Second Asia-Pacific Conference on Multidisciplinary Research 2017

(APMR2017)

Colombo, Sri Lanka
29 - 30 July 2017

Abstracts of Second Asia-Pacific Conference on Multidisciplinary Research 2017

2017
Unique Conferences Canada Publication
Toronto, Canada
Published by

Unique Conferences Canada

Unique Conferences Canada
Suite 2201, 250 Young Street,
Toronto ON M5B 2L7
Canada

info@uniqueca.com
http://www.uniqueca.com

Printed in Sri Lanka
July 2017


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Second Asia-Pacific Conference on Multidisciplinary Research 2017

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Philosophy and Religion:
The Importance of Philosophy of Religion

Prof. Tennyson Samraj
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Canada

In an age where we live believing or disbelieving in God, we discover that those who live believing in God, live converting others to their faith or live fighting with others who are not in their faith. We find it difficult to live in peace with fellow believers who don’t believe or behave like us. We don’t seem to marvel on why we believe in God and enjoy living an authentic life. In this paper an attempt is made to define the relationship between philosophy and religion by providing the basis for philosophy of religion. Philosophy of religion helps us understand what the believer (who believes) must know about their beliefs in relation to God. While religious claims are focused on ontological concerns, philosophy is focused on the questions that necessitates such concerns. In religion, answers are many and understood as being true or false. In philosophy the questions are considered as either being relevant or irrelevant; common, or universal. Philosophy distinguishes religion both as an epistemic ontological matter, and an epistemic existential matter. Here are some insights the believer should know about beliefs related to God: First, God like Gold is definable but God unlike gold is not identifiable. So it becomes imperative to go back to the question “why is there something instead nothing” (Leibnitz)? This is the basis for all religions. Second, we must believe that no one has monopoly over religious truth—in that, the gap between what we know and what there is to know is so immense—that it can be a formula for humility. Thirdly, we must note that the believer is not one who defines what truth is but is a witness to what truth does in their life. So it does not matter whether “truth transcends the text” but what matters is what transforms the believer. Religion is not about what truth is but about what truth does. What philosophy does is to put perspective of religious claims in the context of everything else. All answers we claim to have are answers to questions. We can have questions without answers but we cannot have answers without questions. Answers are different, definitive, and divisive. Questions are common and universal—they are either relevant or irrelevant. Questions determine the relevance of the answers, and answers without questions are irrelevant.

Key Words: Religion, Philosophy, Questions and Leibnitz
Hydrogen and its Role in Renewable Energy

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Due to world population growth, growing industrial development, improvements in living standards, emerging technologies (such as electric vehicles) and the growth in domestic and industrial use of modern equipment, the current growing trend in electricity demand and consumption will continue long into the future. The management of electrical energy supply to meet the growing demand without contributing more to the green-house gas problem is a major task. At the same time city-pollution due to transport is a major problem. To reduce green-house gases, more and more renewable sources of electrical energy are being added to networks. These new sources of supplies can be intermittent and variable. The availability of wind for example is very variable. Solar energy is available during the day time subjected to sun shine but it is not available during the night. Usually peak demand of electricity for industrial customers is during the day time and the peak demand for domestic customers is during early evenings. Growth and sustainability of future renewable energies therefore requires the management of electricity networks using smart grid technologies. It also requires options to store energy and regenerate during demand periods. On small scale, options are required to have self-contained integrated systems to store energy. Hydrogen in this context is considered to be the clean fuel of the future which does not contribute to greenhouse gases. Moreover hydrogen has been recognised as a possible energy storage medium. Excess electricity from wind and solar could be converted to hydrogen by electrolysis. Depending on the application, hydrogen could be stored using various techniques. In this lecture the role of hydrogen in the context of renewable energy is explained and the methods of hydrogen storage options are discussed. Properties of Hydrogen as a fuel is further explained and advantages and disadvantages of hydrogen are also explained. Research undertaken into hydrogen storage systems, combustion and safety aspects of hydrogen are further highlighted.
DESIGN TRADITIONS WITH REFERENCE TO SRILANKAN CONTEXT

Archt. (Prof.) Nimal De Silva
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Design is a creative plan made to fulfil a purpose. Throughout the Sri Lankan history, which goes back to a period of more than 2500 years, functional designs have been created with supreme aesthetic quality, to bring joy to the human kind. The scope has extended from designing cities, buildings, sculpture, jewellery and to ear picks. All designs of the Singhala civilisations has responded and inspired by the nature, guided by a religio-cultural back ground bringing a unique identity.

In the tradition designers were the Artisans and knowledge was transferred with in the family and in addition the expert masters have documented the knowledge in sliper texts, in Architecture and Sculpture the oldest is the Manjusri Bashitha Vasthuvidya Sastra-Chtta Karma Sastre written in the 5rh Century. In jewellery, furniture, weapons, and coins etc. the Vijayantha Tantra written in 9th Century, Chandrakula Malaya for flags written in 16th Century. All decorative components irrespective of the material used have depicted graphic representations of floral, animal and geometrical motifs. The prevailing tradition was that every item designed and made for specific or general use were decorated with carvings, mouldings and painting and this is followed from Royal Crown to kitchen utensil. Designs have graciously involved with time, with changing demand, inspirations and aspirations of the people, changing technology and the influences that the designers were faced with.
A critical literature review on entrepreneurial traits and business performance: Citation and thematic analyses with a conceptual model

Chandi Wijayasinghe

Doctor of Business Administration (DBA) programme, Faculty of Graduate Studies, University of Kelaniya, Sri Lanka

The relationship between the entrepreneurial traits (entrepreneurial orientation, entrepreneurial skills and entrepreneurial experience) and business performance had a considerable scholarly attention in the literature, and most of the scholars have found a strong relationship between the said variables. Thus, a growing number of researches had considered entrepreneurial traits as a powerful tool for business performances. However, substantial portion of researches had mainly focused on entrepreneurial orientation rather than entrepreneurial skills and entrepreneurial experience. In addition to the aforementioned variables, the author has found the mediating effect of the entrepreneurial intention, in-between the entrepreneurial attributes (orientation, skills, experiences) and business performance. It has been found that different thoughts being empirically developed on entrepreneurial traits and business performance. The research papers published between 1996 and 2016 have been considered for the study. The purpose of this paper is to show the real picture of the relationships of entrepreneurial traits and business performance. The review basically consists of two main aspects. Firstly, it reviews literature by means of a citation analysis and the main dimensions are categorized accordingly. Secondly, a thematic analysis is carried out to explore the identical themes within each category. Empirical evidence of entrepreneurial attributes and business performance, under the Sri Lankan context is inadequate and such researches are notably absent. Therefore, there is a valid reason to study the effect of the entrepreneurial traits of the Sri Lankan entrepreneurs and it will definitely contribute filling the research gap in the literature.

Key words: Entrepreneurial Orientation, Entrepreneurial skills, Entrepreneurial experiences, Entrepreneurial intention, Business performance

A design research on doodle arts to develop a commercial collection of prints for Autumn/Winter 2017(With special reference on men’s sporty casual wear for Alexander Macqueen brand)

Himasha Gunasekara, Ranga Senavirathne

The Open University, Sri Lanka

Designing is a combination of science and art and fashion is one of the main and foremost industries in the world that is having higher demand of both aesthetic and economical value. The intention of this research is to develop a commercial collection of prints viable for modern world inspiring from the ancient cave doodle arts. In the contemporary market the prints for the segment of men’s sporty casual wear are restricted into a limited frame. Through this design research it has taken into a new arena with innovative shapes, forms, structures and colour combinations. This design research has been strengthened by a market research and trend research in terms of identifying a suitable consumer segment and to be align with the trend. The research started with the concept development following various design methodologies such as sketching, repeating, overlapping, collaging, rotating, scaling up, scaling down, abstracting, juxtaposition, deconstruction etc. The second step was to carry out design developments where the abstract printing ideas derived from doodle arts were developed as a commercial collection of prints by experimenting on sporty casual wear silhouettes. Finally, the range was developed with five selected prints for six silhouettes. The amalgamation of creative pattern cutting with engineered prints is the uniqueness of this collection.

Key words: Doodle arts, Concept, Engineered prints,
A Numerical study on flow and heat transfer between two rotating spheres

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An analysis of the velocity, pressure and temperature fields of a two-dimensional viscous flow of an incompressible fluid in an annular region of two concentric spheres rotating with different angular velocities about a common axis was performed in the work. The analysis was also extended considering connective flow maintained at different temperature levels and further the flow in the annular region in concentric and eccentric spheres were studied. The Navier-Stokes equations were solved employing finite element Method. The results of numerical simulations were presented and subsequently validated with the theoretical derivation. Further, the behaviour of the streamlines in the presence of blowing and suction in the boundary was studied and extensive analysis on the relationship of variables in diverse circumstance was carried out. Moreover, we studied the heat transfer systems as inner sphere was kept cool and outer sphere was hot. The results indicate the Porous velocity, Turbulent velocity against the Reynolds number and with the eccentricity.

Keywords: Connective flow, Navier Stokes equation, incompressible flow

A study of Ancient Embroidery Craft of Sri Lanka in Relation to Colombo National Museum

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Sri Lanka was a country with full of craftsmanship. Buddhist culture was the chief inspiration for the fine arts and crafts of Sri Lanka, and the ornamentation on textiles and clothes was mostly inspired by ancient crafts and arts. During the 20th century the ornamentation on clothes was transformed due to colonialism, and then the introduction of the open economy after 1980s. The introduction of the sewing machine was a turning point in textile embroidery. However, ancient embroidery techniques are almost unknown and little researched area when compared to other craftsmanship of Sri Lanka. The Colombo National Museum is one of the places, which conserved most of the ancient samples of embroidery of Sri Lanka. This study was based on qualitative research method under grounded theory and the objective was to identify different embroidery techniques of ancient Sri Lanka. This study only focused on and observed embroidered female clothing samples at Colombo National Museum. In ancient time, the difference between the lower and upper classes could be recognized through the colour of yarn, quantity and the quality of embroidery on the dress, because it dignified the social status of the wearer.

Keywords: Sri Lanka, Embroidery, Colombo National Museum
A SYSTEMATIC LITERATURE REVIEW ON EMOTIONAL INTELLIGENCE AND ENTREPRENEURIAL SUCCESS

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Many researchers have tried to unlock the secrets of successful entrepreneurs, explore their cognitive processing, their personality types often with contradictory results. However, research has shown that individuals with greater emotional intelligence are better able to appraise, manage and regulate not only their emotions but also of others. Such abilities allow these individuals to judge if the emotions are linked to opportunities, thus use these emotions in the process of decision making that enhance high performance. Hence, it is important to study the effect of emotional intelligence on entrepreneurial success. The purpose of this study is to collect the current knowledge in the fields of entrepreneurial success, emotional intelligence and its applications related to entrepreneurial success and to carry out a review of the literature.

For this purpose the papers are selected by carrying out a citation analysis in order to select most influential research articles. 23 such papers are selected out of 106 articles screened out. Citation analysis categorized 03 main research areas of entrepreneurial success. Secondly, a thematic analysis is carried out to identify the specific themes being researched within the each category. Out of 3 main categories, there are 44 sub categories are recognized as themes. These sub categories are the findings of the literature review and they are the success factors of entrepreneurship. Literature survey also reveals that there is a relationship between emotional intelligence and success factors of entrepreneurship.

Keywords: Entrepreneurial success. Emotional Intelligence. Literature review. Citation Analysis. Thematic Analysis.

A systematic Literature review on Intrapreneurship and Organizational performance

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Researches on entrepreneurship become a growing field of interest during past decades. However the significance of this stocks lacks systematization and categorization. Therefore it is needed collecting current stock of knowledge in this field. The paper present systematic literature review of intrapreneurship development related to organization, individual and contextual complexities. Emerge of Intrapreneurship in the organization foster the process innovation and organizational growth. Entrepreneurial environment in organization is an important factor nowadays for the development and sustainability of nascent small and medium scale organizations. The purpose and contribution of this paper is to depict a clear picture of sub elements in complexities and explore novel areas for research by using the methods of citation and thematic analysis. Citation analysis explore the categories of main dynamic areas of attraction of researchers. Thematic analysis identifies the specific themes being researched within each category. There are five categories of complexities in this paper and sixth category is with new research cannot be classified into five areas. A number of gaps can be identified throughout the analysis that would postulate new research on development of intrapreneurship.

