

# Abstracts of Published Papers 2018, Vol.13



East West University Center for Research and Training

**East West University**

A/2 Jahurul Islam Avenue, Jahurul Islam City

Aftabnagar, Dhaka-1212, Bangladesh

Phone: 09666775577, Ext.387

Email: [ewucrt@ewubd.edu](mailto:ewucrt@ewubd.edu)

Website: [www.ewubd.edu/ewu-crt/](http://www.ewubd.edu/ewu-crt/)



East West University Center for Research and Training

**East West University**

## PREFACE

It is my pleasure to write this introductory note for the thirteenth volume of the Abstracts of Published Papers 2018. The Abstracts of Published Papers is an annual publication of East West University Center for Research and Training (EWUCRT) with an objective to keep an official log of academic publications of the faculty members of East West University. It includes the abstract of published research articles, book chapters, books, and conference papers of our colleagues.

It is indeed a matter of great satisfaction for East West University Center for Research and Training (EWUCRT) to publish the thirteenth volume of the Abstracts of Published Papers, which contains abstracts of the academic publication published in 2018. This publication is a collective effort of the faculty members of the university. Our scholars have enthusiastically and immensely contributed in areas of business, economics, social sciences, engineering, telecommunications, liberal arts and literature, population health, computer science, pharmacy, and technology. This volume contains abstracts of 87 research articles. Among them, 40 articles were published in international and six in national journals, four book chapters were published abroad, as well as 33 papers were published in international and four in national conference proceedings. Considering their academic achievements, we sincerely congratulate all the research scholars.

The Center expresses its sincere thanks to Dr. Rafiqul Huda Chaudhury, Chairperson of EWUCRT and Member, Board of Trustees, and all the members of the Research Committee (RC) for their support and encouragement. Furthermore, thanks are also due to all the personnel of EWUCRT involved in this publication.

*M. S. Haque*

Professor Muhammed Shahriar Haque, PhD  
Executive Director  
EWUCRT, 2019

# Table of Contents

## Faculty of Business and Economics

### *Book/Book Chapter*

1. Revisiting Indian Green Marketing..... 1
2. Does Branding Matter for Transformation from Informal to Formal Sector: Exploratory Cases from Dhaka..... 2
3. ‘Haji Nanna Biriyani’: A Case of Transformation Through Brand from the Streets of Dhaka.... 3
4. Cost-Benefit Study on Implementing Village Courts in Union Parishads of Bangladesh..... 4

### *International Journal*

1. Performance Evaluation of Selected State Owned Commercial Banks of Bangladesh..... 5
2. Associations Between Organisational Factors, TQM and Competitive Advantage: Evidence from an Emerging Economy..... 6
3. Study on Practice of Soft Skill among the Workforce: A Case from Ready Made Garment (RMG) Industry of Bangladesh..... 7
4. The Impact of Rewards on Task and Extra Task Behaviors in Regards to Gender and Job Position: A Case Study from the UK Retail Industry..... 8
5. The Relationship Between Internal Marketing and Employee Job Satisfaction: A Study from Retail Shops in Bangladesh..... 9
6. Total Factor Energy Productivity and Efficiency Changes of the Gher (Prawn-Carp-Rice) Farming System in Bangladesh: A Stochastic Input Distance Function Approach..... 10
7. Poverty, Income Inequality and Determinants of Income of the Ethnic Communities of Bangladesh..... 11

### *National Journal*

1. The Impact of TQM Practices in Improving Product Quality: Bangladesh Garment Organizations as a Case..... 12
2. Impact of Human Resource Management Practices on the Working Life of Tannery Workers in Bangladesh..... 13
3. Comparative Advantages of Lentil (*Lens culinaris*) and Mustard (*Brassica nigra* L.) Production and their Profitability in a Selected District of Bangladesh..... 14

### ***International Conference***

1.	Engaging Graduates to be Social Entrepreneur in Bangladesh: Problems and Prospects.....	15
2.	An Assessment of Soft Skill Awareness Level amongst Bangladeshi Managers: A Study from Ready Made Garments (RMG) Sector.....	16
3.	Customer Retention for Small Brands, where Recovery Paradox is a Strategic Issue: A Study from Dhaka, Bangladesh.....	17
4.	Do Oil Price Shocks Affect Consumer Spending? Evidence from 5 OECD Countries.....	18

