THAI CASE STUDY	Ms. Laddawan Jianvittayakit	Humanities and Language	International Presentation, Academic Product
8	ANIMATION, A SERIOUSLY FUNNY SUBJECT IN CROSS CULTURAL TELLING TALES	Ms. Millie Young	Fine and Applied Arts	International Presentation, Academic Product
9	BLUEPRINT FOR SMALL SIZE BUSINESS	Atthaphong Sakunsriprasert	Business Administration	Academic Product
10	BRAND VALUATION OF ICT PRODUCTS: THE CASE OF THAILAND	Yingyot Chiaravutthi	Business Administration	International Publication
11	BURMA: FROM BOOM TO BUST IN THE 1950s A HISTORICAL REVIEW ON ECONOMIC INTERDEPENDENCE	Marja-Leena Heikkilä-Horn	Social Sciences	International Presentation
12	CHANGES IN THE STABILITY AND KINETIC PARAMETERS UP ON GLYCATION OF THERMOSTABLE α-AMYLASE FROM BACILLUS SUBTILIS	P. P. Sutthirak, A. Assavanig, S. Dharmsthiti and S. Lertsiri	Science	International Publication
13	CO-MOVEMENT OF INTERNATIONAL STOCK MARKET INDICES AND THE ROLE OF FOREIGN INVESTORS IN THAILAND'S STOCK MARKET INDEX	Chintrakarn, P., Komonrat, R.	Business Administration	National Publication

### Research Outputs 2010

No.	Research Title	Researcher	Division	Remark
14	COMMUNITY-BASED NATURAL AND BIODIVERSITY RESOURCES CONSERVATION AND MANAGEMENT: LESSONS LEARNED	Ramesh Boonratana	Travel Industry Management	International Presentation
15	COMMUNITY-BASED TOURISM IN THAILAND: THE NEED AND JUSTIFICATION FOR AN OPERATIONAL DEFINITION	Ramesh Boonratana	Travel Industry Management	International Publication
16	COMMUNITY-DRIVEN EFFORTS TO CONSERVE AND RESTORE THE REEFS OF KOH TAO, THAILAND	Wayne Phillips	Science	International Presentation
17	COMMUNITY MONITORING AND ASSESSMENT OF THE REEFS OF KOH TAO, THAILAND	Phillips, W.N, Scott, C., Zahir, D.	Science	International Presentation
18	COMPARATIVE STUDIES ON THE EXPENDITURES OF WORLD-CLASS POST-SECONDARY INSTITUTIONS: IMPLICATIONS FOR THAI UNIVERSITIES	Dale Rorex	Social Sciences	International Presentation
19	CONSUMER WILLINGNESS TO PAY AND IMPLICATIONS OF DIFFERING GM LABELING POLICY	Yingyot Chiaravutthi	Business Administration	National Presentation
20	CORPORATE SOCIAL RESPONSIBILITY (CSR) – A CONCEPTUAL FRAMEWORK FOR A CONDUIT APPROACH BETWEEN INTERNAL AND EXTERNAL IMPLEMENTATIONS OF CSR IN ASIA	Tan, I., Ph.D. Udomkit, N	Business Administration	International Presentation
21	CORRUPTION, HUMAN TRAFFICKING AND HUMAN RIGHTS: THE CASE OF FORCED LABOR AND SEXUAL EXPLOITATION IN THAILAND	Malinvisa Sakdiyakorn, Sutthana Vichitrananda	Business Administration	National Publication, Academic Product
22	CREATING INNOVATION THROUGH A BUSINESS MODEL FRAMEWORK AND ITS IMPLICATIONS FOR THE SIAM CEMENT GROUP	Atthapong Sakunsriprasert	Business Administration	National Publication
23	CULTIVATION OF LACTOBACILLUS PLANTARUM KV1 IN WHEY-CONTAINING MEDIUM FOR USE AS STARTER IN VEGETABLE FERMENTATION	Sudaporn Luechai and Saovane C. Dharmsthiti	Science	International Publication
24	CULTURAL INFLUENCE ON PERSONAL EPISTEMOLOGY: VARIATIONS OF EPISTEMIC BELIEFS OF THAI UNIVERSITY STUDENTS	Takayoshi Fujiwara	Humanities and Language	International Presentation
25	DETERMINANTS OF CORPORATE INVESTMENT DECISIONS ON AN IMPERFECT CAPITAL MARKET AND FINANCIAL CONSTRAINTS	Chaicisuttangkun, S., Sivarak, O., Nathaphan, S	Business Administration	National Publication
26	EUROPEAN UNION SOFT POWER: CULTURAL DIPLOMACY & HIGHER EDUCATION IN SOUTHEAST ASIA	William J. Jones	Social Sciences	National Publication

### Research Outputs 2010

No.	Research Title	Researcher	Division	Remark
27	FACILE P-TOLUENESULFONIC ACID-PROMOTED PARA-SELECTIVE MONOBROMINATION AND CHLORINATION OF PHENOL AND ANALOGUES	Bovonsombat, P., Ali, R., Khan, C., Leykajarakul, J., Platon, K., Aphimanchindakul, S., Pungcharoenpong, N., Timsuea, N., Arunrat, A., Punpongjareorn, N.	Science	International Publication
28	GREEN TOURISTS PERCEPTION AND MOTIVATION: A STUDY OF DEMESTIC MARKET IN THAILAND	Kaewta Muangasame	Travel Industry Management	International Presentation
29	HALLOWEEN: COMPRISING A CAUTIONARY ACROSTIC OF NINE BEDTIME STORIES FOR THE DISOBEDIENT OR TIRESOME CHILD	Euan Harvey	Humanities and Language	Academic Product
30	HANDS	Mariejoy Buenaventura	Humanities and Language	Academic Product
31	HANUMAN'S BRIDGE	Euan Harvey	Humanities and Language	Academic Product
32	IMMOBILIZATION OF CADMIUM IN SOIL BY COW MANURE AND SILICATE FERTILIZER, AND REDUCED ACCUMULATION OF CADMIUM IN SWEET BASIL (OCIMUM BASILICUM)	Narupot Putwattana, Maleeya Kruatrachue, Prayad Pokethitiyook*, Ratanawat Chaiyarat	The Office of Academic Affairs	International Publication
33	IN SEARCH FOR AN IDEAL CAMPUS INFORMATION SERVICE IN UNDERGRADUATE STUDENTS' OPINION	Unnawut Leepaisalsuwanna, Tanis Suwannakul, Krittaya Leelawong* and Nopphol Pausawasdi	Science	International Presentation, Academic Product
34	INTEGRATION DE CERTAINS PRINCIPES DU PROFIL EUROPEEN DES LANGUES (PEL) DANS LA CLASSE DE FLE EN THAILANDE	Agnieszka Atthasit	Humanities and Language	International Presentation, Academic Product
35	IS SABIN-FELDMAN DYE TEST USING T. GONDII TACHYZOITES FROM ANIMAL INOCULATION STILL THE BEST METHOD FOR DETECTING TOXOPLASMA GONDII ANTIBODIES?	Ruenruetai Udonsoma, Ruangrat Buddhironkawatra, and Yaowalark Sukthana,	The Office of Planning, Research, and Development	International Publication
36	JOSEPHSON CURRENT IN A DOUBLE FERROMAGNETIC LAYER SG/F1/F2/SG GRAPHENE SANDWICH	Soodchomshom, B., Tang, I.-M., Hoonsawat, R.	The Office of the Dean	International Publication
37	MEDIA DEVELOPMENT FOR BIOMASS PRODUCTION OF ANTIFUNGAL STRAINS OF PSEUDOMONAS AERUGINOSA	Saovanee Chancharoensin*, Sudaporn Luechai, Chintasit Banditwattanawong	Science	International Publication
38	MULTIPLE NON-POLYSACCHARIDE-DEGRADING ENZYME PRODUCTION FROM SOLID STATE FERMENTATION OF ASPERGILLUS NIGER AK10	Jin Young Cha, Narisa Dawar, Sudaporn Luechai and Saovanee C. Dharmstithi	Science	International Publication
39	NEW PUBLIC MANAGEMENT IN ITS SERVING OF INTERNAL STAKEOLDERS: CASE STUDIES OF AUTONOMOUS PUBLIC ORGANIZATIONS IN THAILAND	Malinvisa Sakdiyakorn	Business Administration	International Presentation, Academic Product

### Research Outputs 2010

No.	Research Title	Researcher	Division	Remark
40	PEOPLE'S PARTICIPATION IN WASTEWATER MANAGEMENT: A CASE STUDY OF PHI PHI ISLAND, THAILAND	Kannapa Pongponrat	Travel Industry Management	Academic Product
41	PEOPLE'S PARTICIPATION IN WASTEWATER MANAGEMENT FOR SUSTAINABLE TOURIST DESTINATION : A CASE STUDY OF PHI PHI ISLAND, THAILAND	Pongponrat, K., Koottatep, T.	Travel Industry Management	International Presentation
42	PERCEPTIONS OF JUSTICE IN THE KHMER ROUGE TRIBUNALS : ANTHROPOLOGICAL PERSPECTIVES ON THE 'GLOCALIZATION' OF INTERNATIONAL LAW	Christian Oesterheld	Social Sciences	International Presentation
43	PERFECT SWITCHING OF THE SPIN POLARIZATION IN A FERROMAGNETIC GAPLESS GRAPHENE /SUPERCONDUCTING GAPPED GRAPHENE JUNCTION	Soodchomshom, B., Tang, I.-M., Hoonsawat, R.	The Office of the Dean	International Publication
44	PURIFICATION AND CHARACTERIZATION OF ASPARAGINASE FROM SOLID STATE CULTURE OF ASPERGILLUS NIGER AK10	Saovanee C. Dharmsthiti and Sudaporn Luechai	Science	International Publication
45	REASSESSING THE DETERMINANTS OF INTERNATIONAL STOCK MARKET CORRELATION	Pandej Chintrakarn, Paweena Prasatkitjaroen	Business Administration	International Publication
46	REASSESSING THE ROLE OF DISTANCE ON CROSS-BORDER EQUITY FLOWS: DOES DISTANCE STILL MATTER?	Pandej Chintrakarn	Business Administration	International Publication
47	ROLE OF A BURKHOLDERIA PSEUDOMALLEI POLYPHOSPHATE KINASE IN AN OXIDATIVE STRESS RESPONSE, MOTILITIES, AND BIOFILM FORMATION	Tunpiboonsak, S. , Mongkolrob, R. , Kitudomsub, K., Thanwatanaying, P. , Kiettipirodom, W. , Tungboontina, Y. , Tungpradabkul, S.	Science	International Publication
48	SANTI ASOKE BUDDHISM AND THE OCCUPATION OF BANGKOK INTERNATIONAL AIRPORT	Marja-Leena Heikkilä-Horn	Social Sciences	International Publication
49	SEEDS OF VIOLENCE: MISSIONARIES, CONTESTED IDENTITIES AND KACHIN NATIONALISM IN BURMA	Marja-Leena Heikkilä-Horn	Social Sciences	International Presentation
50	SIGHTING OF THE BORNEAN FERRET BADGER MELOGALE EVERETTI IN THE KINABATANGAN FLOODPLAINS, AND IMPLICATIONS OF ITS LOWLAND DISTRIBUTION	Ramesh Boonratana	Travel Industry Management	International Publication
51	SOCIAL ORGANIZATION OF TONKIN SNUB-NOSED MONKEYS IN NORTHERN VIETNAM: ECOLOGICAL PRESSURES AND EVOLUTIONARY IMPLICATIONS.	R. Boonratana, X.C Le	Travel Industry Management	International Presentation
52	SOCIAL CAPITAL IN COMMUNITY PARTICIPATION FOR LOCAL TOURISM DEVELOPMENT : A CASE STUDY OF FISHERMAN CILLAGE, SAMUI ISLAND, SOUTHERN OF THAILAND	Pongponrat, K.	Travel Industry Management	International Publication

**Research Outputs 2010**

No.	Research Title	Researcher	Division	Remark
53	SPATIAL DISTRIBUTION OF BETA GLUCAN CONTAINING WILD MUSHROOM COMMUNITIES IN SUBTROPICAL DRY FOREST, THAILAND	Boonyanuphap, J. , Hansawasdi, C.	Science	International Publication
54	SPIN SWITCHING EFFECTS IN A FERROMAGNETIC GRAPHENE JUNCTION HAVING A SECOND GATE	Liewrian, W., Hoonsawat, R., Tang, I.-M.	The Office of the Dean	International Publication
55	THAI POLITICS AND ASOKE BUDDHIST ECONOMICS	Marja-Leena Heikkila-Horn	Social Sciences	Academic Product
56	THAI TAXI TALISMANS	Mr. Dale Konstanz	Fine and Applied Arts	Academic Product
57	THE ASEAN CHARTER IN THE CONTEXT OF "NEW REGIONALISM"	William J. Jones	Social Sciences	International Presentation
58	THE BATTLE FOR WORLD WIDE WEB DOMINANCE: IN SEARCH OF NETWORK EXTERNALITIES	Bhatiasevi, V. Chiaravutthi, Y.	Business Administration	International Publication
59	THE DEMON OF HOCHGARTEN	Euan Harvey	Humanities and Language	Academic Product
60	THE FLUTE PLAYER	Mariejoy Buenaventura	Humanities and Language	Academic Product
61	THE GAME OF DISTRIBUTION	Jun Jiang (Mr.)	Business Administration	International Presentation
62	THE GLOBAL DISTRIBUTION OF BAHAI'IS IN THE 1940s	Peter Smith	Social Sciences	International Publication
63	THE INTEGRATION OF THE EUROPEAN LANGUAGE PORTFOLIO INTO THE FRENCH LANGUAGE COURSE IN THAILAND, THE CLASSROOM EXPERIENCE	Agnieszka Atthasit	Humanities and Language	International Presentation
64	THE JAPAN-SIAM TRADE IN THE 17th CENTURY	Julia Zimpel	Social Sciences	International Presentation
65	THE KHRUSHCHEV TOURS OF SOUTHWEST ASIA : LESSONS FOR UNDERSTANDING COLD WAR SOVIET FOREIGN POLICY	Eugene Jones	Social Sciences	International Presentation

**Research Outputs 2010**

No.	Research Title	Researcher	Division	Remark
66	THE MODEL OF KNOWLEDGE ACQUISITION : THE STUDY OF SMEs IN THE THAI HOSPITALITY INDUSTRY	Chanin Yoopetch	Travel Industry Management	International Publication, Academic Product
67	THE RACE TOWARDS A KNOWLEDGE BASED ECONOMY : A COMPARATIVE STUDY BETWEEN MALAYSIA AND THAILAND	Bhatiasevi, V.	Business Administration	International Publication
68	THE RUSSO-SIAMESE RELATIONS	Natanaree Posrithong	Social Sciences	International Presentation
69	THE RUSSO-SIAMESE RELATIONS: THE REIGN OF KING CHULALONGKORN	Natanaree Posrithong	Social Sciences	National Publication
70	THE TYPES AND NATURE OF QUESTIONS VIS-À-VIS STUDENTS' TEST-TAKING SKILLS AS SIGNIFICANT INDICATORS OF SECOND LANGUAGE EXAMINEES' PERFORMANCE ON THE TOEFL-ITP READING COMPREHENSION SUB-TEST	Amurao, Analiza L.P.	Pre-College Program	International Presentation
71	THEORY OF LARGE TUNNELING MAGNETORESISTANCE IN A GAPPED GRAPHENE-BASED FERROMAGNETIC SUPERCONDUCTOR F/(FS) JUNCTION	Soodchomshom, B., Tang, I.-M., Hoonsawat, R.	The Office of the Dean	International Publication
72	TOLERANCE AND ACCUMULATION OF LEAD IN VETIVERIA ZIZANIOIDES AND ITS EFFECT ON OIL PRODUCTION	Rotkittikhun, P., Kruatrachue, M., Pokethitiyook, P., and Baker, A.J.M	The Office of Academic Affairs	International Publication
73	TOXOPLASMA GONDII: SIMPLE DUPLEX RT-PCR ASSAY FOR DETECTING SAG1 AND BAG1 GENES DURING STAGE CONVERSION IN IMMUNOSUPPRESSED MICE	Mahittikorn, A. , Wickert, H., Sukthana, Y.	The Office of Planning, Research, and Development	International Publication
74	WATER FESTIVALS OF THAILAND: THE INDIAN CONNECTION	Agarwal , R.	Social Sciences	International Presentation
75	WHO'S THE BOSS? CULTURE AND THE PROBLEM OF TRANSFER	Jonathan Green	Humanities and Language	International Publication

# **A COMPARATIVE STUDY ON LONG-TERM VOCABULARY RECALL: WORLD LISTS AND A VOCABULARY TRAINER**

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**Keywords:** long-term memory, retrieval, spacing effect, vocabulary trainer, world lists

This study was conducted in order to examine recall rates on previously learned vocabulary. The 2 methods investigated were word lists for exams and a vocabulary trainer using flashcards. In order to gain better insights in the effectiveness of these methods participants were tested for both treatments in a repeated measure design over a period of 6 months. The main focus was on recall rates for previous recall failures. Results show significantly higher recall scores for the vocabulary trainer-method at every stage. The gap in recall scores between both methods was most noteworthy in the yield of never accurately recalled items. Percentages of omission errors were also remarkably higher on world lists, though by a smaller margin. However, the gap in interference errors was less significant. The implementation of special mistake review sessions after the previous trial, an indispensable element of the vocabulary trainer-method, appears to have influenced the differences. The conscious raising effect of self-production of cards for test items seem to have contributed to the outcome as well. Based on the findings individual adaptation for vocabulary learning strategies could be advisable.