Keyword - Entrepreneurship, Corporate Entrepreneur, Organizational growth.
A systematic review on compliance behavior of entrepreneurs: A research Synthesis

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The advancement of digital technologies has created enterprises to scale up their businesses operation across borders. Even though digitalization brings huge benefits to economies in transacting via cyberspace it resulted artificially reduce the taxable income or shift their profits to low-tax jurisdictions in which little or no economic activity is performed. A growing number of research identified various factors influence for such behavior. However, there is a lack of systematization of the factors which influence in compliance decision. Therefore, the purpose of this paper is to summarize and review extant literature concerning the factors which influence in compliance decision. A total number of 150 papers published on the topic of tax compliance during 2012 – 2017 have been analyzed using citation analysis and thematic analysis. Existing literature provides a framework for understanding the influence of economic & psychological factors and social norms on compliance decision. We suggest a partial improvement of the existing literature by incorporating another important external factor - culture and technological changes for the compliance decision. Findings of this review enables to synthesize this topic so as to help researchers find those gaps and consider promising future directions for further study.

Keywords: Compliance Behavior, Compliance determinants, Technological dimension, Base Erosion, Citation Analysis, Thematic Analysis.

Africa-Asia Cooperation and the Quest for Global Economic Justice: Conceptual Concerns and Alternatives

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Since South-South relations have thus noticeably grown in recent years, it is important that a framework for studying these relations be developed, and this framework must include an awareness of the significance of the international system in its entirety. While there is indeed potential for Africa-Asia cooperation in all the areas hitherto proffered by politicians, diplomats, economists and policy analysts, the overarching theme of this paper is that not every problem in the global South can be solved all at once. Drawing on learned African-Asian cooperation initiatives, this paper advocates that the issues affecting developing countries need to be analysed, prioritised and strategic outcomes defined, at a gradualist or minimalist pace. In sum, this paper is a modest contribution to the discourse on how Africa-Asia linkages can foster inclusive and more equitable development, and help to shift developing countries onto new paths of global economic justice and development.

Keywords: South-South cooperation; Africa-Asia cooperation; global economic justice.
An Asia-Friendly Curricular Model of Bi/ Multilingual Education and CLIL (Content and Language Integrated Learning)

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Sri Lankan Bilingual Education has its recent history since 2002. Yet it has a lengthy local history since the 3rd BC. This paper intends to present an academic product developed out of the research conducted on BE in 2007 and 2010. According to these researches, the need for a BE curricular model was a must in the system of education. Consequently the model called A (5Cs + S) (Asoka, 2012) was developed. This combines competence based curriculum development with CLIL dominated BE. The major linguistic feature emphasized by this is the importance of language-use ‘across’ (as media) and ‘in’ (as subjects) the curriculum. Knowledge production which is one component of the competence development is shown in this model as an integrative effort of content (syllabi), communication in minimum two languages, cognition, community and culture: these are the five ‘C’s involved in the model. ‘S’ stands for skills and ‘A’ does for right attitudes. The model emphasizes the need for both formal and tacit knowledge necessary for performing skills of day-to-day living. It has also given a special place to attitudes with the opportunity for multiplying value of both knowledge and skills of people to apply them addressing ethics in line with culturally specific norms and universally accepted values.

Key terms: Bilingual education, BE curricular model, CLIL

An Effective Approach to Compress 2 Dimensional DICOM Human Brain Images

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Medical image processing has become a major sub area in digital image processing which has a wide range of applications in which image compression has become a core sub area of medical image processing due to the wide and frequent usage of medical images all over the world. The high quality of the images are very important for diagnosis and on the other hand, they require huge memory, bandwidth and storage space for processing, transmission and archival in digital form. This research presents an approach which compresses 2D human brain images which are in DICOM format in a hybrid manner using both lossy and lossless methods. This approach basically depends on the wavelet transformation where the regions which are clinically very important can be compressed in lossy manner while others are compressed in a visually lossless manner using the Huffman coding algorithm. Results indicate that compression of large images tend to show better compression ratio than the small sized images. The best compression ratio achieved using the proposed algorithm is 0.84 for grey scaled 2D DICOM images. Resultant compressed image and header data can be stored or transmitted through a computer network effectively to another destination for retrieval.
An Exploration of Modern Supernaturalism in Stephanie Meyer’s Twilight

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Supernatural is an ever present force in literature. It colors our poetry, epic and dramas. In modern fiction one can notice a great coverage of supernaturalism with wide variety of elements. In the modern scenario Stephanie Meyer brought a different viewpoint to the traditional approach of Supernaturalism. This paper will look at Meyer’s work as an example of Modern Supernaturalism. It is well known Vampires have always been a popular element in literature. From books like Polidori’s The Vampyre and cult shows like Buffy The Vampire Slayer, we have moved towards Meyer’s Twilight. The book is not a vampire novel in the traditional sense of term but rather a novel that draws on different genres. In fact the book represents a new sort of vampire fiction where vampires and humans interact in an entirely different manner. The book comes out as a fantastic and beguiling mix of fairy tales, vampire fiction and gothic genre. First published in the year 2005, Twilight brings forward a perennially enthralling subject of Modern Supernaturalism with the young romance of a human girl and a Vampire boy. The paper will also focus on the elements in Twilight that appeal to teenagers especially young girls and how it reached world wide popularity.

Key Words- Modern Supernaturalism, Vampire Fiction and Twilight

An Exploration of Services Branding

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In the field of marketing the branding is achieving in a saliently to attract the consumers demand to purchase the goods at higher value. But the manufacturers and researchers who explored the characteristic of branding had paid less concentration on services branding than physical goods. Technologically products can be manufactured in a standardize process rather than services. When elaborating the characteristic of services branding it will be differentiated from person to the person who involve for supplying services. Basically the services are inseparable, intangible, impossible to demonstrate or present a sample and unable to store. Hence the services are considerably personalized to meet an individual consumer’s requirements. The most effective services are being supplied with experiences or knowledge of consumer’s appreciation. The services branding should be scrutinized to standardize and identify the innovative strategies by this research. Accordingly how do the services brands perceived by consumers? And what are the elements which determine the consumers’ preference on services brands? How do the services brand associated for the type of services to influence the consumers preference? Questions will be searched. The literature review on services brand preference will be developed theoretically and empirically for the benefit of stakeholders. The relationship between services brand awareness, preference and association will be analyzed by multi methodologically to make them significant universally.

Key words: Salient, intangible, Scrutinized.
Analysis of Bio Methane production from food waste as a long term renewable energy option

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The rapid depletion of non-renewable energy resources and the threat of global climate change have forced the energy sector to seek alternative sources of energy to produce energy while preserving the environment. Bio methane is one of the best alternative energy source that has great potential for efficient energy production at an acceptable cost. So far, large scale production of bio methane has been neglected in comparative studies that focus on long term renewable options. Bio methane can be used to produce electricity and heat, and also be used as a fuel. It is produced from organic waste (dead animals and plant materials), wastewater, manure, sludge, etc. The purpose of this article is to analyze the Bio methane potential of food waste with respect to the characteristics of the equivalent food waste samples. Parameters such as Total solids (TS), Volatile Solids (VS), Total Ammonium Nitrogen (TAN) and Total Chloride content were determined in order to recognize the correlation between Biological Methane potential with the each parameter of food waste samples.

Keywords: Bio methane, Food waste, Renewable energy

Antique Culture and Advancing Women

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Githa Hariharan’s novels are examples of social realities. Her first novel The Thousand Faces of Night is such a novel which talks about the clash between three generations of women and the culture which prohibits them by not letting them to pursue their dreams. It is mandatory for a woman to submit herself in the hands of patriarchy to make her family happy. In the name of culture and tradition a woman’s role as an ideal daughter, wife, mother is assigned only in relation to others. Her own self stays in the state of dilemma when she enters into the institution of marriage. Devi, the chief protagonist of this novel also faces the same problem and walks out of the house as an act of prohibition returns to her mother Sita, rejecting the man-made structure of patriarchal culture to become independent than being an ideal housewife. Githa Hariharan sensitively portrays the tension of Indian women caught between tradition and modernity through her gallery of women characters in which one set of women submit themselves in the hands of patriarchy and another set which questions it.

Keywords: Women, Tradition, Modernity

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Medical practitioners owe a comprehensive duty of care towards patients and they should exercise reasonable care when diagnosing, advising and treating the patient. In accordance with the principles introduced in Bolam case in UK, duty of care must be judged according to the prevailing behaviour and the medical opinion at the time when the incident occurred. Accordingly, the doctor is not liable, if he has acted in accordance with the practice accepted by peer professionals. On the other hand, the doctrine of informed consent acknowledges that doctor needs to disclose all inherent risks to the patient to make an intelligent choice. There is a dichotomy in the above two models. However, Montgomery case in UK came up with a new principle saying that, prudent patient standard in lieu of professional judgement is now the yardstick of duty of care. The main objective of this paper is to examine and evaluate the evolution and changing nature of the healthcare law in the field of negligence and its underlying principles. This research uses the black letter approach and international comparative legal research methodology. Finally, the paper highlights the requirement of using the prudent patient yard stick to vindicate patient’s rights in Sri Lanka.

Keywords: medical negligence, evolution, patient’s rights

COMPARATIVE ANALYSIS OF GENERAL NUTRITIONAL COMPOSITION OF SELECTED GRAINS GROWN IN NORTHERN PROVINCE OF SRI LANKA

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Selected seventeen grains were collected from various locations of Northern Province of Sri Lanka, analyzed and calculated for proximate nutritional composition by the Association of Analytical Chemist (AOAC) at the Department of Botany, University of Jaffna and compared the general nutrient composition. Five replicates of each grain were used for each analysis. Percentage of Moisture, Ash, Fat, Protein and Carbohydrate contents of grains were analyzed by analysis of variance (ANOVA) (P < 0.05) followed by LSD. ANOVA indicated that there were significant differences between nutritional compositions of selected grains. Grains have moisture contents varied from 3.6998% to 14.423%, ash contents varied from 0.6602% to 5.5214%, fat contents varied from 2.7954% to 52.934%, protein contents varied from 7.438% to 48.47%, and carbohydrate contents varied from 12.389% to 68.578%. Black gram has the highest moisture content (14.423%) Sesame has least moisture content (3.6998%). Soya has the highest ash (5.5214%), while Barley has the least (0.6602%).Sesame has the highest fat content (52.934%), Beans has the least fat (2.7954%). Soya has a very high protein content of 48.47% as against Kodo millet which has the least protein content of 7.438%. Among all the samples, Soya possesses some desirable nutritional attributes than other grains with respect lower fat (9.23) and carbohydrate and greater protein (48.47%). Ground nut and Sesame cannot be considered as a good source of food as those contain higher content of fat (50.76 and 52.93 respectively).

Key words: grains, nutritional composition, protein
Cost Benefit Study of Household Energy Transition for BIMARU States

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Energy is a crucial element for development and plays a key role in poverty eradication and in advancing the welfare of mankind by driving investments in health, education, water supply and industrialization. However, we cannot rely on traditional carbon intensive fuels to push for economic growth as they are not only finite in quantity but the effects have been disastrous for the environment. In this context, Energy transition attracts global attention today. Energy transition to modern and clean fuels calls for attention to the factors of affordability, availability and accessibility. Despite significant efforts by many nations on these dimensions, energy transition still remains incomplete due to various challenges and obstacles. Our paper aims at studying the Indian context through use of econometric techniques and quantify the benefits that accrue due to shift to clean energy. The results from the analyses indicate that using clean energy sources allow people to save more. They are relevant with the findings from previous literature and strengthen some of the arguments made in earlier studies. The findings from saving and cost-benefit analysis can be buttressed as an argument for enabling switch to cleaner fuels. All options for the energy transitions would yield gains for the people equivalent to at least 4% of Indian GDP in 2015. Thus, the quantified savings and gains that this paper yield can be used to recommend policies to accelerate the energy transition.