### ***National Conference***

1.	Sexual Harassment by Educator: A Glance at East West University.....	19
----	--	----

## **Faculty of Sciences and Engineering**

### ***International Journal***

1.	First Steps in Creating Online Testable Reversible Sequential Circuits.....	20
2.	Thermodynamic Limit of Solar to Fuel Conversion for Generalized Photovoltaic Electrochemical Systems.....	21
3.	Optimization and Performance of Bifacial Solar Modules: A Global Perspective.....	22
4.	Biofilms Comprise a Component of the Annual Cycle of <i>Vibrio Cholerae</i> in the Bay of Bengal Estuary.....	23
5.	HIV-1 Tat Interactions with Cellular 7SK and Viral TAR RNAs Identifies Dual Structural Mimicry.....	24
6.	Enhanced and Preferential Internalization of Lipid Nanocapsules into Human Glioblastoma Cells: Effect of Surface-Functionalizing NFL Peptide.....	25
7.	Analysis of Distortion-Induced Stress and Retrofitting Technique of Curved Twin I-Girder Composite Bridge.....	26
8.	A Statistical Analysis of the Dynamics of Household Hurricane-Evacuation Decisions.....	27
9.	Analysis of Stationary and Dynamic Factors Affecting Highway Accident Occurrence: A Dynamic Correlated Grouped Random Parameters Binary Logit Approach.....	28
10.	Correlation Development for Zeta Potential with Storage Time, Emulsion Concentration and the Stability of the Emulsion on the Droplet Size Distribution.....	29

11.	The Single-Index Support Vector Regression Model to Address the Problem of High Dimensionality .....	30
12.	Fixed Parameters Support Vector Regression for Outlier Detection.....	31
13.	Application of Classification and Regression Trees Algorithm to Classify Children Ever Born: BDHS 2011 .....	32
14.	The Performance of K-Means Clustering Method Based on Robust Principal Components.....	33
15.	Collisions of Ion Acoustic Multi-Solitons in Electron- Positron-Ion Plasma with the Presence of Nonthermal Nonextensive Electrons .....	34
16.	The Modulation of a Dust Ion-Acoustic Wave in a Collisional Dusty Plasma .....	35
17.	Beyond Pristine Metal-Organic Frameworks: Preparation and Application of Nano Structured, Nanosized, and Analogous Mofs .....	36

### ***International Conference***

1.	Design and Development of Smart Water Purification Level Tester for Visually Impaired Person.....	37
2.	Recognition of Bangla Handwritten Characters Using Feature Combinations .....	38
3.	Tailoring Light-Sound Interactions in a Single Mode Fiber for the High-Power Transmission or Sensing Applications, Proc. SPIE 10714. ....	39
4.	A New Hybrid Approach for Scalable Table-Driven Routing in MANETs .....	40
5.	Over Two Octave Spanning Visible and Near-IR Supercontinuum Generation in Dual-Core PCF.....	41
6.	Performance Analysis of a CPDM-QPSK Direct Detection Optical Transmission System Under the Effects of Cross-Polarization.....	42
7.	Applicability of Unsteady RANS for Predicting Flow Fields Around Cylinders .....	43
8.	The Potential Use and Usefulness of Travel Time in Fully Automated Vehicles .....	44
9.	Effects of Non-Extensive Q-Distributed Electrons on Dust Ion Acoustic Shock Structures in an Unbounded Dusty Plasma with Two Thermal States of Electrons.....	45
10.	Modulation of Heavy Nucleus Acoustic Wave in a Degenerate Relativistic Plasma.....	46
11.	Effects of Vortex-Like Ion Distribution on Dust-Acoustic Solitary Waves in a Self-Gravitating Opposite Polarity Dust Plasma Medium .....	47

12.	On Eigenfunction Based Outlier Detection in High-Dimensional Datasets.....	48
13.	Metal Organic Frameworks (Mofs) Derived Magnetic Co-Carbon Composites for the Reduction Of <i>P</i> -Nitrophenol .....	49
14.	Existence of Periodic Traveling Wave Solutions Correspond to Pattern Formation in the Brusselator Model .....	50
15.	Spiral Pattern Formation of Periodic Traveling Wave Solutions in A diffusive epidemic Model with Nonlinear Incidence Rate.....	51

### ***National Conference***

1.	Preparation of Metal Organic Framework (MOF) Derived Cu–Carbon Composite and its Catalytic Applications Towards Environmental Remediation .....	52
----	---	----