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## **A REVIEW OF FRANÇOIS' LEAF MONKEY TRACHYPITHECUS FRANCOISI (SENSU LATO) IN LAO PDR**

Duckworth, J.W.<sup>a</sup>, Boonratana, R.<sup>b</sup>, Robichaud, W.G.<sup>c</sup>, and Timmins, R.J.<sup>a</sup>

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**Keywords:** Conservation status, distribution, habitat, *Trachypithecus (francoisi) ebenus*, *Trachypithecus (francoisi) hatinhensis*, *Trachypithecus (francoisi) laotum*

A monkey population allied to François' leaf monkey *Trachypithecus francoisi* discovered in 1920 constitutes the taxon *laotum*, endemic to Lao PDR. The next seven decades provided very little additional information about it. Wildlife surveys in the 1990s found a large population of *T. (f.) laotum* in Phou Hinpoun (=Khammouan Limestone) National Protected Area (NPA) and north into southern Nam Kading NPA, and a large population in and around Hin Namno NPA of *T. (f.) ebenus*, known outside Lao PDR only from adjoining Vietnam. Detailed here are confirmed records of smaller and more localized populations of leaf monkeys of the *T. francoisi* group (sensu Groves 2001, 2005, p.175) from two other areas (Nakai-Nam Theun NPA and a region outside the protected area system, Muang (=District of) Vilabouli, in Savannakhet province, highly plausible reports from one more site, and records of *T. (f.) ebenus* from southern Phou Himpoun NPA. Animals from Nakai-Nam Theun NPA and Muang Vilabouli differ in pelage from reported forms, and further information is required to resolve their taxonomy in relation to the named forms *hatinhensis* and *ebenus*. All Lao records of the *Trachypithecus francoisi* group leaf monkeys are within the latitudinal band of 16°49'N to 18° 17'N, but reports from local people suggest the possibility of occurrence north of this latitude, and perhaps (parallel with the complex's distribution in Vietnam) north to the Chinese border. Populations in large karst landscapes remain healthy but cannot be assumed to remain so, and those in smaller karst and non-calcareous ranges are highly vulnerable to hunting-induced local extinction. Many uncertainties remain concerning the species-complex in Lao PDR: its overall distribution, the number of forms present, their distribution, and their taxonomy. Undescribed forms may yet be found, most likely to the north of the known range, where threats are much higher, adding to the urgency for surveys in this region.

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**A SONNET TO OLD LOVE**

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**ABSTRACT NOT AVAILABLE**

# **A THEORY OF BANKING REGULATION**

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**ABSTRACT NOT AVAILABLE**

# **ABSTRACT SCORE ANIMATION, MOTION BRACKETING AND ANALOG REPRESENTATION OF MUSIC : A PROPAEDEUTIC SEMIOTIC STUDY**

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**Key words:** Music Semiotics, Music Visualization, Analog Simulation

The basis of this study was to examine the creation of animated music scores. Drawing upon the semiotic analog-digital distinction, this research investigated possibilities of ‘bracketing’ musical motion through analog visual simulation.

Analog modeling was introduced as a tool that breaks away from four predominant musicological paradigms: first, the focus on musical syntax and score information; second, the unquestioned application of traditional music-analytical categories; third, the strict aesthetic separation of formalism from referentialism; and fourth, the restriction of musical meaning to the semiotic functions of denotation, exemplification, or expression.

With analog modeling, the aesthetic claim that music (for instance pitch movement) could be perceived in terms of (spatial) motion was tested. If music does move, it should be possible to determine a particular motion it reveals. In order to assess this working hypothesis, abstract animation was established through a straightforward, one might say ‘naïve’, mapping of musical parameters onto space.

The proposed method established detailed blueprints of movement that (i) differ essentially from coarse motion types like those suggested by the German pioneers Becking and Truslit, (ii) are the result of interpretative ‘hands-on’ modeling rather than products of reductive algorithms that usually underpin contemporary visualization software and (iii) depart from systematic methodological considerations which sets them apart from idiosyncratic (abstract) animation artwork.

A comparison between simple ‘duration-loudness’ animation with the visualization of pitch trajectories concretized the aesthetic speculation about spatial metaphors being involved in the perception of music. The presented experimentation with analog visual modeling, however, did not result in a *reductio ad absurdum*. In contrast, animated pitch trajectories suggested that motion types could be instantiated in both the visual and the audible realms and thus complement rhythmic and accentuated structure as a transferable autonomous ‘synaesthetic’ phenomenon.

Subsequently, this investigation challenged the prevalent view that musical motion could only be metaphorically comprehensive.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# ALPHA AMYLASE INHIBITION AND ROASTING TIME OF LOCAL VEGETABLES AND HERBS PREPARED FOR DIABETES RISK REDUCTION CHILI PASTE

Vareerat Jaiboon<sup>a</sup>, Jaruntorn Boonyanupahap<sup>a</sup>, Sajee Suwansri<sup>a</sup>, Puntarika Ratanatraiwong<sup>a</sup> and Chanida Hansawasdi<sup>b</sup>

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**Keywords:** diabetes, alpha amylase inhibition, local vegetables, herbs, Chili paste

Consumption behaviour of carbohydrate and sucrose rich food is one of main causes of noninsulin dependent diabetes mellitus (diabetes type II). This results in an increase in the number of diabetes patients in Thailand in recent years. Potent inhibitors of mammalian alpha-amylase found in some vegetables and herbs have been known as effective antidiabetic treatment for diabetes. Therefore, this research was aimed to investigate the change of alpha amylase inhibition in chili paste prepared from vegetables and herbs with different roasting time. Local vegetables and herbs which show high potential for diabetes risk reduction used in this study were *Gynura divaricata* DC., *Coccinia grandis* Voigt, *Thunbergia laurifolia* Linn., *Piper retrofractum* Vahl and *Cyperus rotundus* Linn.. They were added into the paste to make up 20% in the form of fresh (0 min) and roasted (5-15 min) materials. Other ingredients and preparation processes correspondingly followed the production of a traditional roasted chili paste with dried fish. Alpha amylase inhibition of the products were then determined. The result found that all of the studied vegetables and herbs showed more than 80% alpha amylase inhibitory activity and this may contribute to the enzyme inhibition effect of chili paste, resulting in this high level of inhibition. Despite the added portion of these vegetables and herbs being quite high, the products were mostly accepted by 30 untrained panelists. The correlation study of enzyme inhibition and roasting time was found to be second order polynomial regression type. Chili paste containing *Gynura divaricata* DC, *Piper retrofractum* Vahl and *Cyperus rotundus* Linn. showed a decrease of alpha amylase inhibitory activity the longer the time of roasting. This was in contrast to enzyme inhibition of chili paste prepared from *Coccinia grandis* Voigt which increased from 23.16% to 45.02% during 15 min roasting. Alpha amylase inhibition of chili paste added with roasted *Thunbergia laurifolia* Linn. tended to decrease after 10 min roasting time. This will be further studied to develop design models for application in a decision support system for development of Thai food that could be applied to diabetes patients and consumed as healthy food for diabetes risk reduction.

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**AN INTERGRATIVE REVIEW OF KEY DETERMINANTS  
AFFECTING FAMILY BUSINESS SUCCESSION**

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**ABSTRACT NOT AVAILABLE**

## **AN EFFICIENT TOOL IN STRATEGIC ASSET ALLOCATION: MATLAB**

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**Keywords:** Portfolio Optimization, Strategic Asset Allocation, MATLAB

**Objective:** To examine return behavior of stocks listed in the Stock Exchange of Thailand (SET) and to form portfolios based on Mean-Variance (M-V) approach by Markowitz (1952, 1959) using MATLAB.

**Methods:** MATLAB is introduced as an alternative tool to form optimal Mean-Variance (M-V) portfolios and to construct an efficient frontier. Optimization process is set to maximize expected portfolio return given a particular level of portfolio risk or to minimize portfolio risk given a particular level of portfolio return. The return of an individual security, expected asset return (average returns), variances, and covariance matrix are calculated from the adjusted price index of stocks listed in the Stock Exchange of Thailand (SET) from June 1999 to June 2009 obtained from Datastream.

**Results:** Resulting from economic boom during the year 1999 to 2004, the expected return of the July 1999-June 2004 period has the widest range compared to the July 2004-June 2009 period and the June 1999-June 2009 period. However, after the IT bubble burst in 2006 and sub-prime crisis in 2007 of U.S. market in coupled with Thailand political turmoil since 2005, the expected return of July 2004-June 2009 period have dropped drastically and there are 116 out of 226 companies with negative performance.

Forming an efficient frontier based on longer historical returns is found to be more stable as the ranges of their characteristics are narrower. More number of diversified portfolios, investing in assets from different industries are also found in the ten-year period.

**Conclusion:** MATLAB can be used as an alternative optimizer to form efficient frontier since it is easy to use and consumes less time and recourses.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# **AN EVALUATION OF THE PROCESS IN THE PROCUREMENT AND FINANCIAL SECTIONS, MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE, IN THE VIEW OF SUPPLIERS**

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**Keywords:** Satisfaction, Coordination, Loyalty, Suppliers and Procurement and Financial Section

**Objectives:** 1) To explore the opinions of suppliers who have been in contact with college staff, especially concerning loyalty. 2) To determine if there may be some staff members who are disloyal. 3) To improve work management in the college in accordance with the results of this research. 4) To understand the level of suppliers' trustworthiness.

**Methods:** The researchers collected data by using questionnaires with 65 random samples of suppliers to survey their satisfaction when contacting the Procurement and Financial Sections. The results were analyzed by using the SPSS program (Statistical Package for the Social Sciences).

**Results:** The results from the random samples showed that there were more males than females, most of whom were between 41-50 years old. In addition, more suppliers were managers of companies.

The satisfaction level of suppliers towards the Procurement and Financial Sections services were in the high range, with 4.16 and 4.36 from a total of 5, respectively.

The measurements of questions were divided into 2 points; coordination and loyalty.

The overall satisfaction of the respondents who contacted the Procurement Section was on the high level, on average 4.16. The satisfaction on coordination and loyalty was also on a high level, 4.17 and 4.16, respectively.

The highest level of satisfaction expressed by the respondents concerned the services provided by the staff, including their good manners. The average satisfaction was 4.33. On the other hand, the least satisfaction was with the clarity of the auction or supplier selection procedure. The average was 4.09.

The overall satisfaction of the respondents who contacted the Financial Section was on a high level, an average of 4.36 from 5. The highest satisfaction was for coordination at 4.26. The satisfaction of loyalty was also on a high level at 4.45

The highest satisfaction was for the loyalty of staff, 4.45. The least satisfaction concerned the speed of services, 4.17.

Moreover, males were more satisfied than females regarding the services of the Procurement Section. Moreover, executives were more satisfied than managers, chiefs and staff.

**Conclusions:** According to the research, we found that suppliers were satisfied with both coordination and loyalty. The respondents were also requested to submit comments and suggestions which will be beneficial to the organization in developing its services and system.

The suggestion from this research indicates that the next research should increase samples by using the Data Collection from the Procurement Section to gain more accurate information.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# **AN INVESTIGATION OF TRAVEL MOTIVATION AS A FACTOR IN INTERNATIONAL STUDENTS' CHOICE OF A FOREIGN UNIVERSITY: A THAI CASE STUDY**

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International student mobility is an increasingly important market for both the international education services sector and the tourism sector. According to OECD (2007), international student mobility has grown from 0.61 million worldwide in 1975 to 2.73 million in 2005; this represents more than a four-fold augmentation. The international student market is likely to increase to about 5.8 million by year 2020 (British Council, 2004). The youth and student travel market has been recognized as a growing segment in the global travel market and a significant contributor to the economy of the destination country (British Council, 2004; Kim, Noh, & Jogaratnam, 2007; Llewellyn-Smith & McCabe, 2008; Mazzarol, 1998; OECD, 2007; Richards & Wilson, 2003; Shanka, Ali-Knight, & Pope, 2002; Ward & Masgoret, 2004). As a result, countries and universities are increasingly devoting marketing efforts to attract international students. A few researchers have investigated the international student phenomenon (e.g., Llewellyn-Smith & McCabe, 2008; Michael, Armstrong, & King, 2003; Ritchie & Priddle, 2003). However, much is yet to be understood about international students' motivations and decision making processes to choose a university in a foreign land. The purpose of this study was to investigate travel (pleasure travel) motivation as a factor in international students' choice of a foreign university. The study was conducted in an international university in Bangkok. A sample of 153 international students, defined as students who are not permanent residents of their country of study or alternatively students who received their prior education in another country of study (OECD, 2007), was drawn for this study. A structured questionnaire was sent by email to ascertain the respective roles of international students' travel motivation factors and academic motivation factors in their choice of a foreign university. The response rate was 88.63%. An exploratory factor analysis was conducted to underlie the importance of travel motivation factors and the academic motivation factors that lead international students to choose Thailand as a study destination. The results show that travel motivation factors can be considered as primary motivation factors, while the academic motivation factors are secondary factors for international students who chose Thailand as a study destination. Thailand has a strong brand image and reputation as a travel destination. This can be considered a competitive advantage for the country and this should be used in universities' recruiting efforts to attract international students.

*(Presented at: The 4th International Colloquium on Tourism and Leisure (ICTL) 2010, 6-9 July 2010, Bangkok)*



**ANIMATION, A SERIOUSLY FUNNY SUBJECT IN CROSS  
CULTURAL TELLING TALES**

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**ABSTRACT NOT AVAILABLE**

## BIOMAGNETIC OF APATITE-COATED COBALT FERRITE: A CORE-SHELL PARTICLE FOR PROTEIN ADSORPTION AND PH-CONTROLLED RELEASE

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**Keywords:** Apatite; Bovine serum albumin (BSA); Cobalt ferrite; Protein release

Magnetic nanoparticle composite with a cobalt ferrite ( $\text{CoFe}_2\text{O}_4$ , (CF)) core and an apatite (Ap) coating was synthesized using a biomineralization process in which a modified simulated body fluid (1.5SBF) solution is the source of the calcium phosphate for the apatite formation. The core-shell structure formed after the citric acid-stabilized cobalt ferrite (CFCA) particles were incubated in the 1.5 SBF solution for 1 week. The mean particle size of CFCA-Ap is about 750 nm. A saturation magnetization of  $15.56 \text{ emug}^{-1}$  and a coercivity of 1808.5 Oe were observed for the CFCA-Ap obtained. Bovine serum albumin (BSA) was used as the model protein to study the adsorption and release of the proteins by the CFCA-Ap particles. The protein adsorption by the CFCA-Ap particles followed a more typical Freundlich than Langmuir adsorption isotherm. The BSA release as a function of time became less rapid as the CFCA-Ap particles were immersed in higher pH solution, thus indicating that the BSA release is dependent on the local pH.