Keywords: Energy transition, econometric analysis, cost benefit analysis, Mortality, Morbidity

Deconstruction the Tradition: An Analysis of Irrigation Management Transfer (Special Reference to the Muruthawa Village in Kurunagala District, Sri Lanka)

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Community participation in the irrigation management to the agriculture sector has been practicing in Sri Lanka since ancient time. This system changed after the colonial administrative structure. The main objective of this study is, to examine the nature of traditional irrigation water management system and its’ transformation after the construction of large scale development project/s in the Sri Lankan context. This study was conducted within the Muruthawa village in Kurunagala District, North Western province, Sri Lanka. The problem of this study is ‘why irrigation management has been transferring and does Sri Lanka has a unique irrigation management policy. This is a qualitative research with sociological perspective in nature. Hence, Case studies, In-depth interviews, and Observations as well as Archival study method were used for the collecting data. According to the analysis, it was reviled that, the Cascade water management system prevailed in the area has been turned upside down and stagnation of water is reduced within the area. After the introduced a large irrigation project, many outsiders have settled in the area. As a result of this, new landowners have emerged and land tenure system which prevailed in the village has been changed. Under this condition, many traditional villagers has become as share cultivators. Similarly, solidarity among the villagers also changed.

Key Words: Water Management, Irrigation Management Transfer (IMT), Agriculture
Difference of Entrepreneurial Orientation in terms of Entrepreneurial Motivation

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Entrepreneurial Orientation (EO) is defined as processes, structures, and/or behaviors that can be described as aggressive, innovative, proactive, risk taking or autonomy. Entrepreneurs are motivated by both “push” and “pull” forces. This study expects to analyse the difference of EO in terms of entrepreneurial motivation. Thus, the five level of EO dimensions were empirically evaluated with 50 Small and Medium scale Enterprise (SME) owner managers. A self-developed questionnaire was used to collect primary data.

In findings, evidence significantly support for conclude that there is no difference of EO in terms of entrepreneurial motivation. Further, findings conclude that majority of SMEs owner managers in Badulla Secretariat area have motivated with push factors to become entrepreneurs.

Keywords - Entrepreneurial Orientation, Entrepreneurial Motivation, SMEs Owner Managers

Differentiation of Pectobacterium carotovorum isolates from selected crops grown in different geographical areas of Sri Lanka and determination of their host range

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Bacterial soft rot caused by Pectobacterium carotovorum is a destructive disease of vegetables, fruits and ornamentals found worldwide. This pathogen belongs to family Enterobacteriaceae and is separated into six subspecies. Characterization of pathogens as much practically as possible is important for implementation of control measures and management strategies on a disease.

Although there are limited studies on characterization at the strain level of P. carotovorum in Sri Lanka, the geographical distribution of its sub-species is unknown. Therefore this study was conducted with the specific objectives of determination of the geographical distribution and host range of P. carotovorum, characterization of their isolates using biochemical and physiological characters.

Among the biochemical and physiological tests, only Indole test and Citrate utilization test showed variation. Cluster analysis for biochemical tests divided the isolates in to three clusters which show evidence for the presence of different P. carotovorum subspecies. Isolates showed variable results for host range identification which was followed using nine crops. Three other clusters were also created using host range identification, all the biochemical, physiological and pathogenicity tests and SDS PAGE banding patterns.

The results show the existence of at least three subspecies and a variation within each subspecies. The susceptibility of the different strains to the control measures needs to be determined. Identification of subspecies using sequence analysis is pending.

Keywords: Soft rot Erwinia, Host range, SDS-PAGE
Dramaturgy of Spectators and Researching the Audience in Sinhala Theatre

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The Sinhala theatre genres occupy an area of enormous academic and cultural interest, which is in stark contrast to its diminishing popularity or its importance amongst the Sinhalese cultural locus. Contemporary performative expression, socio cultural changes and political situation of the country. The complex network of identity politics which it covers as a genre requires an enquiry into a reception of the audience in contemporary time as it is lack of audience for any kinds of theatre. Hence using the significant genre of Sinhala theatre and its audience, this study shaped by my attempt to find a credible answer to this particular vacuum that exists in the contemporary time.

The scope of the present study consists of modern Sinhala theatre and the audience’ reception. Through the process I hope to create an alternative dramaturgical intervention of the Sinhalese theatre and its contemporary relevance. Within this scope, I will also examine a number of other aspects and phenomena that will further define the broader outlines of this study. The rationale or the justification of the study is both theoretical and empirical. The theoretical justification relates to find the interests of audience and their reception for the Sinhala theatre.

Key Words - Dramaturgy, Spectator, Reception

Ecopreneurship as a promising drive for Business Performance: A Study of Eco friendly Food and Beverage Business Models in Sri Lanka

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In Sri Lanka, entrepreneurial businesses heavily contribute for the economic growth of the country. Hence, failure of the entrepreneurial sector is an economic cost to the entire development of the country. In recent times, perceptions of the entrepreneur have significantly changed, specially with the growth of the globalization and green concepts. Today environmentalism grows rapidly and it helps to make the world a better place.

Ecopreneurship is a new approach emerged in 21st century for making money being environmentally friendly. Ecopreneurs can be considered as a subcategory of entrepreneurs. This paper has mainly focused on reviewing ecopreneurship as an emerging driver for business performance. It has found that different inspirations being empirically developed on ecopreneurial practices. The researcher mainly developed this paper based on a systematic literature review along with a case review of eco-friendly food and beverage business models in Sri Lanka. Paper provides the insights on how different thoughts being empirically shared in the literature. Empirical evidence on ecopreneurial practices under the Sri Lankan context is inadequate and the researches based on eco friendly business models, also notably absent. Therefore, there is a valid reason to study the ecopreneurial aspects of the Sri Lankan entrepreneurs.

Key words: Ecopreneurship, Business performance, Eco friendly business models.
EMPOWERING STUDENTS FOR CLIMATE CHANGE ADAPTATION

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Fiji, comprise of 332 islands. The central area of Viti Levu comprise of mountains, therefore much of the residences, the commerce and industry are located in close proximity to the beaches, which make life more vulnerable to climate change.

The annual and seasonal mean air temperatures have been continuously increasing. The sea level rise is approximately 6mm per year. Cyclones are more intense and ocean acidification continues. All these predictions reveal that Fiji needs to adapt to the reality of climate change.

In Fiji, even though prolonged drought seasons, intense cyclones, sea level rise are seen, life goes on without making an effort to adapt to the environmental changes. At the Fiji National University it has become my duty to prepare an effective strategy to empower the students with the knowledge on mitigatory measures and adaptation techniques for combating climate change.

Conference paper will highlight on environmental changes happening in Fiji Islands due to climate change, the negligence by the communities and their consequences, the knowledge transferred to the students to empower them and equip them as messengers to minimize disasters.

Keywords: Climate Change, Adaptation, Empowerment

ENVIRONMENTAL BONDING IN MINING

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Environmental bonding in mining is widely accepted. Bonding is an important component in the distribution of risk and benefit between stakeholders. Rehabilitation responsibilities need to be established in detail and the actual realization of rehabilitation must be binding. Bonding can be, for the regulator, a valuable complement to litigation if it is well structured. Environmental bonding fosters cost internalization by mandating a reserve of capital dedicated to rehabilitation and promotes risk reduction and innovation. Reclamation bonding promotes regulatory compliance, not necessarily economic efficiency. The analysis focuses on salient elements that make up environmental bonding. In particular, the timing of depositing the bonds, the type of security accepted and the evaluation techniques of remediation costs are relevant features that have a direct impact on meeting the declared objectives. It is concluded that jurisdictions with consistent and clear policies are well regarded even if environmental regulations are stringent.
ETHICAL CLIMATE AND ORGANIZATIONAL PERFORMANCE

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This study attempts to examine the impact that exists between the ethical climate and employee performance among employees in the context of the some selected garment factories in Badulla District. The 26 item of ethical climate questionnaire and 14 item of individual employee performance questionnaire was the instrument used to evaluate the employee performance in garment factory. These instruments have introduced three dimensions for ethical climate such as egoism climate, benevolence climate, and principled climate and also two dimensions for employee performance such as task performance and contextual performance. The study made use of both descriptive and inferential statistics such as frequencies, means, and standard deviation, including Correlation Coefficient and Simple Regression Analysis.

The regression and correlation results have provided evidence that ethical climate is significantly and positively associated with employee performance, at Adjusted R Square 0.757. That the climates of an organization and employee performance vary together. The result of this finding ethical climate and employee performance were in moderate level.

After summarizing the results of the research the following conclusion have been drawn up. Employees who work in ethical environment will be more effective with their job and more loyal than employees who work in an unethical environment. Company profit, friendship, team interest, social responsibility, and laws and professional codes were perceived higher in the compare other indicators.

Key Words: Egoism Climate, Benevolence Climate, Task Performance, and Contextual Performance.

Evolution of Transculturalism in Postcolonial India

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India is a biggest secular and multicultural land as it is concerned. When people started to move from their place, they easily get adaptation in their new environment, because people from India have interwoven with their multiculturalism well in advance. Multiculturalism is not new to Indians, as Mr. Pirzada in “When Mr. Pirzada Came to Dine” and Dev in “Sexy” from Jhumpa Lahiri’s short story collection Interpreter of Maladies are some examples to prove the above theory. But at the same time, Mrs. Sen in the short story entitled “Mrs. Sen” from India finds difficult to adapt the new culture in America. Mr. Pirzada and Dev are like salt in the water finds no difficult to interlace with the host country. But Mrs. Sen often laments of her past where, she was with her family in India on the other. Jhumpa Lahiri is one of the eminent diasporic writers, and also a second generation emigrant settled in America after her birth. She often deals with Identity Crisis, Rootlessness and Multiculturalism in most of her works. Trans-culturalism, being famous in Lahiri’s works, her characters go in quest for new cultures very often and settle in different localities, where at first they struggle to adapt it.

Keywords: Multiculturalism, Alienation, Quest for identity,
Exogenous nitric oxide donor sodium nitroprusside enhances growth and physiological attributes of rubber (*Hevea brasiliensis*) plants subjected to water stress

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Rubber (*Hevea brasiliensis*) is a major plantation crop producing latex for commercial utility. Rubber cultivation is being expanded into dry areas of Sri Lanka where drought and heat are the major abiotic stresses reducing growth and yield. Nitric oxide (NO) is a signaling molecule which has proved to be protective against damages provoked by abiotic stresses. In this work, we studied the effect of NO donor sodium nitroprusside (SNP) on the response of *Hevea* to water stress (WS) conditions. Budded rubber plants were imposed with six treatments viz. control [normal watering (NW)], T1 (WS), T2 (50 μM SNP +NW), T3 (50 μM SNP + WS), T4(100 μM SNP + NW) and T5 (100 μM SNP + WS). Photosynthesis rate (*Pr*), stomatal conductance (*gs*) and chlorophyll content (*Cc*) were recorded at 0, 2, 4, 7 and 14 day's intervals and two weeks after the treatments. There was a significant increase in *Pr* and *Cc* in water stressed plants treated with SNP when compared to those devoid of SNP treatments. Significant increase in *Cc* and dry weight of the new shoots were recorded in plants treated with SNP and subjected to WS when compared to water stressed plants devoid of SNP treatments in two weeks after recovering. Results revealed that exogenous SNP proved to be beneficial in alleviating the negative effects exerted due to water stress in rubber plants.

**Key words:** Rubber, sodium nitroprusside, water stress

Factors Affecting Internet Parental Practices And Effects of Internet Parental Practices to Internet Addiction, Risk and Usage of Children-Systematic Literature Review

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This paper present a model to identify the variables with moderating and mediating effects to the relationship between parental practices and internet addiction, risk and usage of children. This is a conceptual paper based on related scholarly works that provide a support for the proposed model. There are myriad of benefits of internet and they include low cost communication, availability of abundance of information and services, ease of sharing information, and access to any form of entertainment etc.. All these benefits have their associated cost and could emanate in different forms including spam mails, virus, trogon and other malware, leakage of private information, addiction and exposure to harmful content. Current education policy of “Facilitation to access the digital world” will promote the IT education in Sri Lanka. The policy makers believe that by generating more IT savvy people in education system, Sri Lankan youth will be enabled to access the global job opportunities with much ease. And also with other initiatives like “Free-Lap Tops, and with highly developed mobile networking technologies ,Sri Lankan children will access internet more frequently in future. Parents will have toface real dilemma when parenting the children in internet. It is not advisable to restrict the internet totally or to give them the free access without any parental involvement. How to parent the children in internetwill be a challenging task.