## **Faculty of Liberal Arts and Social Sciences**

### ***International Journal***

1.	Hyper-Elitism in Writing Literary Criticisms: Theories and References .....	53
2.	Thinking Unconventional: Alternative Assessment at Tertiary Level Education in Bangladesh .....	54
3.	Comparative Studies on Films: Scopes of Digital Humanities .....	55
4.	Ignorance of Rights: Politics of Religious Sentiments Vs Human Rights in Bangladeshi School Textbooks.....	56
5.	Negotiating the Politics of Power: Tahmima Anam’s <i>The Good Muslim</i> and Women’s Role in War and Nation-Building.....	57
6.	An Old Issue of Protecting GIS for Culture: A New Insight from the Experience of India and Bangladesh .....	58
7.	What Do Grown Children Owe their Parents? A Moral Duty and Legal Responsibility in Bangladesh .....	59
8.	Modeling and Mapping the Burden of Disease in Kenya.....	60
9.	Open Access Repositories of Bangladesh: An Analysis of the Present Status.....	61
10.	Perception on the Use of Mobile Phones in Retrieving Information from Academic Libraries: A Developing Country Perspective .....	62

11.	The Influence of Gender Relations on Women’s Involvement and Experience in Climate Change Adaptation Programs in Bangladesh.....	63
12.	Child Murder Issues in Bangladesh: Reasoning from Socio-Ethical Observation .....	64
13.	Web Technology and the Changing Pattern of Relationship: A Study on Urban Youth in Dhaka City .....	65
14.	Media and Consumption Behavior of Urban Youth in Dhaka City .....	66
15.	Analyzing Disaster Risk Factors of Cyclone Survivors in Bangladesh.....	67
16.	Are Organizations Accountable? Disconnect Between Gender and Sanitation in Bangladesh..	68

### ***National Journal***

1.	Mental Health Well-Being Among Undergraduate Students of East West University: Evidence from a Cross-Sectional Survey .....	69
2.	Landslide in Chattogram City: Spatial Vulnerability and Risk Mitigations Options .....	70
3.	Unusual and Unnecessary C-Section Practice in Bangladesh: Violation of Respect for Autonomy Principle and Social Equity in Healthcare.....	71

### ***International Conference***

1.	Mandate of Safeguarding Intangible Cultural Heritage: Is IP Domain a Suitable One? A Missing Opportunity for Bangladesh .....	72
2.	An Overview of the Challenges of ‘Jamdani’ and ‘Hilsha’- The Two Registered Gis from Bangladesh in Post Registration Epoch.....	73
3.	The Importance of the Arbitral Award in the Bangladesh-India Maritime Delimitation in the Aspect of International Maritime Boundary Law .....	74
4.	A Critical Study on Hindu Woman’s Right to Property and to Divorce: Bangladesh Perspective .....	75
5.	Parents Maintenance Act 2013 of Bangladesh: An Analysis of The Provisions and the Implementation Context Strategy.....	76
6.	User’s Perception of Quality in Residential Aged Care in Bangladesh.....	77
7.	Integration of Health Care and Social Support in Specialized School for Children with Autism: A Case Study from Dhaka City .....	78

8.	Designing Classroom Activity: To Understand the Key Psychological Perspectives in an Introductory Course.....	79
9.	Assessing the Role Public Participation in Safeguarding the Good Governance of Climate Finance .....	80
10.	Adaptation Process of the Climate Change Migrants in the Dhaka Metropolitan Region .....	81
11.	Public Engagement in Nation Development Through Open Data Platform: Bangladesh Government Initiatives.....	82
12.	Users Perception of E-Resources in the Private University Libraries of Bangladesh .....	83
13.	What Makes Women Resilient in Climate Vulnerable Situation? Untold Stories of Bangladeshi Women in the Era of Climate Change .....	84
14.	Information Economy and the New Urban Marginality in Dhaka City, Bangladesh.....	85

***National Conference***

1.	From Classroom Discourse to a Business Product: The Commercialization of English in Bangladesh. ....	86
2.	The Alienation of Bachelor in the Metropolitan Areas: A Case of Dhaka City, Bangladesh .....	87



# Faculty of Business and Economics

***Management Research and Innovation***, Department of Business Administration, Bharti Publications New Delhi India, pp. 225-231, ISBN 978-93-86608-58-1

### **Revisiting Indian Green Marketing**

**M Sayeed Alam\***, **Naharin Binte Rab\*\*** and **Bushra Humyra Esha\*\*\***

#### **ABSTRACT**

In the sphere of Green Marketing also termed as environmental marketing customer satisfaction is coupled to sustainable environment or society. The sharp rise in number of ISO1400 companies in India makes visible the trend of adoption of Green Marketing by their companies. A considerable detail about Indian consumer behavior is that, 56 percent of the Indian consumers want environmental protection even if they have to pay for it. A survey reveals that most of the Indian manufacturing companies are willing to adopt eco- friendly practices. This paper investigates the current trend of green marketing in Indian companies. The investigation is based on secondary data. It can be identified as “green marketing myopia” when there is an improper balance between the customer satisfaction and environmental sustainability. Current practices make authors feel skeptical about making a wholesome but delicate balance between the two objectives; in the end provide some generalized guideline for the Indian companies.