*(Published in: Nanoscale Research Letters, 2010, Pages 1-9)*

## **BLUEPRINT FOR SMALL SIZE BUSINESS**

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**ABSTRACT NOT AVAILABLE**

# BRAND VALUATION OF ICT PRODUCTS: THE CASE OF THAILAND

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**Keywords:** Brand equity, Communication technologies, Prices, Thailand

**Purpose** – The paper aims to adopt the hedonic price approach to quantify the brand equity of information and communication technology (ICT) products, narrowed down to laptop computers, laser printers, liquid crystal display computer screens, and mobile phones.

**Design/methodology/approach** – The hedonic price model features the list price as the dependent variable of the regression, whilst the measurable attributes of the product and brand dummies are on the right-hand side. Additionally, the model can be adjusted to measure brand effects on profit margins as well.

**Findings** – In most of the price and log price models, brand dummies are significant, and positively linked to the consumers' willingness to pay. Nevertheless, amongst the four ICT products in this study, only the laptop brands show positive values. Negative but significant brand dummies suggest that brands are undoubtedly important; however, other features exhibit higher value to consumers.

**Research limitations/implications** – As is the case with other financial approaches to valuing brands, the results do not explain how to exploit those values; rather, it identifies the brand's position as measured against other brands.

**Practical implications** – Negative brand premiums imply that brand loyalty is not strong in the market, and that the opportunity exists for a new brand's penetration. The construction of brand premium rankings should prove beneficial to firms who wish to evaluate their current position against other competitors. Regarding the products' features, the results suggest that consumers generally focus their decision to purchase a particular brand on its basic or core features.

**Originality/value** – The paper proposes another approach to assessing brand equity, namely, in terms of both price and profit margin premiums. Though imperfect, the hedonic methodology is relatively simple and relies on available secondary data.

*(Published in: Asia-Pacific Journal of Business Administration Vol. 2 No. 2, 2010, pp. 185-202)*

## **BURMA: FROM BOOM TO BUST IN THE 1950s** **A HISTORICAL REVIEW ON ECONOMIC INTERDEPENDENCE**

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**Keywords:** rice exports, Eight Year Plan, welfare state, U Nu, Caretaker Government

Burmese regard the 1950s as the ‘golden era’ of Burmese history. The country was ruled by a democratically elected civilian Prime Minister and Burma was perceived also by the outsiders as one of the most promising countries in the region in terms of future economic development. Burma was the number one rice exporter in the world and was making a handsome surplus from the rice exports. Burma also exported teak, petrol, minerals and rubber, which added up on the surplus in the state budget. Prime Minister U Nu had ambitious plans to turn Burma into a ‘welfare state’, which could have been financially supported by the surpluses.

This all changed in 1953, after which we can see a slow but steady decline in incomes from the rice export and from other exports. By 1956 the country was in a desperate economic condition and Prime Minister U Nu resigned temporarily allowing the Socialist opposition leader U Ba Swe to take over. U Nu returned to power, but had to hand over the power to General Ne Win and the Caretaker Government in October 1958. This paper outlines the various national and international, socio-political and geopolitical development that caused this rapid economic decline of the once-prosperous Burma.

*(Presented at: The 4<sup>th</sup> International Malaysia-Thailand Conference on Southeast Asian Studies: Reexamining Interdependent Relations in South East Asia, 25-26 March 2010, Malaysia)*

# **CHANGES IN THE STABILITY AND KINETIC PARAMETERS UP ON GLYCATION OF THERMOSTABLE $\alpha$ -AMYLASE FROM *BACILLUS SUBTILIS***

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Glycation of the thermostable  $\alpha$ -amylase, KLE, from *Bacillus subtilis* occurred during incubation with maltodextrin at 95°C. This was revealed by the release of 5-hydroxymethyl-2-furfuraldehyde from the acid hydrolysis of glycated KLE (gKLE), the differences in the protein band patterns on SDS and Native-PAGE, and the shifting of the pI value from the range of 5.6–6.5 to that of 5.2–6.5. After glycation, the activity of gKLE was still retained. Furthermore, gKLE was more resistant to heat and pH compared with the nonglycated enzyme. The  $K_m$ , reaction rate and efficiency to convert gelatinized cornstarch into maltodextrin of KLE were remained unchanged after glycation. This was different from the result obtained for BAN, another thermostable  $\alpha$ -amylase produced by *B. amyloliquefaciens*. Glycation in BAN decreased the activity in converting gelatinized cornstarch into maltodextrin. Moreover, the stability and kinetic parameters of BAN were found to be negatively affected by glycation.

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## **CO-MOVEMENT OF INTERNATIONAL STOCK MARKET INDICES AND THE ROLE OF FOREIGN INVESTORS IN THAILAND'S STOCK MARKET INDEX**

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This study analyzes co-movements of international stock market indices and the role of foreign investors in Thailand's stock market index. The main research questions of the study (1) Do the co-movement of international stock market indices exist? (2) Do stock market indices of large markets statistically influence those of the smaller market? (3) How do the co-movement occur? Analyzing the daily stock market price and return indices from 11 markets : SET (Thailand), STI (Singapore), SHCOMP (The Republic of China), PCOMP (Philippines), JCI (Indonesia), KLCI (Malaysia), HIS (Hong Kong), NKY (Japan), KOSPI ( The Republic of Korea), S&P 500 (United States of America), and FTSE 100 (United of Kingdom) during 1999-2008, the results of Granger-causality test on stock markets' daily return indicate that international stock markets are correlated to each other in different ways. Take examples, (1) S&P 500 index influences most stock markets in the sample (2) STI index is often influenced by large stock market indices (3) SHCOMP index is independent from other stock markets. The study also discusses the role of foreign investors as an important factor that drives co-movements between Thailand's stock market index and some other stock markets' indices such as S&P 500. The results show that on one hand, when S&P 500 index continuously declines, foreign investors take the position of net sellers of Thai stocks resulting in the fall of Thailand's stock market index. On the other hand, when S&P 500 index continuously rises, foreign investors take the position of net purchasers of Thai stocks resulting in the rise of Thailand's stock market index. Hence the overall findings reflect the co-movement between S&P 500 index and Thailand's stock market index.

*(Published in: Bangkok University Academic Review, Volume 9, Special Issue 1, May 2010, Page 88-98)*

# COMMUNITY-BASED NATURAL AND BIODIVERSITY RESOURCES CONSERVATION AND MANAGEMENT: LESSONS LEARNED

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**Keywords:** biodiversity, community, co-management, conservation, Indo-Burma hotspot

The Indo-Burma hotspot, covering about 2,373,000 km<sup>2</sup> of tropical Asia, ranges from eastern Bangladesh to a small extreme northern part of Peninsular Malaysia, and includes northeastern India, most of Myanmar, part of southern China, Laos, Cambodia, Vietnam, and almost all of Thailand. It is home to no less than 7,000 endemic vascular plant species, 70 endemic mammal species, 60 endemic bird species, 200 endemic reptile species, 150 endemic amphibian species, and 560 endemic freshwater fish species. Much of the hotspot's biodiversity are mostly found in protected areas, which account for no more than 10% of the total area. However, it is also one of the most threatened biodiversity hotspots, with only 5% of the original vegetation remains. Rapid population growth and economic development have resulted in forest clearance, agricultural expansion, and overexploitation of natural resources. Habitat loss, degradation, and fragmentation exacerbate biodiversity loss and climate change; and climate change in turn leads to the further loss of biodiversity and natural resources. In addition, there are also many human settlements located in or adjacent to the protected areas, and dependent on them on for their livelihoods or subsistence. Given that it is not always possible to extract humans from nature, therefore, a number of strategies aimed at involving the stakeholder communities in conserving and managing the natural and biodiversity resources have evolved. These usually require the introduction of sustainable use practices or strengthening existing ones, and addressing their socioeconomic needs through the provision of social benefits and/or alternative or supplementary incomes. In return, the stakeholder communities are expected to comply with existing or agreed-upon rules and regulations, and reduce their impacts on the natural and biodiversity resources. Frequently, stakeholder communities actively engage in the protection of the natural and biodiversity resources within their traditional areas of jurisdiction, usually through participatory co-management approaches. Nevertheless, these strategies are not without their share of issues and constraints. Hence, drawing upon regional examples, this paper will highlight the efforts and lessons learned from stakeholder communities' passive and active involvement in the conservation and management of our precious, but threatened natural and biodiversity resources.

*(Presented at: The International Conference on the Environment and Natural Resources 2010: The Changing Environment: Challenges for Society, November 10-12, 2010, Faculty of Environment and Resource Studies, Mahidol University (Salaya))*



# **COMMUNITY-BASED TOURISM IN THAILAND: THE NEED AND JUSTIFICATION FOR AN OPERATIONAL DEFINITION**

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**Keywords:** Community tourism; Community-based ecotourism; Community-based tourism; Homestay; Thailand

In Thailand, any form of tourism that is associated with local and/or indigenous communities is treated as community-based tourism, regardless whether they have actively participated in its development and management and/or if the communities have collectively benefitted from it. Furthermore, community-based tourism is often referred to by several terms, which are used with neither distinction nor agreement. Its definitions or variations of its definitions mostly describe the phenomenon, the objectives, or its principles. This manuscript looks at the characteristics of community-based tourism as it pertains to Thailand, and proposes the adoption of an operational terminology relevant to the practices observed without compromising its principles. Given that community-based tourism and associated terms in Thailand are viewed as complex and confusing, an operational definition will allow a better characterization of community-based tourism, assist in achieving its objectives, and possibly work towards its accreditation. Moreover, an operational definition will allow consumers, partners, investors, and other interested parties to distinguish it from similar forms of tourism.

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**COMMUNITY-DRIVEN EFFORTS TO CONSERVE AND RESTORE  
THE REEFS OF KOH TAO, THAILAND**

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**ABSTRACT NOT AVAILABLE**

## **COMMUNITY MONITORING AND ASSESSMENT OF THE REEFS OF KOH TAO, THAILAND**

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Koh Tao, or Turtle Island, is a relatively small island (21 km<sup>2</sup>) in the Gulf of Thailand, approximately 70km east from the coast between Chumporn and Surat Thani. The official permanent population is about 1400 people but this number increases substantially if tourists, who come mainly for the diving, evidenced by the 40+ dive schools on the island, and those catering to tourists are taken into consideration. A yearly influx of 300,000 people ensures that the local economy is both directly and indirectly involved with the tourism industry. Its crystal clear waters and abundance of corals and fish attract divers, experienced and novice alike, from around the world. This greater number of divers and tourists has resulted in widespread impacts to the reefs of Koh Tao. The Marine Branch of the Save Koh Tao Community Group consists of local dive schools and businesses and volunteers dedicated to the sustainable development and tourism of the island to ensure the survival of the reefs and the island's main source of income. Seven permanent transects have been set up around the island and their benthic cover, fish and invertebrate diversity & abundance and water quality are assessed each month by an Ecology Monitoring Program (EMP). The EMP focuses on the collection of simple, yet robust, data that can even be carried out by suitably trained novice divers. The program, endorsed by Scuba Schools International (SSI), is responsibility of local dive shops and divers allowing for community involvement. All data collected are used to raise awareness, focus conservation and restoration efforts and published for presentation to local and regional government bodies for future planning. This poster aims to show changes to reef structure and ecology since initiation of the EMP in 2006

*(Presented at: The 2<sup>nd</sup> Asia Pacific coral reef Symposium : Collaboration for Coral Reef Conservation in a Changing Climate, 20-24 June 2010, Phuket, Thailand)*

# COMPARATIVE STUDIES ON THE EXPENDITURES OF WORLD-CLASS POST-SECONDARY INSTITUTIONS: IMPLICATIONS FOR THAI UNIVERSITIES

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**Keywords:** expenditure structures, current expenditures, capital expenditures, world-class universities, Thai universities

This paper analyzes and compares the characteristics that distinguish the expenditure structures of several world-class post-secondary institutions in North America, taking as examples Harvard University, Stanford University, the University of California at Berkeley, Yale University Massachusetts Institute of Technology (MIT), and the University of Chicago. Comparisons between these universities and four prominent post-secondary institutions in Thailand are also made. Finally, suggestions are advanced to improve the expenditure structures of Thai universities endeavoring to become world-class institutions.

*(Presented at: The 4<sup>th</sup> International Malaysia-Thailand Conference on Southeast Asian Studies: Reexamining Interdependent Relations in South East Asia, 25-26 March 2010, Malaysia)*

# COMPUTER USER SATISFACTION SURVEY TOWARDS MAINTENANCE REQUEST

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**Key words:** Online Computer Repairing Requisition, Satisfaction, Mahidol University-International College

**Objective:** To study the computer users' satisfaction toward methods of computer maintenance request of Mahidol University International College, comparing between online service and telephone service. The result of this research will be used to develop the maintenance request system of Mahidol University International College for the utmost satisfaction of the computer users, both instructors and support staff.

**Methods:** This was the quantitative research using questionnaire as the tool of data collecting. The data was analyzed as descriptive statistics for percentage, mean and standard deviation using SPSS Program. The population was divided into 2 groups; 119 instructors and 206 support staff in which 119 questionnaires had been responded (36.62 %).

**Results:** The instructors were most satisfied with the online request and least satisfied with the after-request service. The suggestion was that the telephone service should also be employed to make sure that questions and information were declared. 2) The support staff were most satisfied with the telephone service as the answerers were polite and enthusiastic to help. The least satisfaction of support staff was the after- request service.

**Conclusion:** the online-service should be publicized to all MUIC members as many had no idea about it. Moreover, both methods of request should be employed for the best result because the online service could help as the tool of data storing while the telephone service could help to declare details and understanding between computer users and computer staff.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

**CONSUMER WILLINGNESS TO PAY AND IMPLICATIONS OF  
DIFFERING GM LABELING POLICY**

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**ABSTRACT NOT AVAILABLE**

## **CORPORATE SOCIAL RESPONSIBILITY (CSR) – A CONCEPTUAL FRAMEWORK FOR A CONDUIT APPROACH BETWEEN INTERNAL AND EXTERNAL IMPLEMENTATIONS OF CSR IN ASIA**

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It is undeniable that companies in any country have an impact on society and its environs through their operations, offerings and interactions with its key stakeholders. Conceivably, businesses benefits from being socially responsible since CSR programs can generate benefits such as enhancing recruitment of quality employees, increased retention of labor and aid in risk management through preempting costly legal and regulatory actions. Additionally, CSR contributes to brand management and corporate-cause related marketing (CRM) which in turn would create the emotional as well as the rational engagement of the consumer with the brand. As such, CSR can be used as a means and tool to determine a tangible demonstration of the company's corporate social responsibilities together with its values and ethics. However, the heterogeneity of CSR initiatives makes it difficult to reach general conclusions about its impact and its effectiveness since there is no single or commonly agreed-upon set of criteria against which the quality of all CSR initiatives can be measured. In that respect, this study attempts to map a strategic framework on CSR to examine factors that contribute to the effectiveness of CSR by adopting a multi-stakeholder perspective and to tangibly diagnose the relevance and impacts of CSR related issues and initiatives typical to companies in ASEAN.

*(Presented at: The 19<sup>th</sup> AMIC Annual Conference “Technology and Culture : Communication Connectors and Dividers, 21-23 June 2010, Suntee City, Singapore)*

**CORRUPTION, HUMAN TRAFFICKING AND HUMAN RIGHTS: THE  
CASE OF FORCED LABOR AND SEXUAL EXPLOITATION IN  
THAILAND**

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**ABSTRACT NOT AVAILABLE**



**CREATING INNOVATION THROUGH A BUSINESS MODEL  
FRAMEWORK AND ITS IMPLICATIONS FOR THE SIAM CEMENT  
GROUP**

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**ABSTRACT NOT AVAILABLE**

# **CRYPTOSPORIDIUM OOCYST DETECTION IN WATER SAMPLES: FLOATATION TECHNIQUE ENHANCED WITH IMMUNOFLUORESCENCE IS AS EFFECTIVE AS IMMUNOMAGNETIC SEPARATION METHOD**

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**Keywords:** Cryptosporidium; Floatation technique; Immunofluorescence assay; Immunomagnetic separation; Oocyst; Water

Cryptosporidium can cause gastrointestinal diseases worldwide, consequently posing public health problems and economic burden. Effective techniques for detecting contaminated oocysts in water are important to prevent and control the contamination. Immunomagnetic separation (IMS) method has been widely employed recently due to its efficiency, but, it is costly. Sucrose floatation technique is generally used for separating organisms by using their different specific gravity. It is effective and cheap but time consuming as well as requiring highly skilled personnel. Water turbidity and parasite load in water sample are additional factors affecting to the recovery rate of those 2 methods. We compared the efficiency of IMS and sucrose floatation methods to recover the spiked Cryptosporidium oocysts in various turbidity water samples. Cryptosporidium oocysts concentration at 1,  $10^1$ ,  $10^2$ , and  $10^3$  per 10  $\mu$ l were spiked into 3 sets of 10 ml-water turbidity (5, 50, and 500 NTU). The recovery rate of the 2 methods was not different. Oocyst load at the concentration  $<10^2$  per 10 ml yielded unreliable results. Water turbidity at 500 NTU decreased the recovery rate of both techniques. The combination of sucrose floatation and immunofluorescence assay techniques (SF-FA) showed higher recovery rate than IMS and immunofluorescence assay (IMS-FA). We used this SF-FA to detect Cryptosporidium and Giardia from the river water samples and found 9 and 19 out of 30 (30% and 63.3%) positive, respectively. Our results favored sucrose floatation technique enhanced with immunofluorescence assay for detecting contaminated protozoa in water samples in general laboratories and in the real practical setting.