**Keywords:** internet parental practices, internet usage, internet addiction, internet risk
Factors Influencing the Adoption of Mobile Banking:  
(Special Reference to the South-Eastern Region, Sri Lanka)  
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The demand of smart phone is assuming great heights and the banks can empower this by delivering mobile banking services. But it seems that banks have not yet attracted enough customers to use mobile banking services when compared with the other developed and developing countries in the South-Eastern Region part of Sri Lanka. Further the patterns of using banking services are different consumer to consumer. This study examines the factors influencing the adoption of mobile banking services by banks in the South Eastern region in Sri Lanka. The data were collected through questionnaire. Theory was developed to identify the factors that influence the adoption of mobile banking. The results of the model tested that use of mobile banking in South Eastern Region part of Sri Lanka. The adoption/ non-adoption decision is highly influenced by attitude toward Change, Perceived benefits, perceived risks, Occupation, Users’ IT knowledge except Information on online banking. The results also suggests that age, gender and occupation are significantly correlate with mobile banking behaviour. Finally, the researcher recommends that understanding the factors influencing the adoption of mobile banking would certainly help the banks.  

Keywords: Mobile, Banking, Adoption.  

Fashion Reigns the Virtuous Aspirants  
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Literature reflects life so far it is concerned, but here the paper discloses that not only literature, but also film does the same, at times. Literature and film do teach the society based information to the spectators in a practical manner. The novel Two Virgins and the film Fashion are taken up for study to prove at what precedent the both interwoven in terms of aspiration and degradation. Lalitha’s avarice is to become a cine star. Hence, she is born in a middle class, village family she puts an effort to turn out to be a talk of the town. She is beautiful in appearance than her sister so she is liked very much by her father. At once she gets the opportunity to shine in the industry, her chastity is first hoodwinked by the chance giver who becomes situationist swiftly. The recital reflects in the character of Meghna Mathur who also taken a replica of Lalitha. In this world, human beings can aspire anything to become but when it is applied to women, there might be some restriction at certain doings. Though it is, without bothering they want to cross and do achieve in terms of giving shape to their dream in a troublesome field. Whatever the situation may be, once the avarice is fixed in the mind of aspirants that should be done. By applying this to the current paper, it shows how the results would be. In this paper Lalitha is suffered in loads of ways to get success but the fashionable aims of her not let her down to be in a compact place.  

Keywords: Modernity, Aspiration, Degradation
GAC based NOx reduction from the Diesel Engine Exhaust

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A method of NOx abatement from exhaust of diesel engine is proposed and demonstrated using Granular activated carbon (GAC) with microwave (MW) regeneration. A typical two stroke marine diesel exhaust consists of NOx (95% of NO and 5% of NO\(_2\)) which is removed by adsorption process onto the granular activated carbon. It was found that adsorption of NOx onto GAC was significantly increased by Cu impregnated GAC (2%) compared to that of just GAC without any impregnation. Temperature of the flue gas has also great influence on the adsorption process; thus lower the temperature has shown higher the adsorption. The experimental studies presented in this work shows that temperature range between 15\(^{\circ}\)C to 25\(^{\circ}\)C is practically suitable for the best adsorption. Flow rate of the exhaust is also another factor affecting the adsorption process as flow rate directly affects the residence time (or contact time) of the gas with carbon and hence influences the adsorption process significantly. Longer the residence time means more the adsorption of NOx. It also found that the residence time of 2 seconds produced excellent set of results with the flow rate up to 15 l/s. GAC can be manufactured out of coconut shell, which is easily available in most of south-east Asian countries, hence the technology feasible in countries like Sri Lanka and India.

**Key words:** NOx adsorption, Granular Activated Carbon, Diesel engine emission control.

GLOBAL WARMING: REAL OR FEIGNED THREAT TO HUMANITY

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The controversial and prevailing issue of global warming and/or climate change poses sizable apprehensions among human populations worldwide. Some less-informed people think that the issue of global warming and climate change are only imaginary, nonsense simple matter. The truth is that global warming is a real occurrence which has a direct or indirect effect to climate change. Eventually, this global phenomenon may determine the fate of humans to exist as organisms in this only living planet. And based on empirical physico-social observations, climate change is a valid threat both to one’s internal and external communities. Despite of these on-going realities, it is believed that something could still be constructively done to rehabilitate the condition of our ailing environment. The time is not yet too late for us to respond to the pressing demand to restore our nature. However, continual apathy and dispiritedness to the crucial call to revive our ecosystem brought about by global warming and climate change, could worsen and become real and irreversible threat to the survival of humanity. Thus, the concerted efforts of all inhabitants of every society in the world is a critically persisting necessity. If we want human species to live through thousands of decades of millennia, now is the opportune time to act sincerely and selflessly for the biotic milieu.

**Keywords:** altruism, atmospheric disturbance, biota, environmental alteration, greenhouse gases, reconciliation ecology
Herbicides for rice cultivation under limited irrigation


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Weed management is a critical issue for rain-fed rice farmers in Sri Lanka. All herbicides recommended in Sri Lanka by Department of Agriculture (DOA) have been tested under irrigated systems. So, it is necessary to look for herbicides which are effective under lack of water situations. Having that objective a field experiment was conducted adopting RCBD in Yala-2014 seasons at the Rice Research and Development Institute, Batalagoda, to evaluate the performance of five (05) treatments namely; Bispyribac-sodium100g/lSC, Oxyflurofen240g/lSC (Spraying), Oxyflurofen240g/lSC (Application with sands), Pretilaclor300g/l+Pyribenzoxim20g/lSC, Cyhalofop-butyl100g/lSC followed by MCPA with comparison to control. Plot size was 10.5 m² and plots were separated by 30cm (Width) bunds. Seeds of Bg 300 were broadcast at a seed rate of 100 kg/ha. Weed counts at 06 days after spraying, Weed dry weight at 06 days after spraying and final grain yields were measured. Only life saving irrigation was adopted. All other cultural management practices were done according to the recommendation of the DOA. Data was analyzed employing ANOVA using the SAS software package. Weed Controlling Efficacy (WCE) were calculated for each treatments using standard formulae. Bispyribac-sodium100g/lSCandPretilaclor300g/l+Pyribenzoxim+20g/lSCshowed a higher WCE values; 95.73% and 89%respectively. It is concluded that, Bispyribac-sodium100g/lSCandPretilaclor300g/l+Pyribenzoxim20g/lSC can be effectively used in areas where water is a limited factor at the rate of 300 ml/ha and 1.25l /ha respectively.

Keywords: Weed Controlling Efficacy, One-shot Herbicide, Pre-emergent, Post-emergent

High Vein Density, Can it become the Next Target in Rice Breeding?

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Engineering of C₄ rice has been identified as one of the major breeding objectives to meet the rising food demand in Asia and changing climate. Enhanced leaf vein density (LVD) is found to be a prerequisite for C₄ photosynthesis. Therefore, 10 landraces of rice that were identified to vary in LVD from an initial screening of 292 Sri Lankan rice landraces were investigated further for consistency in LVD. Rice yield showed a positive correlation (r=0.40;P=0.38) with increased LVD and confirmed the results of the previous experiment (r= 0.60;P=0.0001) that high yield is associated with high LVD. This suggests that there is a potential to use high LVD candidates in future breeding programs. Results also showed that LVD varied with incident light levels and temperature during the cropping season. Variation in LVD under lower light and temperature levels may be partly due to phenotypic plasticity of the genotypes and adjustments of plants to meet high demand of sink under limited sources to maintain constant photosynthesis rates to balance metabolism. This provides evidence that assimilates transportation rates maybe connected with alternations in inter veinial spacing/LVD. Further detailed biochemical analysis to establish a relationship before use of LVD as a selection tool to enhance therice yield is recommended.

Key Words: C₄Rice, Vein Density, Phenotypic Plasticity
Identifying the green intrapreneurship and its impact on cooperate sustainability in Sri Lanka

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**Purpose**: The main intention of this research is to identify the ideologies and functionalities of green intrapreneurs Sri Lankan and the contribution of such practices on the corporate sustainability efforts.

**Design/methodology/approach**: Main corporate ventures desired for sustainability is identified as the public limited companies. And the structural equation modeling was mainly used to test the set hypothesis. While the sustainability report score model was used to identify and measure sustainability level of the companies. Further the results will be testifying two models and then conclude the model fit proving hypothesis in the process.

**Findings**: Results indicate a strong relationship between green culture and the corporate sustainability. And the suggested model is proven with proper statistical parameters. Overall sustainable consciousness in public limited companies are identified as lower moderate. However the there is an identifiable gap between the top management understanding on the Green Intrapreneurship concept and the commitment for such practices inside their organizations.

**Contribution of the paper**: This paper will contribute key knowledge base for the top management decision makers in the public and corporate structure in Sri Lanka, to use the concept of green intrapreneurship as a sustainable tool.

**Key Words**: Green Culture, Green product life cycle management, Performance base pay, public limited companies.

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Ideological Comedy: Innovating a new fourth estate
(A comparative case study on the impacts of satire on political discourse)

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The modern word “satire” derives from the Latin word – ‘satura’, but the Roman satira was quite different from our notions of satire today. Satire in our modern world is being used increasingly as a tool to address and inform on a multitude of issues. Specifically, issues that have been sealed by a dominating social norm that require a due shift in perception and ultimately actions. Stemming as a key branch of satire, political satire provides the conducive condition for rejuvenating critical thought. Recently, it has also come under intense scrutiny following the Danish cartoon publication (2005) and Charlie Hebdo shootings (2015).

Political satire is gaining momentum across diverse channels of media. Its potential to create ripples in society by challenging political discourse and transcending barriers of geography, ethnicity and cultures, through the lens of ‘jesterism’ is constantly evolving and expanding. The United Nations (UN) annually presents the Ranan Lurie Political Cartoon Award as a testament to the ambitious standards of information and media freedom that political satire represents.

The present paper contends the potency of satire as a tool to shape public opinion on political discourse and in creating a more informed citizen. A comparative case-study analysis will explore the mechanism of satire across time and continents. By contrasting the variant media and political freedoms, the findings aim to highlight the impact of political satire.

**Keywords**: media; information; satire; communication
Impact of Brand value on Consumer Buying decision, empirical evidence from life insurance in Sri Lanka

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Present research was designed to analyze factors that are impact of brand value on consumer buying decision in life insurance in Sri Lanka in which consumer buying decision is determined through brand value. Empirical data was obtained from selected insurance companies in Sri Lanka. A sample of life insurance consumers were chosen from the selected insurance companies so as to observe their views, enabling researcher to test research hypotheses that had been formulated upon the theoretical exposure, which gained throughout the research theoretical review of which a considerable time was used to revealed that consumer buying decision, the extent to which goal achieving task through a consented effort by Managers and non Managers has been largely encountered. Attempt was made to measure the degree of influence of possible factors in connection with the operational dimensions while attempting to assess the significance of those factors that are influenced towards the consumer buying decision in the insurance companies in Sri Lanka.

Keywords: brand value, consumer buying decision, Life insurance

IMPACT OF ONLINE VISUAL MERCHANDISING IN CLOTHING PURCHASING BEHAVIOR AMONG SRI LANKAN CONSUMERS

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The Internet has developed in to a new clothing distribution channel and the online visual merchandising (OVM) becomes one of the key aspect of increasing sales in fashion retailer’s websites. The research is to explore the effect of online visual merchandising on Sri Lankan consumers clothing purchasing behavior and to identify the importance of various online visual merchandising attributes to attract the consumers.

In this study, the Stimulus–Organism–Response (S-O-R) model has been used to evaluate the interaction between the online visual merchandising attributes and the consumer purchasing decisions.

Data was collected through a questionnaires from different consumers within the western province of Sri Lanka. A total of 80 eligible data from 84 responses were continued for data analysis.

Result of the study revealed that the online visual merchandising attribute, such as: Product type, Product detail description, Actual Product colours, Zoom feature, 3D view, Model image, Visual appeal, Search function, Background colour, Typography, Product layout, discount banners and sales promotions have a significant effect to stimuli the Sri Lankan consumers to make Purchasing decisions.

Keywords: Online visual merchandising / Purchasing behavior / Textile & Clothing
Impact of Textural Surfaces to Achieve High Efficiency for Product Usability
Earthenware Culinary Products in Sri Lanka

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Texture is a surface condition of the product and it perceived surface quality. It is one of the qualities that can be seen and felt. In ceramic pieces, two types of textures can be identified. Tactile texture and Perceptual texture. Touch has been described as the most fundamental means of contact with the world, and the simplest and most straightforward of all sensory systems. Skin is the largest organ of the human body and the fingers and lips are the more sensitive areas of the body. Tactile stimulation is vital in several domains, and the ceramic product has a closer relationship because most of the clay culinary products were handled by human hands. In ceramic products texture is created as a result of Embossing and Engraving methods. These techniques can be applied on outer surface as well as on inner surface of the vessels. Most of traditional culinary products were created by applying their experiences and sociocultural requirements. They created different types of carvings on top of the clay layers to enhance their creativity as a decorative art to express their ideas. Chronologically it has become one of the surface decoration methods as well as supportive features for product functionality and usability. How thus textural features accumulate to product functionality is the main obligation of this research. This research is based on the grounded theory method an examine on traditional earthenware culinary product in Sri Lanka. The textural surfaces were created to achieve high functional level when product usage. Qualities of; gripping, stability, smashing, sifting, cooling and heat absorption were created the differentiations of the textural qualities.

**Key words:** Texture, Tactile, Surface

Indian Family Life: A Reservoir of Culture and Tradition

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Family is divine building block of a society. It safeguards and binds relationships. It fastens human beings intimately and emotionally. Novel being a part of Literature reflects society as a mirror in a very lively manner. R.K.Narayan’s character and situations are rooted with this sort. Narayan’s novel *The English Teacher* is a delicate and redolent with the fragrance of love, the pulse of a family. Krishnan the hero in this novel is a married young man and also a father of Leela, a little girl. To him, love is not a physical appetite or obsessive passion. It possess serenity, beauty and tenderness of wedded which stands platonic. India is a land of tradition and culture where familial love is considered pure and eternal. R.K.Narayan makes the readers visualise this veritable human relationship of the land. *The English Teacher* talks about a love story. The life of Krishna and Sushila is happy and contend. The clearly cast back the value and cultured domestic life in Indian families through the day to day situations of Krishna and Sushila. The theme of familial love is thoroughly forecasted in the entire novel. Without communication there is no relationship fulfilled. Here the bond between Krishna and Sushila is beyond, even after the death of his beloved wife the communication continued. This feature is the intrinsic power of Indian family which is the foremost treasure of the land.

**Keywords:** Familial relationship, Indian family, Love
Influence of different levels of ocetnyl succinic anhydride on adsorption potential of corn starch for Cu$^{2+}$ ions

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**Objective**: To investigate effect of different levels of addition of ocetnyl succinic anhydride (OSA) to corn starch on the adsorption of Cu$^{2+}$ ions from water

**Methodology**: Corn starch was modified using OSA at 6, 9.12 and 15% (w/w) under alkaline conditions. The starch prepared was used for batch adsorption studies of copper from synthetic waste water using two concentrations of copper ions ie 250ppm and 100ppm.

**Results and Discussion**: Amylose content of corn starch decreased significantly after the modification. Adsorption of copper ions increased with increasing temperature for all modified starches. The effects of adsorption was also seen by varying pH of the solution and it was found to be maximum at pH=5.

**Keywords**: OSA, adsorption, Amylose


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The hospitality industry has started to take responsibility for environmental sustainability. A strong focus on energy, waste, and water usage is directly linked with financial benefits in the operation of the hoteliers. Practices connected to the social aspect of sustainability are less developed. The dominant utilitarian paradigm in managers’ decisions is a strong causal factor in the lack of systematic social activities. The economic driver seems to be too strong! The suggested research agenda will enable us to better explain this phenomenon in which five star city hotels include sustainable development in their strategy – as long as the benefits are visible. In this agenda a broad definition of sustainability is needed and more attention should be paid to the different stakeholders. Next to this stakeholder perspective also additional approaches such as change management are necessary. In line with this multiple-perspective approach both qualitative and quantitative methods to research the practices in and the motives for a more sustainable hospitality industry for five star city hotels in Colombo, are needed. Finally to understand motives and actual behavior of employee and guest toward sustainable alternatives, more experiment research designs are needed.

**Methodology** - Based on Literature review five independent variables are used to measure Green innovation. Mixed method (both Qualitative and Quantitative approaches) are planned to be used to measure the impact of independent variables on dependable variables.

**Findings** – Provides an integrative framework for studying and evaluating green innovation measuring tools and will be used to identify the issues faced by five star city hotels by Colombo.

**Practical Implication** – This study is based on five star city hotels in Colombo and researcher is expect to visit Colombo five star city hotels and collect important information about the relevant un-touched areas.

**Key Words** – Green innovation, internal stakeholder, External stakeholder and corporate sustainability.
Innovation with natural dyes in traditional and contemporary Indian textiles

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Natural dyes have been a part of the textile repertoire expressing the socio-cultural identity of India. The antiquity of India's textile heritage is evidenced by the remnants of natural-dyed fabric found at Harappa, the excavated site of the Indus Valley civilization. The historicity of indigenous knowledge of materials and processes of natural-dyed textiles is also a precursor to the more recent global focus on the need for slow fashion, green fashion and sustainability. While advancements in textile production lead to the decline of traditional dyeing, natural-dyed handlooms evoke interest among discerning consumers.

To address the question of whether natural dyed fabric can be used for sustainable and commercially viable product development, this paper discusses two case studies in rural and urban scenarios, using traditional dyes of aal and indigo. The first case study is of Kotpad—a hand-woven cotton fabric dyed with aal from the root bark of the Morinda Citrifolia tree in the Koraput village of Odisha, in India and which is now a languishing craft. The second case study highlights the initiative of a commercial denim collection in a niche category for the urban market in natural indigo from the leaves of the Indigofera Tinctoria plant through the collaboration of a textile manufacturer, denim retailer and a fashion designer.

Keywords: Natural dyes, Production process, Sustainability

Innovative ELT Techniques in the UG Classroom: A Case Study Using Nursery Rhymes

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Several Hindi speaking places in India have their own peculiar challenges as concerns ELT. Students hailing from rural backgrounds and Hindi medium schooling come to college with a limited exposure to English. For the teachers on the other hand, routine lessons and monotonous Grammar exercises take away from the joy of teaching English.

This paper proposes that Nursery rhymes can be used as effective teaching material in the Undergraduate classroom in Hindi speaking places in India. Nursery Rhymes are short, easy, interesting, uncomplicated and have an added lilt to them. Majority in the class may not have been exposed to them in their school life and this newness appeals even more. This innovative ELT Technique can be used in every class for a few minutes so that the regular syllabus is not disturbed. The method entails teacher controlled group activity, writing of the rhyme on the blackboard, loud group recitation, explanation, discussions on the rhyme, analysis of the syntax (sentence structures, parts of speech), vocabulary (meanings, antonyms, synonyms), phonetic exercises, punctuation, and so on. Audio visual aids in an ICT classroom (if available) make the activity even more effective. In conclusion, this paper surmises that a creative teacher can use Nursery rhymes as an effective tool to tackle the challenges of ELT in Hindi speaking areas of India.

Keywords: ELT, classroom creativity, nursery rhymes
LAW RELATING TO STATE LANDS AND ITS IMPACTS FOR THE LAND RIGHTS
ANALYTICAL STUDY WITH SPECIAL REFERENCE TO SRI LANKA

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Land rights in Sri Lanka can be considered and identified as an appropriate scope to uphold the prominent standards of human lives. Lands rights are directed on lands. Lands in Sri Lanka can be recognized in two ways as private lands and state lands. Private lands are controlled by people individually as their preference. The lands which do not perform private rights can be considered as state lands. However state lands are directed by the government and people who live in the state lands cannot control the land on their own discretion.

Law relating to state lands is discussed under ‘Crown Lands Ordinance No.08 of 1947’, ‘State Lands (Recovery Possession) Act No.07 of 1979’ and ‘Land Development Ordinance No.19 of 1935’. Basically lands rights of state lands can be identified in a very limited area. The people who live in the state land have to behave their lands rights according to the orders of the government or state. Due to this reason state land owners do not possess their land rights purely, clearly and exactly. Therefore non allowance to enjoy the real lands rights is a serious issue faced by the Sri Lanka people who live in state lands.

The objectives of this study are to critically evaluate the impacts of people who live in state lands without exact land rights and identify the practical difficulties in the existing system and finally to provide recommendations.

This research is basically a qualitative one but for the purpose of assessing the impact of law relating to state lands, mixed approach is used by analyzing case studies. The study reveals and concludes that the advantages of land rights by altering the law relating to state lands and acquire the clear ownership.

Key words: Land Rights, State Lands, control.

Modelling Future Collaborative Supply Chains from the perspective of Green Procurement

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The high competition in the market place forces manufacturing companies to respond more quickly to meet customer requirements through faster product development and shorter delivery times. Many recent studies have discussed about the green supply chain management practices, organizational performance, and environmental performance. However, less focus has been in the areas of collaborative supply chain from the perspective of green procurement in the FMCG industries. In this study, the authors have critically reviewed forty research articles which are in the areas of collaborative supply chain and green procurement practices highlighting the boundary of original raw material supplier to the original equipment manufacturer. The outcomes of this paper develops a conceptual framework for collaborative supply chains from the perspective of green procurement and provides a benchmark for dynamic implementation of aforementioned concepts in future collaborative supply chains.

Keywords: Collaborative Supply Chains, Green Procurement, Manufacturing Industry
Molecular identification and genomic variation of \textit{Colletotrichum} spp. causing leaf twister disease of onion in Jaffna district, Sri Lanka by PCR-RFLP techniques

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Leaf Twister Disease (LTD) is a major disease of red onion cultivated in Jaffna district, Sri Lanka. Rapid and reliable detection of the pathogen is essential for undertaking appropriate and timely disease management measures. The present study was carried out to determine the molecular identification and genomic variation of \textit{Colletotrichum} spp. associated with LTD of red onion grown in Jaffna district by PCR and determining the genomic variation using PCR-RFLP technique. Twenty nine morphologically different \textit{Colletotrichum} spp. were obtained from LTD-infected onions, collected from 30 locations of Jaffna district. Genomic DNA was extracted from each purified isolate using modified CTAB method and amplified by ITS 1 and ITS 4 primers targeting the region of 5.8s-ITS subunit of \textit{Colletotrichum} spp.. To determine the genomic variation among the isolates, PCR products were analyzed by PCR-RFLP using Rsa I, Msp I and Hae III. Based on PCR-RFLP analysis, polymorphism was observed among the \textit{Colletotrichum} spp. DNA sequencing was done for 17 PCR products representing 29 amplified products of \textit{Colletotrichum} spp. DNA molecular search using BLAST confirmed that 11 isolates are 88-92% similarity with \textit{Colletotrichum dematium} and six isolates are 95-99% similarity with \textit{Colletotrichum gloeosporioides}. Results of present study confirmed that \textit{Colletotrichum dematium} and \textit{Colletotrichum gloeosporioides} are the causal agents of LTD on red onion.

\textbf{Keywords}: \textit{Colletotrichum} spp., leaf twister disease, red onion

Monte Carlo evaluation of principal component type estimators in the linear regression model

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The Ordinary Least Square Estimator (OLSE) has been used to estimate the regression coefficient for a long time. However, many results have proved that the OLSE is no longer a good estimator when the independent variables are affected by multicollinearity problem. To overcome the multicollinearity problem, the Principal Component Regression Estimator (PCRE) was proposed. Another method to combat multicollinearity is through the collection and use of additional information, which can be exact or stochastic restrictions. In the presence of stochastic prior information in addition to the sample information, the Mixed Estimator (ME) was introduced. By replacing PCRE instead of OLSE in the ME, the Stochastic Restricted Principal Component Regression Estimator (SRPE) was proposed.

In this study, we propose a new estimator namely Alternative Principal Component Regression Estimator (APCRE) by replacing ME in the PCRE. The stochastic properties of the proposed estimator are obtained. Moreover, the performance of this new estimator over the OLSE, ME, PCRE and SRPE in terms of the Scalar Mean Squared Error (SMSE) criterion is investigated by performing a Monte Carlo simulation with the different degrees of collinearity and different size of the sample. From the simulation results, it has been noticed that the APCRE has the smallest SMSE than OLSE, ME, PCRE and SRPE for different degrees of collinearity and different size of the sample. Also, the OLSE is worse than ME, PCRE, SRPE and APCRE. Hence, it could be concluded that the proposed estimator is meaningful when there exists multicollinearity among predictor variables.