*(Published in: Korean Journal of Parasitology, Volume 47, Issue 4, December 2009, Pages 353-357)*

# **CULTIVATION OF *LACTOBACILLUS PLANTARUM* KV1 IN WHEY-CONTAINING MEDIUM FOR USE AS STARTER IN VEGETABLE FERMENTATION**

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**Keywords:** *Lactobacillus plantarum*, bacteriocin, vegetable fermentation starter, *Lactobacillus phytase*.

Strain KV1 is a lactic acid bacteria isolated from fermented Chinese cabbage. By using the 16S rDNA comparison method, KV1 has been identified as *Lactobacillus plantarum*. It can inhibit the growth of some other bacteria including the nisin-sensitive *L.plantarum* TISTR850. KV1 bacteriocin was autoclavable and was resistant to salinity of up to 7% NaCl. The optimum temperature and pH for growth of KV1 were at 35°C and pH 6.0, respectively. A low-cost cultivation medium was developed which contained 25.0% (v/v) whey, 0.2% (w/v) CaCl<sub>2</sub>, 0.05% (w/v) KCl, 0.05% (w/v) MgSO<sub>4</sub>·7H<sub>2</sub>O, 0.5% (w/v) NH<sub>4</sub>NO<sub>3</sub>, 0.001% (w/v) FeSO<sub>4</sub>·7H<sub>2</sub>O, 0.001% (w/v) MnSO<sub>4</sub>·H<sub>2</sub>O and 3% of pre-incubated baker's yeast in distilled water. After 24 hr, the culture yielded 3.8 x 10<sup>7</sup> cells/ml and 43.3 mU/ml of phytase. The supernatant of the KV1 culture also contained phytase activity which was most active at 37°C and pH 5.5. Using KV1 as a starter for cabbage fermentation showed rapid reduction in the number of other microbial contaminants and increase in phosphate release from degradation of the antinutritional factor, phytate.

*(Published in: International Journal of Biotechnology & Biochemistry (IJBB) Volume 6, Number 6 (2010), Pages 877-888)*

**CULTURAL INFLUENCE ON PERSONAL EPISTEMOLOGY:  
VARIATIONS OF EPISTEMIC BELIFES OF THAI UNIVERSITY  
STUDENTS**

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**ABSTRACT NOT AVAILABLE**

# **DETERMINANTS OF CORPORATE INVESTMENT DECISIONS ON AN IMPERFECT CAPITAL MARKET AND FINANCIAL CONSTRAINTS**

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**Keywords:** Corporate investment, Financial constraints, Capital Market Imperfection, Asymmetric Information, Tobin Q

This paper explores corporate investment strategy under capital market imperfection and financial constraints. Literature reviews of the corporate investment and capital market related theories are conducted aiming at investigating the methodologies used in benchmarking constrained and unconstrained firms and the determinants of investment sensitivity including variety of financial variables between the two groups. Asymmetric information and availability of internal funds are key determinants in corporate investment decisions.

*(Published in : International Management Science Journal, Volume 1, Number 1, September 2009 – June 2010, Pages 25-34)*

# **DETERMINANTS OF CORPORATE INVESTMENT DECISION ON AN IMPERFECT CAPITAL MARKET AND FINANCIAL CONSTRAINTS**

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**Key words:** Corporate investment, Financial constraints, Capital Market Imperfection, Asymmetric Information, Tobin Q

**Objective:** To explore corporate investment strategy and behavior under capital market imperfections and financial constraints, and to determine the possible variables that may affect decisions of corporate investment.

**Methods:** Literature reviews of corporate investment and capital market related theories were conducted, to investigate the methodologies used in benchmarking constrained and unconstrained firms; and the determinants of investment sensitivity, including a variety of financial variables.

**Results:** The investment decision behaviors of a firm under capital market imperfections can be explained through a number of prominent variables; amongst these are the net worth (or the availability of internal funds), liquidity levels, cash flows, taking into account the role of financial constraints. There are two models that incorporate the impact of financial constraints, namely Tobin's Q equation and the Euler equation. However, these two models also consider additional explanatory variables.

**Conclusion:** The study tries to ascertain the factors determining the investment decision behavior of a firm. Previous studies, documenting the costs of funds, is not the only concern under an imperfect capital market. Analyzing the availability of internal funds, liquidity levels, along with the characteristics of the firms should also be taken into account. More excluded variables such as manager's behavior and ownership structures are determinants that should be investigated more profoundly, over an empirical study.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

## **EFFECT OF AUDIT FIRMS BRAND ON SECURITY PRICING**

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**Key words:** Underpricing, Audit quality, Initial public offerings, Emerging market

**Objective:** The purpose of this paper is to examine the demand for higher quality auditors and the effect of their brand names on the security's pricing at the time of the initial public offering. Because the Thai capital market is highly regulated, especially in terms of auditor selection (i.e. the Thai Security and Exchange Commission provides a list of individually qualified auditors and underwriting firms that the issuing firms will have to choose from), it is therefore of interest to look at the demand for reputable audit firms and the importance of reputation capital in the signaling mechanism.

**Methods:** Data from 100 issuing firms that went public during 2003 to 2008 was collected. Logistic regression and OLS regression were applied to test the relationship between the use of reputable audit firms and the level of underpricing of new issues. The demand for these reputable audit firms in this highly regulated capital market is also examined.

**Results:** The results suggest that only the newer large firms will select the higher quality audit firms, namely the Big 4. Furthermore, the role of the audit firms in the signaling model is also examined. The findings illustrate that new issues are underpriced less when they engage Big 4 audit firms, but there is no significant association between the underwriter and the level of underpricing. However, this relationship becomes more negative when Big 4 audit firms and prestigious underwriters are both employed.

**Conclusion:** The findings confirm the significant signaling role of the auditor. Therefore, when the choice of an auditor and underwriter are restricted, the issuing firms should consider hiring reputable audit firms, rather than prestigious underwriters, at the time of the initial public offering. Also, potential investors could use the interpretations of the findings to make rational investment decisions.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

## **ESTABLISHMENT OF A RELIABLE CORAL GROWING FACILITY, SPECIFICALLY TO ALLOW IMPLEMENTATION OF FUTURE MOLECULAR EXPERIMENTS ON REGIONAL CORALS**

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The global health of the ocean can be examined by monitoring the subsequent health of the world's coral beds. The increased human manipulation of the environment, primarily through industrial waste, has had detrimental effects on the state of the world's ocean; and thus, the world's corals. In Thailand, residential wastes are also a primary contributor, as most of the islands discharge their wastes directly into the local waters. Additionally, increased atmospheric temperatures due to greenhouse gasses from industrial (and residential) pollution have had numerous effects on the global environment. Rising ocean temperatures not only alter nutrient providing currents, but also help to increase the growth of oceanic pathogenic microorganisms. As these pathogenic microorganisms are indigenous inhabitants of the world's oceans, it is reasonable to assume that corals have had to develop an effective defense against the pathogens. Recent experimental work done on scleractinian corals in the Red Sea and Indian Ocean have shown that some corals respond to stress by secreting antibacterial compounds. In this study we assessed the health of the waters along Pattaya beach and Koh Sak by monitored the total number of bacteria, coliforms, and *Vibrio* sp for one year. Additional water measurements included temperatures, salinity, turbidity, and coral samples were taken from Koh Sak and tested for any ability to secrete antimicrobial compounds. Throughout the year, bacterial numbers were not only higher in the channel between the islands, but displayed a significant fluctuation between night and day sampling times. Bacterial counts at the coral beds were relatively constant. Branching coral specimens tested in the lab were shown to secrete antibacterial substance(s) that were effective at killing populations of mixed *Vibrio* in the laboratory. These data show that the coral beds at Koh Sak are not subjected to bacterial population spikes, yet the channel between the islands may be a potential threat. Similar to the corals of the Red Sea, branching coral specimens from the Gulf of Thailand also secrete defensive compounds when subjected to higher numbers of *Vibrio* species.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*



**EUROPEAN UNION SOFT POWER: CULTURAL DIPLOMACY &  
HIGHER EDUCATION IN SOUTHEAST ASIA**

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**ABSTRACT NOT AVAILABLE**

## **EVALUATION OF ACQUISITION VALUE OF LIBRARY, MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE DURING YEAR 2005-2007**

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**Key words:** Acquisition, Evaluation of Acquisition, Acquisition value

**Objective:** To assess the cost-effectiveness with regards to the amount of books used by different divisions in MUIC and the budget used in purchasing the books during the year 2005-2007.

**Methods:** The research is conducted by surveying the book samples that have been bought by the library and accessed statistical data in terms of percentage and count used per books.

**Results:** According to the research, Mahidol University International College Library has purchased the total books of 2,122 copies. With regards to different divisions in MUIC, the field that mostly requested purchasing the book is the Science division, the field with the most used of books more than once is the BBA division, and the field that purchased most books but have less students used is Language and Humanities division. In addition, the services used by most students and staffs with the purchased books is borrowing service, followed by books renewal, then internal use, and the least is to borrow the books for photocopy. In addition, the statistical data shows the average used of books is between 4.95-12.85 times per copy.

**Conclusion:** The profits are mostly fulfilled because it is measured in terms of books used per cost of book and the amount of borrowers. The division with the highest cost of values fulfilled is the BBA division while the Social Science and Language and Humanities divisions are the least. On the other hand, the division with the highest merits with regards to most used of books is Tourism and Hospitality Management.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

## **FACILE P-TOLUENESULFONIC ACID-PROMOTED PARA-SELECTIVE MONOBROMINATION AND CHLORINATION OF PHENOL AND ANALOGUES**

Bovonsombat, P., Ali, R., Khan, C., Leykajarakul, J., Pla-on, K., Aphimanchindakul, S., Pungcharoenpong, N., Timsuea, N., Arunrat, A., Punpongjareorn, N.

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Para-Regioselective bromination of phenol and analogues, promoted by p-toluenesulfonic acid, is achieved in high to excellent yields at room temperature with N-bromosuccinimide. Chlorination with N-chlorosuccinimide and catalysed by p-toluenesulfonic acid also gives para-chlorinated phenol analogues in good yields at room temperature. Para-Bromination of phenol, promoted by p-toluenesulfonic acid, is achieved in excellent yields at room temperature with N-bromosuccinimide. p-Toluenesulfonic acid is also effective as a promoter of para-chlorination with N-chlorosuccinimide.

*(Published in: Tetrahedron, Volume 66, Issue 34, 2010, Page 6928-6935)*

# **FACTORS RELATING TO THE PARTICIPATION IN ACTIVITIES OF MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE STUDENTS**

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**Key words:** MUIC Students' Participation in Activities

**Objective:** The objective of this research is to study the factors relating to Mahidol University International College students' participation in extra curricular activities aimed to study the factors which relate to students' behavior in participating activities.

**Methods:** The method used in the research was selecting one observation period of a sample group of 343 students all classes; freshmen, sophomores, juniors and seniors out of a population 2415 students. Tools which were used to collect the data compose of frequency distribution, percentage, mean, standard deviation, t-test, one way analysis of variance, and coefficient of correlation.

**Results:** Individually, all the factors, such as genders, year of enrollment, monthly expenses, and grade point average (GPA) directly affected the decisions of Mahidol University International College students to participate in each activity. Those mentioned factors made the differences around 0.05. On the other hand, the different age, curriculum, family status, people who live with, accommodations and source of monthly income did not actually have any impact or made any differences.

After analyzing the factors which relate to the behavior and decision of Mahidol University International College students in participating activities, the attitude, understanding, the support from university, parents and peers, duration of each activity, and the ease of access to university were correlated and went in the same direction

**Conclusion:** Overall, the result after analyzing the factors which relate to students' behavior in participating activities revealed that students participated in activities at the medium level. The findings of the study illustrated that the majority of students, mostly involved in those activities, receive the greatest benefit from the activities. Followed by the involvement of the evaluation phase, operation phase and planning phase were other findings from the research respectively.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

## **FAMILY BUSINESS SUCCESSION AND POST SUCCESSION PERFORMANCE: EVIDENCE FROM THAI SME**

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**Key words:** Family Business, Succession, Incumbent, Successor

**Objective:** This paper aims to study the key factors affecting the process of family business succession in Thailand and the post succession performance. The purpose of this research is to identify the level of impact of the four determinants (personal factor, intra-family relationship factors, context factors, and financial factors) on the effectiveness of the succession process by using the method of structural equation model. The research paper also aims to measure the level of impact after the succession process by looking the post succession performance of family firms in Thailand.

**Methods:** Structural Equation Model (SEM)

**Results & Conclusion:** There is a positive relationship between the four determinants (personal factors, intra personal relationship factors, context factors, and financial factors) and the succession process.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# **GREEN TOURISTS PERCEPTION AND MOTIVATION: A STUDY OF DEMESTIC MARKET IN THAILAND**

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**Keywords:** Green tourist, green tourism, Thai green tourist, Green tourist behavior, Making decision process, Motivation

Green tourism is emerging as a significant global market trend towards a new lifestyle of people who are concerned with the environmental issues, such as global warming. Hence, this study aims to propose the recent survey evidence on the perceptions and motivations of Thai tourists towards green tourism by using Samut Songkram and Phang-Hga, two of the most famous provinces in Thailand, as a comparative case studies to examine the shades of green tourist. These communities are outstandingly well established in terms of maintaining sustainable tourism development as part of green tourism product aspect.

The research is aimed to analyze the perception and motivation of 400 Thai green tourists by using both quantitative and qualitative methods. It is designed to determine the consumers' perspectives and it focuses on the possibility to promote green tourism project as part of the government campaign for developing sustainable tourism of domestic market.

The research study showed that Thai green tourists have various understandings and applications of being "green". This reflects the diversity between consumers in terms of their perception, motivation and actions towards the environment in general. Hence, the proposed study is to provide an assessment of the Thai green tourists' perceptions and motivations from the tourists' current activities and also provide the evaluation of the environmental-friendliness from the tourists experience by using sample size representing Thailand aspect. The formulation of guidelines for the appropriate behaviors of a green tourist, and the possibility in promoting Thai green tourist campaign for sustainable tourism development are illustrated in this research.

The influential factors on the decision making process of tourists are classified into 'Push and Pull factors'. In the case of Thai tourists, and comparing Push and Pull factor, the mean value of Push factor is slightly different from Pull factor. This can be implied that Thai tourist is influenced more by the external factors especially the ones that support their own desires while making decision. It is different from international tourist results which push factors is clearly

higher than pull factor, indicating that external factors do not have much influence on their decision making when they go travelling.

The results were illustrated to support the internal and external determinant relationship among channel of the received green tourism information, tourist behavior, perception and shade of green tourist. With respect to a received information channel, the green tourism information is delivered to green tourist by friends and relatives, Television, radio, internet, Tourism Authority of Thailand (TAT) website with different behavior pattern as receiver as well as perception aspect expect tour operators channel which can be created the same pattern of green tourist behavior. Therefore, green tourist behavior can be affected by tour operator easier than others.

It could be suggested that the decision making process of green tourists is not only to consider the development of green products, but it should also be concerned with the distribution of information on green tourism, informing the way to preserve nature and environment. From the study, providing the information from travel agencies or being informed by relatives or peers sharing the experience on green tourism would strengthen the awareness and build-up a sense of environmental-friendly traveling.

It is advisable to make green tourism product more tangible such as providing a clear definition of green tourism products, a clear green product identity, image and personality of green tourist. In fact from the study, the unclear perception of green tourists is resulted from the fact that green tourism is intangible in the consumer perception. Therefore providing the information about green issues to increase the green awareness to tourists is required.

For the future research, the further emphasis of shade of green tourist behavior from different segments is recommended. Although this study has identified some interesting findings, there are limitations as these data as the majority of the information was captured from respondents at Phang-Nga and Samut SongKram in Thailand. Therefore, it is not necessarily an indicative of all tourists.

*(Presented at: The 5<sup>th</sup> International conference on Monitoring and Management of Visitor Flows in Recreational and Protected Areas, 30 May – 3 June 2010, Wageningen, Netherlands)*

**HALLOWEEN: COMPRISING A CAUTIONARY ACROSTIC OF NINE  
BEDTIME STORIES FOR THE DISOBEDIENT OR TIRESOME CHILD**

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**ABSTRACT NOT AVAILABLE**



## **HANDS**

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## **HANUMAN'S BRIDGE**

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**ABSTRACT NOT AVAILABLE**

**IMMOBILIZATION OF CADMIUM IN SOIL BY COW MANURE AND SILICATE FERTILIZER, AND REDUCED ACCUMULATION OF CADMIUM IN SWEET BASIL (OCIMUM BASILICUM)**

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**ABSTRACT NOT AVAILABLE**

**IN SEARCH FOR AN IDEAL CAMPUS INFORMATION SERVICE IN  
UNDERGRADUATE STUDENTS' OPINION**

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**ABSTRACT NOT AVAILABLE**

**INTEGRATION DE CERTAINS PRINCIPES DU PROTFOLIO  
EUROPEEN DES LANGUES (PEL) DANS LA CLASSED DE FLE EN  
THAILANDE**

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**ABSTRACT NOT AVAILABLE**

## IS SABIN-FELDMAN DYE TEST USING *T. GONDII* TACHYZOITES FROM ANIMAL INOCULATION STILL THE BEST METHOD FOR DETECTING *TOXOPLASMA GONDII* ANTIBODIES?

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**Keywords:** *Toxoplasma gondii*, mouse and cell culture derived tachyzoites, dye test, IFAT

Although the Sabin-Feldman dye test is the gold standard for detecting *Toxoplasma* antibodies in human, it is performed only in reference laboratories because live virulent *T. gondii* are used for the test. We collected 210 human serum samples and tested them by the dye test using *in vivo* tachyzoites (conventional method) than compared these results with three other methods: a dye test using cell culture-derived *T. gondii* tachyzoites and indirect immunofluorescent antibody tests (IFAT) using *in vivo* and *in vitro* tachyzoites. We found the conventional dye test detected the highest percent of cases (4.3%), followed by the IFAT using parasites from mice (3.8%), then the dye test and the IFAT using cell culture tachyzoites (both 2.8%). Agreement with the dye test when using mouse and cell culture derived tachyzoites was 96.7%. Using *in vivo* tachyzoites for the dye test and the IFAT gave 94.3% agreement, while using *in vitro* tachyzoites gave 94.8% agreement. When compared with the conventional dye test, the IFAT had 75% sensitivity and 100% specificity. The *T. gondii* tachyzoites obtained from cell culture had a lower virulence, as indicated by a three times longer survival period in the inoculated mice. We favor the conventional dye test as the gold standard for *Toxoplasma* antibody detection. *In vitro* tachyzoites can be used routinely in the dye test but false negative results may occur in some cases. The IFAT, using either *in vivo* or *in vitro* tachyzoites, are alternatives for laboratories where provision of live tachyzoites is limited.

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# JOSEPHSON CURRENT IN A DOUBLE FERROMAGNETIC LAYER SG/F<sub>1</sub>/F<sub>2</sub>/SG GRAPHENE SANDWICH

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The Josephson current in a double ferromagnetic layer SG/F<sub>1</sub>/F<sub>2</sub>/SG graphene junction where the SG's are graphene-based s-wave superconductors and the F<sub>1,2</sub> are ferromagnetic layers of thicknesses  $d_{1,2}$  in which the exchange energies are  $E_{ex1,2}$ , is studied. The Josephson current in this junction is composed of Cooper pairs formed by quasi particles which are massless Weyl-Dirac electrons. By switching the alignment of the two exchange fields, we find that the Josephson current in the junction can change from being in the  $\pi$ -state to being in the 0-state. For the case where the magnitudes of the exchange field strength are the same, it is seen that the phase difference dependence of the critical Josephson current in a parallel aligned junction indicated a cross over from a 0-state to  $\pi$ -state whenever the ferromagnetic barrier strength  $\chi_{ex}$  is equal to  $(n/2 + 0.25)\pi$  (with  $n = 1, 2, \dots$ ). The AP-junction for  $F_1 = F_2$  behaves as if it has no the magnetic barriers, like S/N/S junction. It is also seen that the temperature dependence of the (%) magneto-Josephson current ratio defined as the difference between the critical currents of the graphene-based P-junction and AP-junctions defined as,  $\% P_S \sim (100 \%) \times (I_P^c - I_{AP}^c) / I_P^c$ , is found to be oscillated under varying the exchange energies. The maximum value of  $\%P_S$ ,  $(\max)P_S \rightarrow -\infty$  as  $T \rightarrow T_C$ . The cause of these effects is the relativistic nature of the quasi particles in the graphene-based junctions.

*(Published in: Physica C: Superconductivity and its Applications, Volume 470, Issue 2, 15 January 2010, Pages 123-128 )*

# MANAGING SERVICE QUALITY IN THE AIRLINE INDUSTRY IN THAILAND, VOICE FROM THE AIRLINERS

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**Keywords:** Service Quality, Airline Industry, Delphi Method, Thailand

**Objective:** This paper identifies the human resource factors that strengthen or weaken airline service quality based on the service providers' points of view. The investigation provides a better insight into competitive factors, and highlights the areas of improvement of the employee general performance and the employee efficiency towards the development of airline service quality.

**Design/methodology/approach:** The Delphi method, using questionnaires and interviews was used to elicit the perspective of 20 experienced airline experts on the subject of service quality under Thai Resource Operations. The questionnaire was based on international standards of airline service quality, and looked at literature from both the customers and service providers' points of view. The questions were categorized into two areas namely employee general performance and performance and reliability within airline operations.

**Results:** This paper represents a consensus of factors derived from an experienced panel of experts in the airline industry on the strengths and weaknesses of Thai employees on airline service quality. The comments from airline experts also indicate that one of the main problems, causing a shortfall of service quality of airlines in Thailand are the current operating handling agents.

**Conclusion:** It can be clearly seen that the inefficiency of the handling agents creates problems for airlines operating in Thailand. The problem of miscommunication, the inability to communicate English clearly and a lack of discipline, lacking positive attitudes whilst working, and the problem of staff turnover are the main concerns that the managers of handling agent companies have to take into consideration in order to improve the entire process.

On the other one hand, emphasis on communication and training between airlines and handling agents is also very important. The monitoring of handling staff by airline companies, such as SAS, creates better efficiency levels and better communication. SAS mentioned that they are working and communicating very closely with the Thai Ground Services handling, and also training them in the systems that have been specifically implemented in SAS. Once the expected competency is met, there will be less problems to be faced in the future.

**Originality/value:** This country specific study aims to provide both theoretical and practical contributions on human resource performance and efficiency under airline operations. Other related service industries such as hotels, spas, restaurants and international organizations can also benefit from this study by implementing and adapting their procedures to minimize the weaknesses of staff whilst maximizing their strengths to increase the company's competitiveness.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*



**MEDIA DEVELOPMENT FOR BIOMASS PRODUCTION OF  
ANTIFUNGAL STRAINS OF PSEUDOMONAS AERUGINOSA**

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**ABSTRACT NOT AVAILABLE**

## **MULTIPLE NON-POLYSACCHARIDE-DEGRADING ENZYME PRODUCTION FROM SOLID STATE FERMENTATION OF *ASPERGILLUS NIGER* AK10**

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**Keywords:** *Aspergillus niger*, solid state fermentation, phytase, cellulose, xylanase, mannanase, Thailand.

*Aspergillus niger* strain AK10 was isolated from ingredients used for animal feed production. It was found to be capable of producing multi-enzymes required for animal feed supplements, namely phytase, xylanase, cellulase and mannanase. Except for mannanase, solid state fermentation of AK10 for production of the other three enzymes was found to be best done on RB medium which was composed of rice bran mixed with mineral salt solution [0.1% K<sub>2</sub>HPO<sub>4</sub>, 0.02% MgSO<sub>4</sub>, 0.01% CaCl<sub>2</sub> and 0.25% (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>] at a weight by volume ratio of 1:1. The solid medium for high mannanase production was SM medium containing soybean meal and mineral salt solution at 1:1 (w:v) ratio. The optimum temperature for growth of AK10 was at 35°C for 4 days. The mineral salts solution was found to be an important factor for mannanase activity. Each enzyme was characterized for the levels of optimum temperature and pH for the activity and stability. Efficiency of the crude multi-enzyme mixture in digesting grass was tested and found to help increase the metabolizable reducing sugar and protein by 3 and 13.5 folds, respectively. It also helped releasing the free absorbable phosphorus by 10 fold.

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**NEW PUBLIC MANAGEMENT IN ITS SERVING OF INTERNAL  
STAKEOLDERS: CASE STUDIES OF AUTONOMOUS PUBLIC  
ORGANIZATIONS IN THAILAND**

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**ABSTRACT NOT AVAILABLE**

## ***P*-TOLUENESULFONIC ACID-PROMOTED *PARA*-SELECTIVE MONOBROMINATION OF PHENOL AND ANALOGUES**

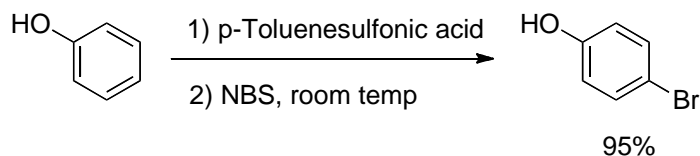
P. Bovonsombat, R. Ali, C. Khan, J. Leykajarakul, K. Pla-on, S. Aphimanchindakul, N. Pungcharoenpong, N. Timsuea, A. Arunrat and N. Punpongjareorn

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**Key words:** Para-selective bromination, phenol, *p*-Toluenesulfonic acid, *N*-bromosuccinimide

**Objective:** Bromophenols are important synthetic intermediates and are also constituents of various naturally occurring biologically active compounds. The challenges of phenol ring brominations, due in part to their high reactivities towards electrophiles and in another by the high reactivity of the bromonium ion, are the mono versus polyhalogenation control and regioselectivity.

**Methods and Results:** A new and inexpensive methodology for regioselective monobromination of phenol and analogues has been developed using a simple combination of *p*-toluenesulfonic acid (*p*TsOH) and *N*-bromosuccinimide.



**Conclusion:** High to excellent yields of *para*-brominated phenol and analogues were obtained in room temperature acetonitrile with sequential addition of *p*TsOH and NBS. *Para*-selective monobromination of phenol and analogues, although less effective at ice-bath temperature, were promoted by a combination of acetonitrile and *p*TsOH, which for the latter is believed to act as a hindering group at the *ortho* position.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

**PEOPLE'S PARTICIPATION IN WASTEWATER MANAGEMENT:  
A CASE STUDY OF PHI PHI ISLAND, THAILAND**

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**ABSTRACT NOT AVAILABLE**

# PEOPLE'S PARTICIPATION IN WASTEWATER MANAGEMENT FOR SUSTAINABLE TOURIST DESTINATION : A CASE STUDY OF PHI PHI ISLAND, THAILAND

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**Keywords:** People's participation, sustainable tourism, tourist destination, wastewater management, Thailand

In Thailand, tourism plays a vital role in socio-economic development meanwhile it also creates many environmental problems. Given that Phi Phi Island is one of the most famous beach destinations in Thailand; tourism development without proper sustainable planning has had significant impacts on the local community especially in terms of environmental conditions. This research aimed to assess the pattern and potential of people's participation in wastewater management. Problems encountered in people's participation were identified. Recommendations were provided based on the findings to strengthen people's participation in wastewater management to pursue sustainable tourist destination. Participatory data collection methods were implemented through questionnaire survey, focus group discussion, in-depth interview and stakeholder dialogue. Based on the study, findings support the concept that the participatory approach is needed for sustainable development to pull resources from the government side and the local community side, working collectively for their tourism community development and its sustainability.

*(Presented at: The 5<sup>th</sup> World Conference for Graduate Research in Tourism, Hospitality and Leisure, 25-30 May 2010, Turkey)*

# **PERCEPTIONS OF JUSTICE IN THE KHMER ROUGE TRIBUNALS : ANTHROPOLOGICAL PERSPECTIVES ON THE ‘GLOCALIZATION’ OF INTERNATIONAL LAW**

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This paper presents an anthropological analysis of concepts of justice in contemporary Cambodia in the context of the Khmer Rouge Tribunals and addresses issues regarding the glocalization of international law and universal (or ‘natural’) ethics. Adopting a basically cultural-relativist perspective, legalist notions of ‘international justice’ will be critically discussed and alternative ways of localizing ‘global’ ethics proposed.

Based upon an analysis of perceptions of justice in traditional Cambodian society on the one hand, and notions of social justice and the idea of ‘just(ified)’ violence during the Khmer Rouge period on the other hand, this paper surveys the myriad concepts of ‘justice’ as they have been displayed in the course of the Khmer Rouge Trials in the Extraordinary Chambers in the Courts of Cambodia (ECCC), a hybrid tribunal, set up to charge senior leaders of Democratic Kampuchea and those ‘most responsible’ for crimes committed during April 1975 and January 1979. The analysis of ‘justice’ concepts in this context is not limited to legal precepts of retributive and restorative justice, but includes also the wider aims of the tribunals – reconciliation and strengthening the rule of law in contemporary Cambodia – as well as the persistence of alternative (extra-legal) ideas of justice in the court room, e.g. notions of ‘psychological peace’ and demands for vengeance among the Civil Parties and the Victim’s Unit of the ECCC, or personal justification strategies of Kaing Guek Eav alias ‘Duch’, former director of the political prison S-21 (Tuol Sleng) and currently accused of crimes against humanity, grave breaches of the Geneva Convention and crimes under the Cambodian Penal Code of 1956.

On the basis of courtroom observations, interviews and a review of the transcripts of the proceedings, this paper suggests that the tribunal has, so far, failed to foster “Western” notions of the “rule of law” in Cambodia. However, the existence of the ECCC and the wide interest Cambodian society has taken in its work, has stimulated public discourse on ‘justice’ and continues to help reconstituting alternative frameworks of legal consciousness in contemporary Cambodia.

*(Presented at: The 4<sup>th</sup> International Malaysia-Thailand Conference on Southeast Asian Studies: Reexamining Interdependent Relations in South East Asia, 25-26 March 2010, Malaysia)*

# PERFECT SWITCHING OF THE SPIN POLARIZATION IN A FERROMAGNETIC GAPLESS GRAPHENE/SUPERCONDUCTING GAPPED GRAPHENE JUNCTION

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**Keywords:** Ferromagnet/superconductor junction; Gapped graphene; Massive Dirac electron; Specular Andreev reflection; Spin transport

With the fabrication of gapped graphene, interest in the tunneling spectroscopy in graphene-based FG/SG junctions in which one side consists of a gapless ferro-magnetic graphene (FG) and the other side, of a gapped superconducting graphene (SG) has arisen. The carriers in the gapless (gapped) graphene are 2D relativistic particles having an energy spectrum given by  $E = \sqrt{(\hbar^2 v_F^2 k^2 + (mv_F^2)^2)}$  (where  $mv_F^2$  is the gap and  $v_F$  is the Fermi velocity). The spin currents in this FG/SG junction are obtained within the framework of the extended Blonder-Tinkham-Klapwijk (BTK) formalism. The effects of the superconducting energy gap in SG, of the gap  $mv_F^2$  which opened in the superconducting graphene, of the exchange field in FG, of the spin-dependent specular Andreev reflection, of the effective Fermi energy ( $E_{FF}$ ) of FG and of the bias voltage across the junction ( $V$ ) are simulated. It is seen that by adjusting  $E_{FF}$  or  $V$ , the spin polarization (defined as  $SP(\%) = 100\% \times (G_{\uparrow} - G_{\downarrow}) / (G_{\uparrow} + G_{\downarrow})$ ) can be switched from a pure spin up ( $SP = +100\%$ ) state to pure spin down ( $SP = -100\%$ ) state.