\textbf{Keywords}: Multicollinearity, Principal Component Regression Estimators, Mixed Estimator
Multiplier Effect of Zakat: Case Study in Tello Island, South Nias, Indonesia on National Amil Zakat Agency Education Program

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Indonesia is one of the countries with the largest Muslim population in the world. The population of Muslims in Indonesia in 2010 are to 87.18% or 207 million from a total of 238 million people. One of the obligations of muslims is zakat. The National Amil Zakat Agency (BAZNAS) as the official institution which established by the government of Indonesia for manage zakat at the national level (revenue and distribution) reports that there is an increase of zakat revenue in Indonesia about 1.27 trillion rupiah from 2010 to 2014. Tello Island, one of the islands in South Nias district with less than 10% muslim population. The lack of muslim population in the southern district of Nias has a direct impact on the access to islamic education. BAZNAS partnered with MA Bahrul Ulum to cooperate on operational and development assistance which distributed from zakat to solve the problem. Based on the method of calculating Social Return on Investment (SROI) on the impacts generated by the program which includes improving access and quality of Islamic education, it is known that its have a SROI ratio of 2.08 which indicating that the program runs well and could continue with no doubt. In addition to the immediate perceived impact, the zakat implementation program by BAZNAS also has other long-term impacts that include the education, entrepreneurship and tourism sectors.

Keywords: zakat, muslim, education

Myth and Magic Realism: Examining Language and Narratives in Salman Rushdie's Shame

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Based on the assumption that most postcolonial literatures are in one way or the other ‘nationalistic allegories’, they provides a structural stability and an optic to view the operation of third world texts as they can employ the mundane daily struggles of subjects in a nation to illustrate the state of the nation. The representational multiplicity of such texts can enrich our understanding of third world and provide a tool of vigorous interrogation of the temporality in which these texts are situated. Parodying previous literary texts and subverting the historical documents and events which they refer to, voices an alternative plural history. In reading various postcolonial texts through this viewfinder, a state of objectivity is attained in which the transgression of boundaries between fact and fiction is achieved. The paper proposes to analyse a similar text, Shame by Salman Rushdie, set in post-colonial Pakistan as mapping a specific geo-temporal space marked by a dysfunctional and chaotic political trajectory. The paper also plans to investigate the novel as mapping and satirising the discourse of the Islamic Pakistan’s treatment of its freedom once the initial optimism and euphoria about the acquisition of the ‘hallowed land’ has diminished. The novel critiques the catalysis of shame accruing due to the failure of nation making and political emancipation. The destiny of characters mirrors the destiny of the nation, their failures, and unfulfilled potentials resemble the nation. Rushdie employs his signature techniques like magical realism and biting sarcasm to investigate this thwarted postcolonial subjectivity.

Key words: Postcolonial, Allegory, History, Metafiction, Politics.
Nutritional Improvement of Yoghurt using Seaweeds

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Seaweed is an essential healthy food item. Although it can be utilized in food industry, as a nutritious ingredient, currently seaweed extraction is not used in yoghurt production at commercial level in Sri Lanka. This study investigated the nutrient composition of Ulva lactuca and Gracilaria edulis. As Gracilaria edulis contains comparatively high amounts of nutrients than Ulva lactuca, Gracilaria edulis was selected to be used as a gelling agent and a nutrition enhancer to develop a new yoghurt. The collected seaweed samples were prepared in order to add that in to the yoghurt. The development of the enriched yoghurt with the prepared seaweed extraction (Gracilaria edulis) was carried out on the basis of the best ratio of yoghurt extraction which gives the best gelling property. The nutritional composition of enriched yoghurt was compared with the commercially available yoghurts. It was found that the seaweed yoghurt consists of 0.03%, 76%, 3.10%, 9.30%, 0.76% and 10.58% (w/w) of crude fiber, moisture, protein, fat, total ash and carbohydrates respectively. Also it contains 63.7%, 24.5%, 3.09% of SFA, MUFA and PUFA including essential fatty acids. When comparing with commercially available yoghurts seaweed yoghurt proves that it contains sufficient nutrients to enhance human health. Based on microbiological and shelf life analysis seaweed yoghurt was safe to consume. One yoghurt per day is enough to be consume to satisfy the daily recommended Omega 3 intake per person.

Key words : Yoghurt, Seaweeds, Omega fatty acids

Optimization of DNA extraction protocol for herbarium specimens

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DNA extraction from herbarium materials is very important to preserve endangered/ threatened species and also species that are not extinct now. But DNA extraction method from herbarium specimens is difficult due to the collection and processing steps that are followed to prepare herbarium. In addition to those physical and chemical alteration, age of herbarium specimens also play an important role in the integrity of DNA from such specimens. Here a modified cetyltrimethylammoniumbromide (CTAB) extraction protocol was used to extract genomic DNA successfully from herbarium specimens. However liquid nitrogen couldn’t be avoided in this modified protocol. The concentration and quality of DNA of recently prepared herbarium specimens (2013 and 2015) were comparably higher than to that obtained from old herbarium specimens (1990 and 1991). This protocol can be simply used in any laboratories without sophisticated facilities. In addition, this protocol is less time consuming and less labor intensive. Therefore this kind of simple protocols will open up many research works involving DNA extraction from valuable herbarium materials and thereby many downstream applications.

Key words: Herbarium specimens, CTAB and DNA
Particulate Matter Dispersion Model for Power Plants

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Accurate prediction of associated hazards resulting from accidental releases of Particulate Matter (PM) from power plants is imperative in risk analysis & emergency response. PM 10 and PM 2.5 are the most health damaging considered to other pollutant in atmosphere thus people with heart or lung diseases are the most likely to be affected. This paper elaborates the protracted modeling of well-known Gaussian Plume Dispersion model used in forecasting of dispersion and behavior patterns of PM emitted from Sri Lankan power plants. Adiabatic lapse rate & environmental lapse rates are analyzed in identifying the atmospheric stability conditions and the type of the plume buoyant or momentum. The PM emission rate is modified with particle interaction coefficient of 0.002 and the effective stack height is modified by adding the distance travelled by particles due to drift velocity. Stack tip downwash, building downwash & multiple stack effect are integrated in the model with GIS collaboration to characterize PM in both urban & rural areas. The model is validated with meteorological, topographical, demographic and refinery emission data where the results depict that stable atmospheric condition is the most challenging. This framework can be used in identifying the concentration contour lines, spatial point PM concentrations, PM dispersion pattern during emergency situations and the minimum ground level concentration with the relevant ground level distance through graphical representations with numerical figures.

Key words – Particle matter, Dispersion, Model

Performance of heat pump dryer for perishable dehydration

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Heat pump (HP) system pumps heat from the low-temperature source at a near ambient temperature to the high-temperature sink and recover both sensible and latent heat of the low-temperature heat source. HP dryers are advantageous for energy savings, low temperature drying, and provision of supplementary heating. Closed cycles have the potential of providing oxygen free and aseptic drying environment compared to open cycle. The objective of the study was to test the performance of closed cycle HP dryer for perishables dehydration and design improvements for minimal microbial contamination and oxidation during drying. A prototype closed cycle heat pump dryer was fabricated. An ozone generator was coupled to the dryer. Variable volumes of exhausted air flow let through the evaporator and condenser, and the remaining air bypass the evaporator and then the two portions allowed mixing before the dryer entrance. Dryer was tested for jackfruit, curry leaf, pepper, pineapple and banana. The effects of heat pump, and dehumidification on drying temperature, drying time, sensory qualities were experimentally investigated and showed significant difference (0.05<P) compared to electrical hot air dehydration and showed attractive flavor and texture compared to freeze dried products. Coupling of heat pump dryer with vacuum is being designed for further improvement of products quality.

Key words: energy recovery, closed cycle heat pump, products quality
Phytochemical evaluation of Ashwagandha (*Withania somnifera* Dunal) tubers as affected by source of nutrients

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Ashwagandha (*Withania somnifera* Dunal) is an imperative medicinal crop used in herbal industry since time immemorial and its roots are in commercial importance. This herb is known for its ability to enhance the resistance to stresses, increase stamina and promote general wellbeing. The changes in the plant growth and quality of the roots mainly depend on different agronomic practices coupled with stage of harvesting. Plants were grown up to ten months of sowing under organic and inorganic sources of nutrients and tubers were analysed for total ash, oleoresin, alkaloid, crude fat, total fiber and withaferine A contents. The highest values for all phytochemical constituents mentioned above were detected in organically grown tubers compared to tubers from inorganically fertilized plants, except crude fiber content at six months after sowing that is considered as the best stage for harvesting to obtain high quality tubers. The results of the present study are important for biochemical standardization of Ashwagandha tubers in commercial processing.

**Key words:** Ashwagandha, Withaferine A, Organic fertilizer

Promotion strategies and destination branding in Sri Lankan tourism

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In today's changing business, increasing and achieving to resilient and powerful brand is one of the significance for any organization, because it follows a many advantages. The solid brand provides to organization for setting itself in the market. For determining and valuing the brand equity, researchers primarily analysis the concept of destination brand equity as destination brand equity is indicated the significant value to the consumers in an organization. Developing and properly managing destination brand equity has been emphasized as an important issue today in the Tourist industry. Therefore, the aim of his study is to investigate how brand promotional mix i.e. advertising, personal selling, sale promotion, public relations and direct marketing effect on brand equity. Importantly, this study investigates the relationship between promotional mix on destination brand equity in Tourist Industry. Keller' Model was used to build up the conceptual model. The methodology adopted in this study was quantitative. Data was gathered through face-to-face interviews from 500 respondents using a semi-structured questionnaire. Data was analyzed using descriptive statistics, correlation and regression. Findings of this study revealed that brand promotional mix have positive impact on destination brand equity. The results further show that advertising, public relations, sales promotion and direct marketing have significant positive impact on destination brand equity. Moreover, the results shows that advertising/propaganda is the most influential factor for the destination brand equity. These results imply that managers should select appropriate promotional strategies for creating a high level of destination brand equity. More importantly, managers should pay more attention on advertising strategies, i.e. extensive investments on advertising, advertising diversity, direct marketing for building adequate level of destination brand equity.

**Keywords:** Brand, promotional mix, brand equity, tourism Industry, destination branding equity.
Quantitative Analysis of Blended Learning in ODL Education

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The evolution of internet and communication which was once confined to a limited purpose has now branched into the education sector as well. This compels the era to move towards blended learning which is an integration of online technologies into traditional teaching and learning methods. Though there exists many researches related to blended learning there is no quantitative measure on the degree to which the online technology must be integrated to produce an effective outcome. The distance learning program followed by the Open University of Sri Lanka (OUSL) compels the active participation of students in blended learning in order to channel course related content. This research focuses on the quantitative measure of the Open Distance Learning (ODL) through blended learning to implement a positive effect in reducing the dropout rates and performance of students. Our participants include seventy students registered for academic year 2016/2017 at OUSL. They were randomized between two groups, the first involved in both face to face presentations and online activities, the second in online activities only. Each group will be monitored through their performance in the examination. Based on the outcome the means of postulating the adequate levels of blended learning can be deduced. This research would enable the academics to develop the curriculum in an effective manner which would drive towards the success of the student’s learning process.

Key words: open distance learning, blended learning, quantitative measure

Recent changes in South American political leaderships: the role of nonprofit / nongovernment organizations in the cases of Argentina, Brazil and Venezuela

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The recent shifts in direction in South American politics, in general, are having and will have a profound effect on the region to come. Particularly, we will look at three potentially turbulent scenarios: the electoral triumph in Argentina of President Mauricio Macri in 2015 and the subsequent accusations of corruption in the previous administration, the impeachment of Brazilian President Dilma Rousseff in 2016 for similar charges and the 2017 ongoing crisis in Venezuela where opposition politicians are denouncing a “self-coup d’état” by President Nicolás Maduro for virtually foreclosing the “National Assembly.” In these three scenarios, nonprofit / nongovernment organizations (NPOs / NGOs) have had a relevant, yet different, role. The involvement of these organizations with state affairs is nothing new to Latin American government issues, in fact the origin of some NPOs / NGOs dates back to the 1700’s which is even prior to the independence of the nations themselves. But in these recent years, these organizations have acted and been used for and against the different political factions, both ruling and opposition parties. The blend between civic, political and community engagement create a synergy that should, in an ultimate degree, strengthen democratic practices but unfortunately are sometimes manipulated into partisan interests.