*(Published in: Physica C: Superconductivity and its Applications, Volume 470, Issue 1, 1 January 2010, Pages 31-36)*



## **PURIFICATION AND CHARACTERIZATION OF ASPARAGINASE FROM SOLID STATE CULTURE OF *ASPERGILLUS NIGER* AK10**

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**Keywords:** Asparaginase, *Asperigillus Niger*, asparaginase purification, asparaginase characterization.

An asparaginase producing fungus, *Aspergillus niger* strain AK10, was isolated from raw material for animal feed production. The enzyme production was done using solid state fermentation on the medium containing soybean meal and water at 1:1 ratio. The 4-day-old culture was extracted, purified and determined for the general properties. From SDS-PAGE, it was 91.4 kDa in size. The enzyme functioned maximally at pH 8.6 and 37oC and was most stable when stored at pH 8.0-8.6 and 40oC - 50oC. AK10 was slightly sensitive to (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> and was insensitive to NaCl and monosodium glutamate. The potential application of AK10 asparaginase in reducing asparagine content in blended potato has been demonstrated.

*(Published in: International Journal of Biotechnology and Biochemistry, Volume 6 Number 7 (2010) pp. 1083–1092)*

## **REASSESSING THE DETERMINANTS OF INTERNATIONAL STOCK MARKET CORRELATION**

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**Keywords:** Equity Flows, Cross-border Portfolio Investment, Information Asymmetries, Gravity Model, Home Bias

The purpose of this paper is to examine the determinants of international stock market correlation by applying the gravity model where the roles of distance and overlapping opening hours are of key interest in this study. Based on the work of Flavin, Hurley, & Rousseau (2002), we utilize a dynamic gravity model, the findings herein confirm the importance of overlapping hour variable as the main determinant of international stock markets correlation.

*(Published in: International Research Journal of Finance and Economics Volume 60, December 2010, Pages 7-14)*

## **REASSESSING THE ROLE OF DISTANCE ON CROSS-BORDER EQUITY FLOWS: DOES DISTANCE STILL MATTER?**

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**Keywords:** Equity Flows; Cross-Border Portfolio Investment; Information Asymmetries; Gravity Model; Home Bias

Portes and Rey (2005) employ a gravity model to analyze bilateral crossborder equity flows and find that increase in the distance of 1% lowers bilateral crossborder equity flows between 0.66% and 0.88%. Applying the Poisson pseudomaximum likelihood (PPML) estimators reveals that although distance which is a proxy for some information costs still has a significant, negative effect on international asset transactions, the magnitude of the coefficient are generally of much smaller than documented in Portes and Rey (2005). That is, an increase in the distance of 1% lowers bilateral cross-border equity flows between 0.39% and 0.56%.

*(Published in: The Empirical Economics Letters, 9 (5), May 2010, pp. 459-465)*

**RELATIONSHIPS WITHIN LENTINUS SUBG. LENTINUS  
(POLYPORALES, AGARICOMYCETES), WITH EMPHASIS ON  
SECTS. LENTINUS AND TIGRINI**

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**Keywords:** Mating systems; Panus; Phylogeography; Pleurotus; Pleurotus sajor-caju; Systematics

Representatives of Lentinus subg. Lentinus sensu Pegler (sects. Lentinus and Tigrini) were evaluated using ribosomal ITS-1-5.8 S-ITS2 sequence data, sexual intercompatibility studies and morphological analysis. Members of sects. Dicholamellatae, Rigidi and Lentodiellum sensu Pegler were also included in the study, but in much smaller numbers. All included sections were shown to be monophyletic with respect to the taxa sampled. While no biogeographical pattern was observed in sect. Lentinus, *L. tigrinus* (sect. Tigrini) produced a strong phylogeographic signal. Taxa of the related Polyporus "group Polyporellus" sensu Nuñez and Ryvardeen representing two clades were included in this study. Synonymy of *Lentinus lindquistii* under *L. tigrinus* is suggested based on sexual intercompatibility studies and molecular data.

*(Published in: Mycological Progress, 2010, Pages 1-15)*

## **ROLE OF A BURKHOLDERIA PSEUDOMALLEI POLYPHOSPHATE KINASE IN AN OXIDATIVE STRESS RESPONSE, MOTILITIES, AND BIOFILM FORMATION**

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**Keywords:** *B. mallei*; *B. pseudomallei*; Biofilm; Flagellin; Oxidative stress; Polyphosphate kinase

*Burkholderia pseudomallei*, a motile and rod Gram-negative bacterium, is the causative agent of melioidosis. The bacterium is an intracellular pathogen and that motility is generally crucial for their survival in a natural environment and for systemic infection inside a host. We report here a role of *B. pseudomallei* polyphosphate kinase in virulence, such as an oxidative stress response, motilities and biofilm formation. The polyphosphate kinase (ppk) mutant is susceptible to hydrogen peroxide in an oxidative stress condition, unable to perform swimming, swarming motilities, and has lower density biofilm forming capacity than the wild-type strain. We also demonstrated that both polyphosphate kinase and motile flagella are essential and independently involved in biofilm formation. The *B. pseudomallei* flagellin (fliC) mutant and *B. mallei*, a nonmotile species, are shown to produce higher density biofilm formation than the ppk mutant, but less than wild type *B. pseudomallei*. © 2010 The Microbiological Society of Korea.

(*Published in:* Journal of Microbiology, Volume 48, Issue 1, March 2010, Pages 63-70)

# **SANTI ASOKE BUDDHISM AND THE OCCUPATION OF BANGKOK INTERNATIONAL AIRPORT**

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**Keywords:** Thailand, Santi Asoke, Dharma Army, People's Alliance for Democracy (PAD), Chamlong Srimuang

Thailand experienced dramatic political turmoil from February 2006 to November 2008 culminating in the occupation of the Bangkok International Airport. The demonstrations against then Prime Minister Thaksin Shinawatra and his political allies were organized by the People's Alliance for Democracy (PAD). One of the PAD leaders, Major-General Chamlong Srimuang, is an active member of the Buddhist Santi Asoke group. The group is controversial as it is not under the state Buddhist authorities and has implicitly criticized the Thai state Buddhist monks for moral corruption. Known as the 'Dharma Army', hundreds of Santi Asoke monks, nuns and lay people participated in PAD demonstrations. This paper analyses what the Santi Asoke Buddhist group represents, what the 'Dharma Army' is, how its reality differs from media images, what the ideological reasons for Asoke to initially support Thaksin were, and why the group finally turned against him. The paper argues that the group cannot be viewed as a monolithic community. Instead, it should be considered as an amalgamation of monks and nuns, urban and rural temple residents, lay followers of Asoke monks, practitioners of organic agriculture in Asoke village communities, students and former students of Asoke schools, and supporters of Major-General Chamlong Srimuang. Representatives of all these networks participated in the demonstrations albeit with different intensity.

*(Published in: Austrian Journal of South-East Asian Studies, Volume 3, Issue 1, 2010, Page 31-47)*

# **SATISFACTION TOWARDS SERVICE QUALITY PROVIDED BY THE SECRETARIAL STAFF OF EACH PROGRAM AT MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE : A CASE STUDY OF UNDERGRADUATE STUDENTS**

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**Key words:** Satisfaction towards service quality, A case study of undergraduate

**Objective:** This research has three purposes; Firstly, to access the satisfaction level of undergraduate students who receive services from the secretarial staff of each program in Mahidol University International College (MUIC). Secondly, to study the relationship between descriptive data factors (gender, age, study year, program, major and family income) to satisfaction of services received from the secretarial staff of each program. Lastly, to obtain feedback and suggestions from undergraduate students, regarding the secretarial staff of each program, in order to bring about better and more efficient services.

**Methods:** The research is quantitative, and was conducted through interviews and surveys. The population of the survey is 2,444 undergraduate students, who are currently studying a bachelor's degree in all of the programs at MUIC. A total sample of 345 undergraduate students undertook the survey, of which 326 students returned the survey forms (94.5 percent of the sampling group). The obtained data was analyzed using the Statistical Package for the Social Sciences for Windows (SPSS).

**Results:** The research found that the satisfaction levels of the undergraduate students regarding the services of staff from each program in MUIC, both in general and according to the category of each descriptive data factor, is on average indifferent with a satisfaction level of average to excellent. According to the research on the relationship between the satisfaction levels for each factor of descriptive data, it shows that the study year has the most significant effect on the satisfaction level amongst all the other factors. Following which the program of study, major, gender, and age respectively, also have a significant effect on the satisfaction level. The evidence shows that family income has no significant effect on the satisfaction level of services.

**Conclusion:** The feedback and suggestions provided by undergraduate students in each major revealed that speed of services, availability of staff during lunch breaks, provision of a one-stop-service, and a suggestion box for each program of study, were highlighted by most students.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# **SEEDS OF VIOLENCE: MISSIONARIES, CONTESTED IDENTITIES AND KACHIN NATIONALISM IN BURMA**

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**Keywords:** Kachin, Jinghpaw, Border Guard Forces, Evangelical Christians, chosen

Wars have ravaged Burma/Myanmar since the end of the Second World War. The central government has neither been able to consolidate its sovereignty in the remote border areas nor to guarantee cultural, economic or political autonomy to the peoples living in these areas.

The present military regime negotiated ceasefire with several armed ethnic minority groups. Ceasefire groups have been offered to become 'Border Guard Forces', which many groups have rejected. One of those ceasefire groups is the Kachin Independence Army (KIA). Besides the KIA, there are also other Kachin armed groups with complex military-economic relations with the central government.

Kachins are regarded as a 'super-ethnic category' or a 'multi-group ethnic category' as the group 'Kachin' consists of at least six different ethno-linguistic subgroups. What unites the subgroups is Christianity and the Romanized writing system in Jinghpaw created by a Swedish-American missionary Dr. Ola Hanson. The Kachin Christians are divided into Baptist, Roman Catholic and various Evangelical Protestant churches.

The purpose of this paper is to discuss the contested Kachin Christian identity, identity politics and the Christian ideologies, which provide the Kachin elites justification for their cause. The paper looks into the Kachin diaspora's discourse carried out through various Kachin websites, where terms like 'chosen people' or 'people of God' are invoked. The paper also looks into the different Christian denominations among the Kachin, and their role in the discourse on Kachin identity.

*(Presented at: The 6<sup>th</sup> EuroSEAS Conference in Gothenburg, 26-28 August 2010, Sweden)*



# **SIGHTING OF THE BORNEAN FERRET BADGER MELOGALE EVERETTI IN THE KINABATANGAN FLOODPLAINS, AND IMPLICATIONS OF ITS LOWLAND DISTRIBUTION**

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**Keywords:** altitudinal range, rarity, Sabah, sight-record, Sukau

I report a sighting of the Bornean Ferret Badger *Melogale everetti* in the Kinabatangan floodplains of north Borneo. Supported by another sighting in the same general area and the discovery of subfossil remains in the Niah Caves in southwestern Borneo, this extremely rare observation in the lowlands challenges known distribution of the species, which reportedly occurs between 1,070 m and 3,000 m, and is known only from Mount Kinabalu and its environs. I describe the two sightings made in the Kinabatangan floodplains and discuss possible reasons for the species' rarity in the lowlands.

*(Published in: Small Carnivore Conservation, Volume 42: 22-24, June 2010, Page 22-24)*

## **SOCIAL ORGANIZATION OF TONKIN SNUB-NOSED MONKEYS IN NORTHERN VIETNAM: ECOLOGICAL PRESSURES AND EVOLUTIONARY IMPLICATIONS.**

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**Keywords:** ecological pressures, *Rhinopithecus avunculus*, social organization, Tonkin snub-nosed monkey

The Tonkin snub-nosed monkey, *Rhinopithecus avunculus*, is an endemic, critically endangered, slender-bodied arboreal colobine, whose distribution is largely restricted to the tropical evergreen forests associated with karst limestone hills and mountains in northern Vietnam. It has been recorded at elevations between 200 to 1,200 m. The basic social unit of the Tonkin snub-nosed monkey is a one-male unit (OMU), and extra males form all-male unit (AMU). Different OMUs and AMUs frequently come together to feed, rest, and occasionally travel together, thereby exhibiting a secondary level of social organization – the band, with fission-fusion of stable OMUs. The Tonkin snub-nosed monkey is wide-ranging, and the home ranges of different units overlap completely. The former suggests widely distributed food resources, and the latter imply inter-group tolerance and the absence of defense for food resources. In 1993, a study of the Tonkin snub-nosed monkey at the Tat Ke Sector of the Na Hang Nature Reserve showed that the average size of the OMU was 17.7, and the band size was 72 (estimated 80). A latter study at the same site, carried out in 2005, observed that the average size of the OMU was 5.6, and the band size was 17 (estimated 22). This significant drop in group and band sizes could only be attributed to hunting pressures, evidenced by both primary and secondary data. Furthermore, habitat cover has in fact increased within that 13-year period and food resources are likely to have similarly increased, therefore unlikely to account for the reduced sizes.

*(Presented at: The 23rd Congress of the International Primatological Society, Kyoto, Japan, 12-18 September, 2010)*

# **SOCIAL CAPITAL IN COMMUNITY PARTICIPATION FOR LOCAL TOURISM DEVELOPMENT : A CASE STUDY OF FISHERMAN CILLAGE, SAMUI ISLAND, SOUTHERN OF THAILAND**

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**Keywords :** Community participation, social capital, Thailand, tourism development

In Thailand, as other developing countries, tourism is a sector that plays a vital role in socio-economic development for the country. Considering Samui Island, one of a famous beach destination in Thailand, tourism has significant effects on the local community. The island has faced various problems caused by inappropriate planning for rapid tourism growth. To reduce the negative impacts of tourism, a community participation approach has been applied in response to local problems and needs in tourism development with the aim of creating long term sustainability. This paper aims to explore and discuss the pattern of community participatory approach initiated by a small local community located in Samui Island called Fisherman village, one of main local tourist destination. The case study shows how community participation was conducted and organized by the local people who were acknowledged as natives and non-natives. Both qualitative and quantitative data collection and analyses were applied in this research. In the case study, there was an innovation approach of adapting the concept of community participation into diversified local conditions. Consequently, results show that social capital strongly contributed to community participation through mobilizing people for their participation in local tourism development.

*(Published in : Journal of Ritsumeikan Social Sciences and Humanities, Volume 2, Special Issue : Tourism in Asia ; Trends and Challenges, 2010, Pages 45-60)*

# **SPATIAL DISTRIBUTION OF BETA GLUCAN CONTAINING WILD MUSHROOM COMMUNITIES IN SUBTROPICAL DRY FOREST, THAILAND**

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**Keywords:** Beta Glucan; Canonical correspondence analysis; Mushroom; Spatial distribution; Subtropical dry forest; Thung Salaeng Luang National Park

In addition to their use as food, mushrooms have been gaining importance in medicinal practices. Beta glucan, known as a modulator of the immune system, is one of the bioactive compounds of interest. This study explores the relationship between environmental variables and spatial distribution of mushroom communities containing beta-glucan using Canonical Correspondence Analysis. Mushroom samples were collected for study from 125 sampling points within three sites in seven subtypes of subtropical dry forest along elevational gradients with a variety of ecosystems and climates from Thung Salaeng Luang National Park in the lower North of Thailand. Most mushrooms in the family Russulaceae, growing in deciduous dipterocarp forests and mixed deciduous forests with bamboo in the northern and the central-western parts of the park, and Polyporaceae, found in dry evergreen forests, were found to have relatively high beta glucan content. Mushroom communities could be categorized into five groups by cluster analysis using the Sorensen (Bray-Curtis) distance technique with remaining information of 75%; the groups were named according to altitude and forest type. It was found that the high beta glucan content mushroom community consisting of *Pycnoporus cinnabarinus*, *P. coccineus*, and *P. sanguineus* mostly occurred in the highland dry evergreen forest habitat. It is also shown that the occurrence of high beta glucan content mushroom communities is correlated with the specific habitat characteristics of high altitude, high crown cover percentage and high rainfall.