Keywords: South American politics, nonprofit / nongovernment organizations, community engagement
Recognizing the various aspects to market Halal meat successfully among the people practicing Non Abrahamic Religions: A case study in India

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"Halal" food industries are at a very nascent stage in a multi-racial country like India. "Halal" literally means permissible or in other words it encompasses all actions that abide by all the rules and regulations by the law of Shariah. Consuming "halal" meat is one of the responsibilities of a Muslim and The Holy Quran expands in various verses the importance of Halal food, but what is more interesting is that such type of religiously approved food, specially meat is getting a fast acceptance among the people of Non Abrahamic religions specifically in such cities where a significant number of inhabitants are Muslims. It is true that it is quite challenging to assimilate all the Islamic norms in a non Muslim majority surrounding but astoundingly "halal meat" food business is growing at a fast pace in India. The purpose of this research is to identify the various factors which plays a significant role in acceptance of "halal" food so that it becomes easier for the "halal meat" industries to grab the market in India. The aspects recognized in this context can work as possible market differentiation factors to make a Non Muslim cognizant about and appreciate "halal meat". This case study was conducted in a halal food outlet in India and the results can be extrapolated to the entire territory of India.

Keywords: "Halal", Shariah, Abrahamic religion.

Relationship between service quality and customer satisfaction (retention): A study of Airline industry in Sri Lanka

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Air transport is the gift of the 20th century to the world and it facilitates economic growth, world trade, international investment and tourism and is therefore central to the globalization-taking place in many other industries. Service quality has become an important factor, which determines the survival of the airline industry. Therefore it is essential for airlines to maintain the service quality in order to compete with other competitors. Delivering high-quality service to passengers is essential for airlines survival. Service quality conditions influences a firm’s competitive advantage and with this comes market share, and ultimately profitability of the airline. The purpose of this study is to explore the relationship between service quality and passenger satisfaction(retention) in the airline industry. The SERVQUAL model was used as an instrument to measure service quality on passenger retention. The methodology adopted in this study was quantitative. Data collected from 728 frequent flyers of srilankan airlines using semi-structured questionnaires. The Cronbach’s alpha was used to test the reliability of the data. Correlation and Multiple regression analysis were used to measure the relationship between service quality and passenger satisfaction (retention). The findings of the study revealed the importance of the tangibility reliability, responsibility assurance and empathy in service quality towards the passenger retention. The practical implication of the finding is that srilankan airlines should consider service quality as a critical element in passenger retention.

Key words: Service quality, SERVQUAL model, and Passenger retention.
Screening and *in vitro* selection of *Lactobacillus* strains isolated from Sri Lankan dairies with potential bile salt (BSH) hydrolysing activity

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Bile salt hydrolase (BSH) activity has been included among the criteria for probiotic strain selection and often being associated with its cholesterol-lowering effects. Various studies have indicated that probiotics may reduce blood cholesterol hence, BSH activity was explored in this study as the criterion for selecting potential BSH-active and cholesterol-lowering *Lactobacillus* strains isolated from selected Sri Lankan dairies. Probiotic lactobacilli (38 isolates) were screened for BSH activity by spotting 10 μl of 18 hour old culture onto BSH screening medium (MRS agar supplemented with 0.5% (w/v) sodium salt of taurodeoxycholic acid and 0.37 g l⁻¹ of CaCl₂). Plates were incubated, in an anaerobic jar, fitted with Anaerocult A (1.13829 Merck, Darmstadt, Germany) at 37 °C for 24-48 hrs. BSH activity was semi-quantified by measuring the diameter of precipitation zones. The assay was performed in duplicate. Majority of the isolates (76.3%) were grouped into class 1 based on diameter of precipitation zones (colony surface; up to 8 mm). Isolates of *Lactobacillus plantarum* HL-20 (13.2%) produced zones of up to 10 mm, therefore grouped under class 2. Around 10.5% of isolates belonging to *Lactobacillus fermentum* LAB 10 and *Lactobacillus fermentum* Akhavan-E1 did not produce any precipitation zone. Those isolates belonging to activity classes 1 and 2 were considered to have low BSH activity, hence, should further assess for their cholesterol assimilation and cholesterol co-precipitation abilities *in vitro*.

**Key words:** *Lactobacilli*, probiotic, bile salt hydrolase

Separation of Concerns for Web Engineering Projects

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There are over a billion websites on the world wide web and more are being added every minute. It is becoming increasingly challenging for web developers, designers and companies to create logically sound web applications which are also appealing to users. A common cause for this conflict is that the individuals who excel at developing the logical components of a web application has less regard and capability to contribute to the aesthetic aspects of the project and vice versa. Many developers and organizations resort to solutions such as pre-built templates which are suboptimal solutions for the project requirements and kills the uniqueness of the web site or web application they are building. While others, typically large companies follow time consuming and expensive methodologies employing tools such as wireframes and mockups which needs to be converted to code by a front end developer and costs time and effort to incorporate changes. The author proposes a methodology in which all the stakeholders involved in the development of a web application use a common abstract model which can be used for automatic code generation promoting the separation of concerns between the logic oriented stakeholders such as developers, architects and the aesthetic oriented stakeholders such as designers.

**Keywords**: Web Engineering, Separation of Concerns, Model Driven Engineering
Shakespeare in Bollywood

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Film or cinema is a comparatively recent genre than literature. Often critics assume the aesthetic superiority of the written word over the audio visual medium. This is primarily because one believes that written literature presents the reader with a greater plethora of discoverable facets than an audio visual medium where not much is left to the imagination. As soon as the makers of cinema recognized that telling a good story in moving pictures required a “good story,” adaptations of novels, plays, and short stories became commonplace. Indian cinema, popularly known as Bollywood, was not far behind. One of the most inspiring writers is William Shakespeare. His plays have a universality to them that has seen continual adaptations, reinterpretations and explorations in various forms. Whether through cinema, theatre or performing arts, India has contributed to its own understanding and shift in context of the essence of Shakespeare’s work. This paper shall discuss some major cinematic adaptations of Shakesperian plays by Bollywood and the cultural shift that they enjoy in this regard.

Keywords: Shakespeare, Bollywood, Cinematic Adaptations.

Simulation of the polygon penetration algorithm to find the depth of penetration of an object

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Here, in this research work, we perform the simulation of an algorithm called as the polygon penetration algorithm to find the depth of penetration of an object into an obstacle, while the object is being transported from the source point to the destination point in the real time in the surrounding environment of the robot. Here, we develop a C program/code to do the simulation. The simulation results show the effectiveness of the method developed by us.

Keywords—Polygon, Penetration, Euclidean Space
“South Asia: Financial Integration ideas & Performance of its Economy/Corporates vs. Peers from other Developing markets”

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To understand where South Asia stands vis a vis peer regions, this paper looks at the performance comparison of South Asian economy vs regions like BRICS, ASEAN, NEXT-11, MINT, East Europe, etc, including projections from 2015-2020. It then compares performance comparison of South Asia’s Top-200 companies vs companies from peer developing countries that make up BRICS, ASEAN, NEXT-11, MINT, etc. Once the relative standing of this region vs peers is established, it looks at several financial integration ideas that can help leverage this economic opportunity into savings mobilization for capital. Apart from conventional integration product ideas, it also looks at several unconventional financial integration ideas like medical tourism health insurance scheme, solar energy on-grid scheme, master ETF & feeder fund structure, start-up exchange, frameworks, etc between South Asian financial markets. It also looks at a SAARC Asset Class portfolio idea (CDCF portfolio) and compares it to market indices, and shows how it can increase the upside from multiple return enablers, while minimizing the downside due to low-correlation constituents. Lastly, it addresses the main Geo-political challenge of the South Asian region by offering a solution of Anchor partner countries to be investors in such financial integration ideas.

Keywords: South Asia, financial integration, capital market

Spatial dimension of Dengue epidemic in an urban environment: A study in Kolonnawa, Sri Lanka

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The study was carried out to identify the spatial dimension of the distribution of Dengue cases in Kolonnawa Medical Officer of Health (MOH) area in Colombo district Sri Lanka. The study was accomplished using 615 recorded dengue cases from May to September 2016 in the area. Kernel density estimation tool was used as the data analysis method. Integrated use of ArcGIS 10.1 software packages along with Microsoft Excel analytical tool were used to accomplish the data analysis. According to the results twenty Dengue high risk hotspots have been identified from the area. High population density and manmade environment were observed as the encouraging factors for the spatial distribution of Dengue. Considering the gender factor of the dengue affected individuals, 309 males and 306 females were identified during the study period which did not show any considerable difference between gender vise total. However, Kernel density estimation showed that there were gender vise differences in spatial distribution of Dengue cases. Comparatively more female patients recorded in areas such as Sedawaththa, Malpura, and Kiththampahuwa. More male patients were recorded in Salamulla and Megoda-Kolonnawa in the western half of the study area. The findings of the study are important in developing of dengue prevention measures in this area.

Key words: Spatial distribution of Dengue, Kolonnawa DS division and Dengue epidemic
STUDENT'S ANXIETY IN LEARNING STATISTICS

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Statistics is a much versatile subject which has been introduced in almost all degree courses in universities. Studies in different countries have shown that there is a high level of statistics anxiety among the undergraduates. This study was therefore initiated to study the statistics anxiety of the Social Science undergraduates in government universities in the Western Province in Sri Lanka. Necessary information was acquired through structural questionnaire from a sample of 319 undergraduates and the sampling method was 2-stage stratified random sample. It was found that the percentage of statistic anxiety among males is significantly higher than that of females. Factors were extracted using principal axis factoring method and both orthogonal and non-orthogonal methods of rotation were applied. Fear for Mathematics, Statistical Software, Computers, Statistics, Less Support, Misunderstanding, Negative Self Perception, Less Guidance, Less Cognitive Capacity and Class Anxiety were the factors identified as the reasons for statistics anxiety irrespective of gender and age. Of those ten factors “fear for mathematics” is the most important factor. Furthermore, it was identified that “more support and help” and “cognitive capacity” were the two significant factors to mitigate the student’s anxiety in statistics. The results identified are useful to the decision makers in the respective departments and it is recommended to carry out similar studies for other universities.

Keywords: Factor Analysis, Principal Axis Factoring, Statistics Anxiety

Study of the Community Outreach Library Services in Rajarata University Library System: A Marketing Perspective

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Academic library have been happily plateful their clientele by giving information service accomplish the requirements of students and researchers. The purpose of this paper is to describe the community outreach service done by Rajarata University Library system to promote service to their clientele a marketing perspective. The determination of this paper is to establish the concept of community service for cultivating continuous lifetime library use by the communities from their early childhood up to developed age. The additional purpose is to examine the best practices leading to community success and growth done by Rajarata University Library. Library conducts frequent training programme as an outreach programme for the public such as Primary level Student students, preschool teachers, and pregnant mothers in North Central Province. Through these all programmes, it provides students and library officers of the particular library a chance to interact with librarians who are not continuously noticeable to the public. Library offers a range of service for children including numerous categories of themes such as storytelling, good reading habit, mind mapping concept, getting ready for exam, and the way of organizing home library. Therefore libraries can accomplish great effects when they are with the community from their early childhood. It is hoped that this study will be supportive to libraries to implement a library community service that may be beneficial to other academic libraries.

Key words: Academic Library, Community Outreach Service, Library Marketing
Study of the turbine blades quantity affecting for the performance of a Savonius Type Vertical Axis Wind Turbine

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In the near future the whole world including Sri Lanka will have to find ways to utilize the available renewable energy, in order to match the increasing energy requirement. Therefore, they are moving towards for the renewable energy sources such as wind power, which is one of the highest potential clean energy source available in the world. Wind turbines: mainly Horizontal Axis Wind Turbine (HAWT) and Vertical Axis Wind Turbine (VAWT) are often used to harness wind energy. Usually, HAWTs give high power output than VAWTs. Although, HAWTs require relatively high wind speeds to operate at optimum conditions, It can generate higher amount of power than a VAWT with a same size turbine. However, VAWTs do not require as much wind as HAWTs, thus allowing them to be erected closer to the ground where wind speeds are lower. The aim of this research was to study the performance of a Savonius type VAWT with respect to the blades quantity. As a prototype, a barrel shaped and barrel sized wind turbine was analysed. For the analysis, number of turbine models which had different number of blades from 2 to 7 were analysed. During this research work, a comprehensive literature survey was carried out and analysing was largely based on simulations using state of the art computational fluid dynamics (CFD) codes. In this research, K-epsilon viscous model used for analysing the turbulent flow and studied transient time base. It was observed that 4 turbine blades have higher force and higher moment on the blades with increasing the speeds of the wind.