*(Published in: Fungal Diversity, 2010, Pages 1-14)*

# SPIN SWITCHING EFFECTS IN A FERROMAGNETIC GRAPHENE JUNCTION HAVING A SECOND GATE

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**Keywords:** Dirac equation; Ferromagnetic barrier; Graphene; Magnetic tunnel junction

The effects of the bias voltage placed on a second gate which is positioned to the left of the ferromagnetic graphene (FG) layer on the switching of the charge and spin transports in a ferromagnetic graphene junction are studied. We show that the change in the bias voltage from positive to negative (while maintaining the positive voltage on the first gate above the FG layer) can induce a switching from high to low conductance states in the junction. The voltage on the first gate is used to shift the Fermi level in the FG layer. Enhancement of the on/off conductance ratio on the switching is shown to be inversely proportional to the thickness of the second gate barrier. We show that by biasing the nanostructures with the voltage  $U_2$ , the spin polarization can be increased and that as a consequence, the thickness of the FG barrier layer needed for spin-polarized transport can be reduced.

*(Published in: Physica E: Low-Dimensional Systems and Nanostructures Volume 42, Issue 5, March 2010, Pages 1287-1292)*

# **THAI POLITICS AND ASOKE BUDDHIST ECONOMICS**

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**ABSTRACT NOT AVAILABLE**

## THAI TAXI TALISMANS

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**Key words:** Thai Culture, Thai Folk Beliefs, Talismans, Photography, Exhibition

**Objective** To organize an exhibition of my series of photographs of religious and superstitious decorations in Bangkok taxis at Silpakorn University Ta Phra Campus from 23 October – 1 November, 2010. A secondary objective was to create an exhibition catalog with reproductions of photographs, as well as an artist's statement and biographical information.

**Methods** To assemble, print, and create methods of display for selected work from a large archive of photographs taken inside Bangkok taxis. Research involved reading reference material relevant to Thai art and culture, interviewing taxi drivers, and viewing artwork with related subject matter.

**Results** The exhibition provided an opportunity to share my photographs with the public as it brought attention to an aspect of Thai culture that is sometimes underappreciated or taken for granted. The exhibition was also useful in promoting the Fine and Applied Arts Division at Mahidol University International College to others outside the university. MUIC was listed as a major sponsor on all promotional materials and it was mentioned that I teach at Mahidol in several write-ups, including a short article on CNN Go website. The exhibition also served

to promote my forthcoming book, *Thai Taxi Talismans*, to be published by River Books in 2011.

**Conclusion** I will continue to take photos inside the taxis and archive them until I finish the book in the next month and as I continue to maintain my blog, "Still Life in Moving Vehicles" which focuses on related subject matter. In the future, I'm considering using the photographs as sources for paintings. I'm also interested in making a short film or video about Thai Taxi Talismans in the near future.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# **THE APPRAISALS OF MANAGEMENT EFFICIENCY OF MAHIDOL UNIVERSITY INTERNATIONAL COLLEGE FOR THE PERIOD OF 12 YEARS SINCE BEING AUTONOMOUS ENTITY**

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**Key words:** autonomous entity or public reform, financial reports, financial ratios

**Objective:** Mahidol University International College (MUIC) is the first autonomous entity under the supervision of Mahidol University. Professor Dr. Chariya Brockelman was appointed by the Mahidol University Council to be the second director and was given the task of preparing the college to be fully autonomous in all business departments, including Finance & Accounting, Procurement, Budgeting and Human Resources. The purpose of pursuing a strategy of full autonomy for MUIC was to improve administrative efficiency. Professor Dr. Chariya managed the college for 12 years from January 1 BE. 2540 to March 31, BE. 2552. This is a qualitative research study incorporating data from 12 years of MUIC-Financial Reports, all audited by Chartered Public Accountancy in measuring the appraisals of management efficiency of Mahidol University International College for a period of 12 years since becoming an autonomous entity.

**Methods:** The financial data have been analyzed using 6 traditional accounting financial ratio analyses followed by a percentage statistical review and factor analysis over 12 years. Since there are more than 2 variations, the Principal Component Analysis (ส่วนประกอบमुखสำคัญ) was used for calculating the efficiency of the based year of management for the purpose of comparisons and statistical analysis was completed using the software, The Statistical Package for Social Science, SPSS.

**Research Results:** An analysis of the yearly efficiency of MUIC operations over the 12 years of autonomy was conducted. Since MUIC became an autonomous entity, the year BE. 2551 was the most efficient year of operation followed by BE. 2549 and BE. 2550. This was confirmed using factor analysis with scores of 58.91, 57.05, and 52.42 for the top 3 years, respectively. The higher efficiency levels are accounted for by management's ability to produce high profits (net profit to income) as well as high profit to capital levels. However, the research demonstrates that net profit to income is not the only important measure of efficiency at MUIC. A supporting reason is seen in data from the most efficient year, BE. 2551. Although BE. 2551 was the most



efficient year, there was a drop in profits of %11.99 from BE 2550 (ranked third.)

Using BE. 2551, the most efficient budget year, as a comparative milestone, the results show that BE. 2549 was the most efficient in 10 years (2541-2550) with a score of 3.17 while BE. 2550 and BE. 2548 were ranked second and third, with scores of 11.01 and 24.22, respectively. (Milestone year BE 2551 is 0, the closest figure is the best)

As an educational institute, MUIC achieved an impressive growth of income and profits over the 12 years from January 1 BE. 2540 to March 31, BE. 2552. This financial success was noticed by other Mahidol University faculties and its management systems have been widely applauded. The MUIC-Financial Reports may be used for benchmarking for other Mahidol entities considering or embracing an autonomous system and using General Accepted Accounting Principle (GAAP) in accounting records.

**Recommendations from this research:** Although there is a substantial quantitative output from financial reports, this report suggests management should not simply strategize to obtain the same financial results of the preceding years. An educational entity is a not-for-profit concern, meaning that there must be quality financial asset management coupled with a concern for quality of life of its personnel and stakeholders in an ever changing environment. A combination of these two concerns should be the best strategy.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# THE ASEAN CHARTER IN THE CONTEXT OF “NEW REGIONALISM”

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**Keywords** : ASEAN, ASEAN Charter, regionalism, New Regionalism, Institutionalism, Constructivism, Human Rights, Sovereignty

The ASEAN Charter proposed by the eminent Persons group in 2006 is seen as a progressive step forward in the deepening and evolution of ASEAN regional integration. With its signing and ratification ASEAN will attempt to transform its character to be a regional institution in form and function both within the region and internationally.

Serious reservations remain as to the competences and impact this legal document will have in particular on the ‘ASEAN way’ of interstate relations and its functional human/civic characteristics which are now a legal part of ASEAN. As national sovereignty is a fundamental feature of ASEAN relations and human rights is an abstract institutional feature of ‘modern’ interstate discourse a fundamental dichotomy has arisen in this regional grouping.

The purpose of this paper is the critique the newly ratified ASEAN Charter in terms of ASEAN’s attempt to identify itself with the wider world by means of accessing ‘new regionalism’s’ core mandates. It is the view of this writer that the ASEAN Charter is a lift document intended to keep and/or increase ASEAN’s relevance in the post Cold War world while attempting to keep its core ‘values’ intact. This critique will attempt to blend a theoretical assessment of ASEAN from an institutionalist perspective as well as constructivist to try and ascertain what embodiment the ASEAN Charter is meant to express within the context of ‘new regionalism’

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**THE BATTLE FOR WORLD WIDE WEB DOMINANCE: IN SEARCH  
OF NETWORK EXTERNALITIES**

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# **THE DEMON OF HOCHGARTEN**

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**ABSTRACT NOT AVAILABLE**

## **THE FLUTE PLAYER**

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**ABSTRACT NOT AVAILABLE**

# **THE GAME OF DISTRIBUTION**

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**ABSTRACT NOT AVAILABLE**

## **THE GLOBAL DISTRIBUTION OF BAHÁ'IS IN THE 1940s**

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**Keywords** : Baha'I statistics 1940s, institutional growth, population figures, administration, Iran, USA

This note provides a summary of information presently available on the extent and distribution of the Baha'i communities around the world during the 1940s.

I have previously provided brief notes on basic Baha'I statistics during the 1920s and 1930s. This present note continues that study into the 1940s, summarizing the information presently available. As before, I have utilized the data provided by the Baha'i World series – in this case, volume 8-11, which give lists of local spiritual assemblies and Baha'i groups and localities for 1939-40, 1943-4, 1945-6 and 1949-50. These enable us to gain some sense of the differential distribution of the Baha'i faith worldwide during the period.

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**THE INTEGRATION OF THE EUROPEAN LANGUAGE PORTFOLIO  
INTO THE FRENCH LANGUAGE COURSE IN THAILAND, THE  
CLASSROOM EXPERIENCE**

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**ABSTRACT NOT AVAILABLE**



## THE JAPAN-SIAM TRADE IN THE 17<sup>th</sup> CENTURY

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In 2008, Japan was Thailand's largest import and second largest export partner. Long-lasting strong economic ties between the two countries have been topped by the recent Japanese Thai Economic Partnership Agreement (JTEPA) of 2007 to further stimulate and expand trade. While the full implications of the JTEPA are not yet known, it has given rise to an increased interest in Japanese-Thai historical trade relations. This study examines the nature of the trade between Japan and Siam (as Thailand was formerly known) as well as its impacting factors in the 17<sup>th</sup> century when diplomatic contacts were first initiated .

In response to William van Schendel's criticism of "geographic of ignorance" in academic institutions and area studies, this study sets out to break the conventional categories of East and West, as well as East Asian and Southeast Asian Studies with across and interregional focus. Rather than adopting the traditional approach of juxtaposing a Western with an Asian country, this study deals with two Asian countries, integrating the subjects of direct trade between Japan and Siam conducted by state officials and private merchants, and indirect trade through European intermediates, i.e. the British East India Company and the Dutch East India Company.

The Japan-Siam trade was so substantial that even Europeans sought to participate. Europeans competed with each other as well as Japanese, Siamese and Chinese traders. In contrast to the British East India Company, the Dutch East India Company was able to emerge as a major player in the trade. During a brief interlude of termination of direct trade brought about by the sudden break up of diplomatic relations between Japan and Siam in the 1630s, the Dutch East India Company was crucial in keeping up the mutual demand for Japanese and Siamese goods and thus the continuation of the Japan-Siam trade.

This study argues that the Japan-Siam trade never ceased for long during the 17<sup>th</sup> century because it was welcomed by both the Japanese and Siamese elite for its delivery of luxury goods and financial profits. In Japan the trade with Siam had the additional benefit of providing a tool to disown potential dissidents of their financial means to stage rebellions by encouraging them to lavishly spend on impact items. In this vein, the Japan-Siam trade was soon tolerated again and even actively supported by Japanese authorities after the official break up of diplomatic relations. This makes Japan's "seclusion policy" (sakuko) and isolationist tendencies in the 17<sup>th</sup> century appear less forceful.

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# **THE KHRUSHCHEV TOURS OF SOUTHWAST ASIA : LESSONS FOR UNDERSTANDING COLD WAR SOVIET FOREIGN POLICY**

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In the winter of 1955-6, as the Cold War was gaining momentum and East and Southeast Asia were becoming the battleground of that war. Nikita Sergeyevich Khrushchev visited Southeast Asia. He toured cultural and industrial sites in Afghanistan, India and Burma. In 1960 as the nations of Asia were themselves from the shackles of European colonialism, Khrushchev again visited East Asia, making speeches against imperialism in Burma, Indonesia and India. From analysis of Khrushchev's tours of the region, one can gain an understanding of the Soviet premier's foreign policy. While the tours were included in Asian good will trips that emphasized Soviet relations with India. These visits are significant for determining the motives and insights of Khrushchev both for the countries they did and did not include and for the substance and results of the visits. Burma, the only country in Southeast Asia to be on the itinerary for both of Khrushchev's tours, was definitely neutral and unaligned, while Indonesia in 1960 was learning left and worrying the USA. It is also interesting that he avoided the only two nations in Southeast Asia that were Soviet allies during his tenure : i.e. Vietnam and Laos and that he did not visit South east Asian nations with the most active communist insurgencies : Thailand, Malaysia, Cambodia and the Philippines. At the times of the Asian tours, Khrushchev was perceived negatively by much of the world. His foes in the West portrayed him as a clumsy prince of darkness intent on world domination. His sometime allies in China and in Asian insurgencies caste him as a traitor to Communism and the neutral nations believed him to be weak and indecisive.

Relying on sources from the Soviet archives, U.S. State Department documents, reports from news sources of the times as well as Khrushchev's mentions, I will argue that Khrushchev, far from being either the bungling rustic that the U.S. and the West tried to paint him or the revisionist conciliator that was the images the Chinese communist Party gave him, Khrushchev was both a sincere reformer and an astute political analyst. Perceiving that the Soviet Union was not and would never be popular among Southeast Asian Communist movements outside Vietnam and Laos. Khrushchev chose to let those insurgencies look to China for aid and inspiration. Believing that his role in history was to improve the image of Communism in the West, Khrushchev used his "good-will" tours in Southeast Asia merely to demonstrate that he was neither a demon dictator nor a clumsy peasant. Further he intended to use his Asia tour to strengthen the position of the USSR in Europe. By allowing the West to believing he was putting heat on such unstable countries as Thailand and Malaysia, he turned their attention away from Germany and the Balkins.

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# **THE MODEL OF KNOWLEDGE ACQUISITION : THE STUDY OF SMEs IN THE THAI HOSPITALITY INDUSTRY**

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**Keywords:** knowledge acquisition, information technology support, social network, teamworking

The main purpose of this research was to test the model of knowledge acquisition. This study emphasized the knowledge management activities in the aspects of knowledge acquisition. In addition, the unit of analysis was the Small and Medium Enterprises (SMEs) in the hospitality industry in Thailand, providing more in-depth understanding about how SMEs acquired knowledge. There were four factors affecting knowledge acquisition, including information technology support, teamworking, social network and internal communication. The findings indicated that social network and teamworking had high influence on knowledge acquisition respectively. The suggestions and directions for the future research in the areas of knowledge management were also discussed.

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# **THE RACE TOWARDS A KNOWLEDGE BASED ECONOMY : A COMPARATIVE STUDY BETWEEN MALAYSIA AND THAILAND**

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**Keywords:** Knowledge-Based Economy, KBE, Malaysia, Thailand

This paper has attempted to study the development and growth of a knowledge based economy in two developing countries, namely Malaysia and Thailand. A summary of different economic theories states that the best theoretical grounding for a knowledge based economy is the endogenous growth theory. The conceptual framework established for statistically measuring the success of knowledge-based economy (KBE) comprise of the following variables: 1). Innovation, 2). Information and communication technology, 3). Development and 4). Business Environment. Recommended additions to the framework were proposed in this paper based on integrating the following variables: 1). Government incentives, 2). Better human capital, and 3). Institutional factors. The last section of the paper proposes policy recommendations and conclusions.

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## THE RUSSO-SIAMESE RELATIONS

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**Keywords:** History of International Relations, Imperial friendship, territorial conflicts

The long lasting russo-Siamese relationship had started since 1897 when King Chulalongkorn paid his first visit to St-Petersburg. The welcoming attitudes of Tsar Nicholas II changed the Siamese diplomatic strategy in dealing with the European expansion completely. Siam was encountering territorial conflicts with both major European powers, France and Britain. As a consequence of the 1893 Franco-Siamese War, Siam had converted into a “buffer” state. With its utter position, Siam sought ways to preserve its predominance in the region. Hence, King Chulalongkorn headed to the road he termed “modernization” which inspired him to realize that imperial friendship was necessary. Four years after the war, the Siamese King then reached his way to one of the greatest royal courts of the world, the Romanov.