Keywords: Wind turbine blades, Wind energy, CFD

SURVEY ON WHETHER THE SRI LANKAN PRE-SERVICE NATIONAL DIPLOMA IN TEACHING PROGRAMME ADDRESSES THE LEARNING NEEDS OF DIVERSE LEARNERS

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This study sought to identify the state of prospective teachers' knowledge about differentiated instruction in the pre-service National Diploma in teaching program in order to meet the needs of diverse learners in 8 National Colleges of Education in Sri Lanka. This study involved 158 prospective teachers, 36 teacher educators from 8 National Colleges of Education including 3 Tamil, 3 Sinhala and 2 English in seven provinces and 8 different districts were selected to participate in this study. Data were collected using observation schedule, questionnaires and interview for prospective teachers and teacher educators. In addition, differentiated instruction factors embedded in the syllabus of National Diploma in teaching (29 subjects) were analyzed using content analysis. Chi square analyses and the descriptive analysis were used as major analysis techniques. The researcher found the individual differences; instructional strategies, classroom environment and the product assessing the learner were the influential factors of differentiated instruction in meeting the needs of diverse learners. The researcher concluded that differentiated instruction factors have to be included in the theory and practice of the syllabi to see improved achievements in the pre-service National Diploma in teaching. Empowering the teacher educators in differentiated instruction concept and practice is a dire necessity for the successful implementation of this pre-service teacher training conducted in Sri Lankan National Colleges of Education.

Keywords: Learning needs, diverse learners, differentiated instruction, instructional strategies, assessing the learner, pre-service teacher education
SVM Image Identification from BoW to Create article through NLP

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Image processing and Natural language processing apply to identify images and documents uniquely. However, this achievement is identify historically valued places around Sri Lanka and produce unique article around those area. We addressing this problem because existing system only provide location through GPS in Sri Lankan context. They are not providing much information. In this method, we train the images regarding those places through SVM to identify the images using SURF detector. System will increase the accuracy of prediction by taking GPS data and user inputs necessarily. We show that system will give 70% of accurate for the given training dataset and can increase the accuracy of system when number of training dataset is increasing. NLP help to produce unique article for the identified places using the algorithm which is written to remove the duplication of sentences.

Keywords: Support Vector Machine, SURF detector, Natural Language Processing

Syntax acquisition by the Sinhala child

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Human beings aren’t having the proper competence of language at birth. This research conducted to find how does the child acquire the syntax of language and learn the process of using language in various contexts and the influence of imitation, comprehension and production on language acquisition. A sample of six children in the age of 1½- 4 years whose first language is Sinhala were selected proportionally to represent word stages as the first research methodology. Grammatical context was studied with the data collected through recordings of children’s natural speech. Secondly, 20 regular constructed utterances, 10 different couples of pictures and 10 different pictures were used to study the influence of imitation, comprehension and production respectively. Thirdly, data obtained through a questionnaire from 50 parents having 1½ - 4 children were analyzed. Key findings of the research denote that the Sinhala child obtains the competence of acquiring the syntax of the language with biological and language environmental influence. Additionally, it reveals that the structure of a language directly affects for the order of acquisition. Additionally, imitation and comprehension and the influence of adult directly affect for acquisition. Accordingly, it reveals that the biological competence of acquiring syntax by small child develops with the interaction of the environment and all common universal factors generous to all languages and the parameters specialized for some languages should be developed through the behavioral process.

Keywords: syntax acquisition, Sinhala language, child, nature, nurture
The Impacts of Marketing Strategies on the Growth of Small Medium Enterprises in Sri Lanka

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Small Medium Enterprises (SMEs) in Sri Lanka is the backbone of the Sri Lankan economy as a developing county. Other hand it is a crucial to the growth of the country. There are most of researches about the marketing strategies with growth on SMEs in the world, there are very few researches relate to marketing strategies of SMEs in Sri Lanka. Marketing strategies is a crucial marketing approach that is most important to growth on SMEs. SMEs have to apply some formal marketing strategies which will be helped them to achieve competitive advantages than their competitors in the existing market. The main objective of this study is to find out the impacts of marketing strategies on the growth of small medium enterprises. To do this study, researcher used primary data and secondary data as the data sources. The researcher developed structural questionnaire to gather primary data. Researcher chooses 50 samples of SMEs randomly from Ampara district in Sri Lanka who were engaged in the manufacturing and services sectors to collect the primary data. The researcher used the SPSS-20.0 (Statistical Package for Social Science) version to analysis the data and hypothesis. There is high failure rate of SMEs business activities due to its lack of marketing strategies toward growth on their business. Therefore SMEs must require effective and efficient marketing strategies to obtain competitive advantages in the market.

Key words: Marketing Strategies, Small Medium Enterprises, Business Growth

The involvement of women as home-based workers in Indonesia: profile, contributing factors, and implications to their life condition

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Indonesia has experienced the process of economic globalisation for decades. Along with economic globalisation, the size of the informal economy in Indonesia has been changing over time. Now, in Indonesia, approximately more than fifty percent of women who works in non-agricultural sector are occupying informal employment. One form of informal employment that are held by most women is home-based work. This paper aims to explore the involvement of women in home-based works in Indonesia in the context of globalisation. This paper is a literature study adopting qualitative analysis technique on the results of previous research and other secondary documents. Even though the real condition of the informal economy in Indonesia tend to be invisible and no more than statistical estimates, this study found that home-based works are occupied by women from poor households with low education level. It is also found that they produce various types of product and are involved in diverse industries. Women's involvement in home-based works cannot be separated with the context of globalisation. There is an indication of the phenomenon of “housewifisation of labour” involving the discourse of patriarchal ideology and capital accumulation. Their involvement in home-based works influences their life condition at least on three issues: income, working time, and health. However, it tends not to influence the gender relation within the household.

Keywords: globalisation, informal economy, home-based works, women
The Other View: Demystifying History in *The Djinns of Eidgah*

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Through unresolved conversations that mark the polarity of the violent political narrative of Kashmir, the pertinent play, *The Djinns of Eidgah* written by Abhishek Majumdar becomes a parable of loss, pathos, and conflict. The obfuscated answers that emerge in trying to find the elusive truth demand a choosing of sides that justifies the brutal narrative of conflict, which has engulfed us for decades. This choosing of sides is somewhat arbitrary and subject to not only the process of peacekeeping, perpetration of violence and resistance to it but also the historic representation of aspirations of Kashmiris. If at all there is a concept of 'we', both in terms of the nation-state to which we belong or the kinship of human kind it is thoroughly investigated by Abhishek in this haunting play. The human cost of conflict is expertly portrayed through the trials and tribulations of two young siblings, Bilal and Ashrafi. This paper attempts to read this recent play by Abhishek in the backdrop of historically inflicted violence and the theoretical context of Linda Hutcheon's concept of historiographic metafiction. Abhishek's play adroitly offsets the psychological breakdown of Kashmiris against the contemporary history of the unrest in, in inscribing both these narratives, the pattern that emerges is that of a mirrored effect where events create a cyclical narrative without any hope for closure.

*Key words*: Resistance, Violence, Metafiction.

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**THE PHASE TRANSFORMATION OF QUARTZ FROM α TO β AS EXAMINED BY IN-SITU HIGH TEMPERATURE X-RAY DIFFRACTION**

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The simultaneous determination of composition and Lattice constants due to the phase transition of quartz has not been received considerable attention yet. The effect of heating on composition and lattice constants of quartz has been investigated by high-temperature X-ray diffraction technique. The X-ray diffractograms were initially recorded with progressive heating at around 25, 200, 400, 600, 800 and 1000 °C. The phase transition of quartz was further investigated by obtaining X-ray diffractograms at 1 °C intervals between 570 °C and 575 °C. Results indicated that the composition variation was initiated close to the transition temperature where the phase conversion was eventually occurred between 572 °C and 574 °C. The phase transition was enduring until the α-phase was completely converted to β-quartz and the transformation was accomplished at around 574 °C. The stability of the crystal lattice was further established through an infinitesimal rearrangement of the β-quartz structure to stable quartz-β-high. A significant expansion of the unit cell volume was observed at 600 °C (117.21 Å³, 4.54%) from the initial volume (112.12 Å³). It is also found that the unit cell volume expansion is accounted from the elongation of lattice constant in all crystallographic directions. A substantial increase in unit cell volume was observed during the initial stage of the heating and insignificantly changed during the phase transition period and beyond the completion of the transformation.

*Keywords*: Quartz, Phase transition, Lattice constants
The Relation between Demographic Factors and the Employees’ Intention to Quit in Free Trade Zones in Sri Lanka
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Most important assets of any organization is employee. Thus, organizations spend a lot for recruitment, selection as well as for training and development, employee well-being and improving quality of work life. Therefore, reducing employee voluntary turnover and improving employee retention is major concern for any organizations. The problem of employee retention is depending on many factors among demographic factors are important. The main objectives of this study to examine relation between demographic factors affecting employees’ intention to quit in the Free Trade Zones in Sri Lanka. Quantitative approach was employed with structured questionnaire among 950 workers in 13 Free Trade Zones in Sri Lanka. A research hypothesis was tested to determine whether there is any significant difference between the demographic factors and the intention to quit. Analysis of variance, multiple classification analysis and descriptive statistics were used to test the hypothesis. The results of the analysis of variance show that age, length of service and family income significantly affect to the intention to quit however, marital status and education do not affect at the 0.05 level of significance. However, the results of the multiple classification analysis shows that employees who were below 22 years old, have service of less than 3 years, have a family income below US $60.00 per month, married employees and pass the GCE (O/L) had a significantly higher propensity to resign.

Keywords: Intention to Quit; Demographic Factors; Free Trade Zones

The Role of Parents in Improving Teaching-Learning Process: A Study Conducted in Selected Plantation Secondary Schools in Badulla District
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Parental involvement has a significant contribution in improving teaching-learning process in school education. This study was conducted in selected plantation secondary schools which due to historical and other reasons still remain the weakest segment in the national education system in Sri Lanka. The major objective of the study was to assess the parental involvement in improving the students’ performance and also to make recommendations to make such involvement more effective. Using a mixed method research design, this study was conducted in Badulla Education Zone with a sample that included five schools selected through random sampling method. Data were collected using questionnaires and interviews from all the five principals including five teachers, six students and eight parents from each school. The study showed that principals and teachers generally expect only physical and financial support from the parents in improving the infra-structural facilities of the school as well as for school functions and ceremonies. On the other hand the plantation parents are generally ignorant of their parental role in involving in teaching-learning process due to their lower education levels and the nature of their work.

Key words: Plantation schools, Parental involvement, Teaching-learning process
The treatment of women characters in Amitav Ghosh’s *The Glass Palace*

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Amitav Ghosh is one of the versatile writers in Indian English Literature, who mainly signifies the cultural heritage of world literary scene. He was born on July 1956 in Calcutta and grew up in Bangladesh and Srilanka. He has done his schoolings in an all-boys school named Doon school and later he finished his degree course in St. Stephen’s college, Delhi University and Delhi school of economics. Gosh finds his own place in Indian Literature through his amazing works. He in his works often raises his voice for the upliftment of the female characters who suffer in their day today life. The treatment of women characters in Amitav Ghosh is too different from the traditional notions of female characters and their existence in fiction. They are not sleeping beauties but living creatures which is rather being a burden on their struggle or their share of fight as and when needed. Ghosh has thrashed women’s problems and situations in a fast-changing social scenario. Amitav Ghosh’s, novels reflecting their high critical mind of women’s struggle for existence seem to reveal the essential and typical theme of literature.

**Keywords:** Exile, cultural displacement and uprooting.

Wearable Device for the Visually Impaired to Automatically Detect Sri Lankan Currency Notes

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Currency note recognition is one of the most difficult tasks encountered by visually impaired people in Sri Lanka. It is reported that nearly 200,000 people are believed to be blind and 400,000 are having low vision out of a population of 20 million in Sri Lanka. These visually impaired people have to undergo numerous challenges in their routine life when interacting with various outside sources including banks, police, transport, postal services, shops, etc while using currency notes.

This paper presents a computer vision based approach to automatically detect the type of a currency note using a portable device that can be used by a blind person. The proposed approach uses a monochromatic light source to illuminate the currency note in order to segment the currency from the image. A fusion of Bag of Feature of Speeded Up Robust Feature (BoF-SURF) and hue color histogram is used to describe the currency notes and classifying with a Support Vector Machine (SVM). The portable device is setup using a Raspberry Pi 2 model B with a Raspi camera. Based on the type of detection, a feedback is given to the user by specific vibration pattern corresponding to particular currency notes. The results indicate that the proposed technique segments the currency notes with an average completeness of 95% having a spatial error of 0.3 while keeping the average recognition rate at 91 %.

**Keywords:** Currency notes, wearable devices, wireless devices
Agriculture & Fisheries 2017
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