The main goal of this research is to explore the origins of the relationship between the two royal courts of Russia and Siam as well as the impact of their imperial friendship. To do this, the research will be divided into three main chapters. Chapter one aims to examine records of the exchanges between the two royal courts since the first Siamese King’s visit to Russia in 1897. This includes personal promises the two leaders have exchanged i.e. records of princes who were sent off to study in Russia under the Tsar’s guardianship. Chapter two approaches the analysis of the diplomatic relations. This chapter analyses different factors that determine the friendly motives each nation had for the other. Chapter three examines the impact of the Russo-Siamese relations on the Siamese territorial conflict with France where the role of Tsar Nicholas II in this conflict will be investigated.

Through primary records from the Thailand’s National Archives, books, and journals, this research will lead to the new discoveries of the history of Russo-Siamese relations in which still remain reserved for over one-hundred and twelve years since the two great Kings met.

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# **THE RUSSO-SIAMESE RELATIONS: THE REIGN OF KING CHULALONGKORN**

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**Key words:** Imperial friendship, territorial conflicts, Russification, Siamification

**Objective:** This research has four main objectives as follow:

- (i) To explore the origin of the Russo-Siamese relations.
- (ii) To examine the impact of the Russo-Siamese diplomatic relationship on the Franco-Siamese territorial conflict.
- (iii) To discover the lasting legacy of the relationship in the process of modernisation of King Chulalongkorn's reign.

**Methods:**

- (i) Data Collection
- (ii) Textual Analysis of the primary records
- (iii) Literature Survey

**Results:**

- (i) The foundation of the great Russo-Siamese relationship is unique in its nature based on all three origins; the Czarevitch's visit to Siam, the King Chulalongkorn's visit to Russia, and finally the other personal relationships between the Siamese and Tsar Nicholas II.
- (ii) As a result of the firm establishment of the Royal friendship, Russia was acting as a mediator in the Franco-Siamese conflict.
- (iii) The modern process of Siamification is a direct heritage of the Siamese-Russo relations.

**Conclusion:**

- (i) Even though the Russian did not resolve the Siamese problem due to its many limitations, its alliance was essential to the position of Siam in an international arena.
- (ii) The Siamification was a successful program unlike the Russification.

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# **THE STUDY OF CUSTOMER SATISFACTION AND LOYALTY INTENTION OF MOTORCYCLE BRANDS IN THAILAND**

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**Key words:** Dealer retention, Loyalty Intention and Customer Satisfaction

There are three main research objectives in this study. The first objective is to identify the level of loyalty intention of motorcycle brands. Secondly, the authors examined the relationship of customer satisfaction and loyalty intention. The last objective is to determine the influence of factors affecting customer satisfaction of motorcycle brands. In this research, motorcyclists provided answers to determine customer satisfaction and loyalty intention of motorcycle's brands. 400 Samples of the motorcyclists in Bangkok were collected and analyzed. The authors used descriptive statistic, Structural Equation Modeling (SEM) as methods for data analysis.

The results proved that the study has achieved all three objectives. Firstly, the respondents showed the above average degree of agreement on the loyalty intention measures, including that they are loyal and likely to repurchase the same brand of motorcycle again in the future. Secondly, the authors discovered that customer satisfaction demonstrated positive relationship with loyalty intention. Thirdly, all factors proposed have positive relationship with customer satisfaction where brand image demonstrated the highest influence on customer satisfaction. In addition, directions for further research and implications of the study were also discussed.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

# **THE TYPES AND NATURE OF QUESTIONS VIS-À-VIS STUDENTS' TEST-TAKING SKILLS AS SIGNIFICANT INDICATORS OF SECOND LANGUAGE EXAMINEES' PERFORMANCE ON THE TOEFL-ITP READING COMPREHENSION SUB-TEST**

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**Keywords:** Word meaning variation, expanded question format, inferences

This study examined the reading performance of selected students at the Pre-College program of the Mahidol University International College (PC-MUIC) as they are required at the end of each quarter to attain a score of 520 in the TOEFL-ITP (or equivalent performance in IELTS) to enter MUIC. Specifically, this research aimed to evaluate whether the reading skills that participants in this study possessed could be linked to successful performance on the Reading Comprehension sub-test of the TOEFL-ITP. Only TOEFL-ITP Reading Comprehension Sub-test performance was considered in this study as IELTS is not taught or administered in the Pre-College program. This study made use of descriptive qualitative design relying heavily on the following instruments for data collection: Commercial-based test-prep texts (Reading Comprehension Sub-section), Schraw and Roedel's Levels of Difficulty (1992), the researcher's modification of said band, the respondents' scores per question type, tabulations of the respondents' scores based on the levels of difficulty of the items and the question types used in the test, focused interviews with the respondents, and retrospective journal entries of the researcher. With the aim to shed light on issues surrounding how second language learners' reading skills affect performance on standardized tests such as TOEFL, the study revealed the following findings:

The subjects' main difficulty was on vocabulary primarily because (1) their lexis was insufficient, and (2) they either had no or lacked knowledge of different word meanings in different contexts; second, questions in expanded format proved to be difficult as combining new ideas to form a new whole involved cognitive and meta-cognitive tasks they could not do with ease; inferential questions, generally speaking, were difficult to tackle not only because of the examinees' poor vocabulary, but also because of their limited



schema making them unable to make sense of what the texts indirectly said, and; fourth, making associations between a text and a related subject matter outside the passage was a difficulty which may be attributed to their poor world/background knowledge.

A number of suggestions that may be undertaken in exploring other language teaching-learning possibilities follow below.

1. That students need to expand their vocabulary both through explicit vocabulary instruction and sustained outside reading;
2. That students have to be taught about the “pervasiveness of contextual variation in meaning” (Nagy, n.d.) and be trained how to recognize these changes so as to raise their level of awareness;
3. That more synthesis and analysis exercises should be given to the students to develop in them the ability to put ideas together to create a sound outcome;
4. That students should be more exposed to texts with implied meanings;
5. That students should be more exposed to readings rich in world meanings aimed at deepening their world/background knowledge;
6. That another investigation looking into said area through the use of verbal protocol be done in the future to further confirm results of this study;
7. That a replicate study may be done in the future using, if possible, real TOEFL test items;
8. That should a replicate study be done in the future, it is important to note that exactly the same testing conditions be observed so as to achieve an experience closest to that of, if not the same as, the actual TOEFL exam, and;
9. That findings and Conclusions of this study should be taken as something unique to the experience of the research participants and not an absolute representation of the entire PC population or of the MUIC students taking TOEFL as part of the university’s admission requirements.

*(Presented at: The 7<sup>th</sup> conference of the International test commission, 19-21 July 2010, Hong Kong)*

# THEORY OF LARGE TUNNELING MAGNETORESISTANCE IN A GAPPED GRAPHENE-BASED FERROMAGNETIC SUPERCONDUCTOR F/(FS) JUNCTION

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**Keywords:** Ferromagnetic superconductor; Gapped graphene; Massive Dirac electron; Spintronics; Switching effect; Tunneling magnetoresistance

Coexistence of superconductivity and ferromagnetism in a gapped graphene-based system (FS) is theoretically investigated. The center-of-mass momentum,  $P$ , of a Cooper pair in FS is found to be  $P \sim 2 E_{\text{ex}} / \hbar v_F \sqrt{1 - (m / E_{\text{FS}})^2}$ , where  $m$ ,  $E_{\text{ex}}$ ,  $E_{\text{FS}}$  are the rest mass energy of the Dirac electron, exchange energy and the Fermi energy in the superconductor FS, respectively. It is unlike the nature in a conventional FFLO state where  $P \sim 2 E_{\text{ex}} / \hbar v_F$ . This work studies the magneto effect on the transport property of a F/(FS) junction where F is a ferromagnetic gapless graphene. In this work, FS is achieved by depositing a conventional ferromagnetic s-wave superconductor on the top of gapped graphene sheet. The Zeeman splitting in FS induces spin-dependent Andreev resonance. The conductances effected by both spin-dependent specular Andreev reflections and spin-dependent Andreev resonances are investigated. The interplay between the spin-dependent specular Andreev reflection in the F region and the spin-dependent Andreev resonance in the FS region causes a very large tunneling magnetoresistance  $|\text{TMR}| \sim 3000\%$  for  $m \rightarrow E_{\text{FS}}$ , possibly valuable in the graphene-based spintronic devices. This is because of the coexistence of the superconductivity and ferromagnetism in FS and the relativistic nature of electrons in graphene.

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## **TOLERANCE AND ACCUMULATION OF LEAD IN VETIVERIA ZIZANIODES AND ITS EFFECT ON OIL PRODUCTION**

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**Keywords:** Lead, Tolerance, Accumulation, Vetiveria Zizanioides, Vetiver oil

Experiments were conducted to evaluate lead tolerance and accumulation in vetiver grass *Vetiveria zizanioides* (L.), grown in hydroponics and a pot study and to examine the effect of lead on vetiver oil production. Elevated concentrations of lead decreased the length of shoots and roots of plants. However, vetiver grown in highly contaminated soils showed no apparent phytotoxicity symptoms. Lead concentrations in the shoots and roots of vetiver plants grown in hydroponics were up to 144 and 19530 mg kg and those grown in soil were 38 and 629 mg kg, respectively. Lead had an effect on vetiver oil production and composition by stimulating oil yield and the number of its constituents. Oil yield ranged from 0.4-1.3% ; the highest yields were found in plants grown in nutrient solution with 100 mg Pb l<sup>-1</sup> for 5 weeks (1.29%) and 7 weeks (1.22%). The number of total constituents of vetiver oil also varied between 47-143 compounds when lead was present in the growth medium. The highest number (143) was found in plants grown in soil spiked with 1000 mg Pb kg<sup>-1</sup>. The predominant compound was khusimol (10.7-18.1%) followed by (E) – isovalencenol (10.3-15.6%). Our results indicated that lead could increase the oil production of vetiver.

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## **TOXOPLASMA GONDII: SIMPLE DUPLEX RT-PCR ASSAY FOR DETECTING SAG1 AND BAG1 GENES DURING STAGE CONVERSION IN IMMUNOSUPPRESSED MICE**

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**Keywords:** Duplex RT-PCR; Mice; Stage conversion; Toxoplasma gondii

Toxoplasmic encephalitis (TE) is caused by reactivation of dormant bradyzoites into rapidly dividing tachyzoites of the apicomplexan parasite *Toxoplasma gondii* in immune-compromised hosts. Diagnosis of this life-threatening disease is complicated, since it is difficult to distinguish between these two stages. It is, therefore, mainly based on a test positive for *T. gondii* antibodies, and specific clinical symptoms. We developed a duplex RT-PCR to detect the expression of bradyzoite (BAG1) and tachyzoite (SAG1) specific genes simultaneously during tachyzoite/bradyzoite stage conversion. The conversion reaction was observed in many organs of experimental mice, indicated by tachyzoites in the cerebrum, cerebellum, heart and lung, beginning in week 1 after the suppression period, and continuing until the end. Bradyzoites were also detected in nearly all organs throughout the study, suggesting that during the reactivation period, bradyzoites not only escape from cysts and reinvade neighboring cells as tachyzoites, but are also driven into developing new bradyzoites. The results of our study show that duplex RT-PCR is an easy, rapid, sensitive, and reproducible method, which is particularly valuable when numerous samples must be analyzed. This technique may usefully serve as an alternate tool for diagnosing TE in severely immunocompromised patients.

*(Published in: Experimental Parasitology, Volume 124, Issue 2, February 2010, Pages 225-231)*

## **TRANSPLACENTAL TRANSMISSION IN CATTLE: IS TOXOPLASMA GONDII LESS POTENT THAN NEOSPORA CANINUM?**

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We compared the transplacental-transmission ability of *Toxoplasma gondii* and *Neospora caninum* in cattle. One uninfected pregnant heifer served as control, while three were inoculated with *N. caninum* K9WA strain and four with *T. gondii* RH strain at their midgestational period. Both infected groups showed clinical signs and antibodies either to *N. caninum* or *T. gondii*, while the control animal was normal. Two (50%) *Toxoplasma* dams aborted on days 6 and 11 postinoculation. *T. gondii* tachyzoites were found in various organs of those dams that had abortions but not in their fetuses. Two *Neospora* dams did not abort but gave birth to subclinically infected calves. The remaining two *Toxoplasma* dams and one from *Neospora* group became recumbent. Those two dams and their fetuses showed disseminated *Toxoplasma* DNA, but no *Neospora* DNA was found. Our findings suggest that maternal toxoplasmosis could be a cause of abortion and congenital toxoplasmosis in cattle, especially when they are infected by virulent strains.

*(Published in: Parasitology Research, 2010, Pages 1-7)*

# UTILIZATION OF AGRICULTURAL AND OFFICE WASTES FOR THE PRODUCTION OF EDIBLE MUSHROOMS

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**Key words:** Oyster mushroom, biological efficiency, waste, cultivation

**Objective:** Analyze the suitability of weed plants, common agricultural and paper wastes for growing mushrooms.

**Methods:** Traditional cultivation techniques supplemented with newer technologies were used. The most prevalent method in Thailand uses plastic bags stuffed with prepared substrate that is then sterilized using steam. This method has distinct advantages, but improvements were made during the processes of inoculation, substrate formulation and fruiting. The main indicator of this will be biological efficiency (BE) measured as mass of mushrooms produced for a given mass of substrate (e.g. grams mushrooms/kg of substrate).

**Results:** When oyster mushrooms are grown on water hyacinth, the biological efficiency varies from 35 to 80%. Supplementation/augmentation of substrate with shredded office paper waste and rice straw also has benefits for biological efficiency.

**Conclusion:** The main factor to consider during the cultivation of oyster mushrooms on water hyacinth is the initial moisture content of the substrate. This dramatically effects biological efficiency. Modifications to traditional methods such as larger amounts of inoculum also showed benefits.

*(Presented at: the 2010 Research Seminar, 21 January 2010, Mahidol University International College, Thailand)*

## **WATER FESTIVALS OF THAILAND: THE INDIAN CONNECTION**

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**Keywords:** Songkran, Loy Krathong, Kartik, Kartik Purnima, Sankranti

The common heritage Indians and the Thais share are on religious, cultural, social and language level. This sharing of culture can be very well seen in festivals celebrated in Thailand. The most important festivals in Thailand are Loy Krathong and Songkran festivals which are linked to the Indian festivals. Thais celebrate Loy Krathong on the full moon in November and respect the river by floating the banana leaf cups into it and ask for forgiveness from the River Goddess Ganges. River Ganges has no connection with Thailand but still is respected by Thais on this day. It is related to the Indian festival of Kartik Purnima which gets its name from the month of Kartik (November-December). On this day people will bathe in sacred rivers as the beliefs are that Gods descend of earth and reside in the holy rivers that flow naturally for healthy growth and spiritual grace.

Songkran word derived from the Sanskrit word “Sankranti” which is a Thai New Year that falls on 13<sup>th</sup>-14<sup>th</sup> of April every year. It portrays the typical ways of life of the people which are involved in the agricultural aspects in India as well as Thailand. Both the festivals are celebrated in India and Thailand with different names but with the same purpose somehow and are related to water. My paper deals with the cultural religious connection of such festivals of Thailand with India.

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## WHO'S THE BOSS? CULTURE AND THE PROBLEM OF TRANSFER

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**Keywords:** Transfer of Learning, Learner Agency, Personal Epistemology, Culture, Higher Education

Transfer of learning, although arguably education's most important goal, is also its most pervasive problem. Research confirms one of the classroom teacher's most common complaints: that learners do not transfer what they have learnt in one subject to another, or fail to use what they have learnt in the school setting in the "real world." There may be many reasons for this – one being that transfer is often left to take care of itself. To counter this, cognitive-based strategies, such as "hugging" and "bridging," suggest that educators pay active attention to both structural and instructional elements in order to effect transfer: educators, can, for example, draw learners' attention to extra-contextual opportunities to use their learning, or coach them to develop the thinking skills that allow the abstraction of transferrable principles.

Conceptualizations such as these, however, do not go far enough. Because these interventions rely on the instructor, the sought-after transfer may not occur once the learner is removed from the context and is required to act independently. What is preferred is a self-motivated, autonomous, mastery-oriented learner – one who will actively seek opportunities using his or her skills or knowledge in new contexts. Such a learner, however, will only develop if cultural conditions so allow.

This discussion explores the link between culture, learner agency, and transfer of learning. In so doing, it examines practical cultural concerns, particularly in a Thai context, that may help or hinder transfer of learning.

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