**Keywords:** Green Marketing, India, Green Marketing Myopia

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: sayeed@ewubd.edu

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: naharin@ewubd.edu

\*\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: esha\_bushra@ewubd.edu

***Management Research and Innovation***, pp. 232-236, ISBN 978-93-86608-58-1, published by Bharti Publications New Delhi India.

**Does Branding Matter for Transformation from Informal to Formal Sector:  
Exploratory Cases from Dhaka**

**M Sayeed Alam\*** and Masudur Rahman\*\*

**ABSTRACT**

This paper is about two successful cases of transformation from informal into formal sector. The cases are: Shaemsher Ali's VhunaKhichuri and Salam Dairy. Authors approach to have a deeper understanding of 'how' these entrepreneurs made this journey from informal into formal with a special focus on role of branding. This is an exploratory and explanatory case study where information was collected through in-depth interview and observation technique that allowed the researchers look into the phenomenon and infer. The main finding is: the entrepreneurs did vary in demographic profile though, their success attributed to a common trait; i.e. commitment.

**Keywords:** Dhaka, Branding, Informal Sector, Case Study

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: sayeed@ewubd.edu

\*\*Department of Marketing, University of Dhaka, Dhaka 1000, Bangladesh

**Responsible Human Strategies for gender, Equity, Empowerment and Leadership,**  
pp 241-246, ISBN: 978-93-88630-08-5, published by Bloomsbury India

**‘Haji Nanna Biriyani’: A Case of Transformation Through Brand from the  
Streets of Dhaka**

**M Sayeed Alam\*** and Masudur Rahman\*\*

**ABSTRACT**

This is a single descriptive case study that examines the de facto context of a 42-year long sustainable brand, namely Haji Nanna Biriyani that once had the status as street vendor. This paper attempts to shed light on transformation of street food vendors from informal into formal sector through the lens of branding per se marketing. For this purpose the author ‘chose’ a unique case of transformation. Haji Nanna Biriyani, today’s reputed brand in Dhaka started back in 1976 without a license. Today, this business is registered, pay taxes and maintain all business formalities. The primary focus of the owner was customer satisfaction through quality instead of obtaining registration. Having driven by quality-centric motivation the owner would rather get himself involved in purchasing the ingredients. Haji Nanna Biriyani achieved name recognition or became a brand, through the core means of customer satisfaction, got registered which by now branched out at seven different premium locations in Dhaka city. The brand has proven to be a sustainable one in the backdrop of intense competition in the category.

**Keywords:** Nanna Biriyani, Brand, Transformation, Informal Sector, Formal Sector, Dhaka

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: sayeed@ewubd.edu

\*\*Department of Marketing, University of Dhaka, Dhaka 1000, Bangladesh

***Bangladesh Priorities-Helping Vision 2021 a reality***, Volume 1 (A H Development Publishing House), ISBN number: 978-984-92671-0-2, Page numbers: 531-549, Year of publication: 2018

**Cost-Benefit Study on Implementing Village Courts in Union Parishads of Bangladesh**

Md Shanawez Hossain\* and Nabila Zaman\*\*

**ABSTRACT**

The proverbial judicial delay in Bangladesh has proved the saying, ‘Justice delayed is justice denied’. Although it is essential for justice to be dispensed as early as possible, in Bangladesh it is being hindered by the structure of governance and structure of judiciary system. Establishment of Village Courts can accelerate the sluggish process by significantly reducing the cost and time of a petitioner. The study adopts a cost-benefit approach to evaluate the efficiency of implementing Village Courts in Ups in Bangladesh, which is assumed to increase the access to justice of common villagers. Implementation of Village Courts is considered by many practitioners, academics, litigators as a form of judicial reform intervention which is targeted towards ensuring better justice for under-privileged citizens. The distribution of cases between district courts and Village Courts also brings down the number of pending cases in district courts. For per unit cost, each petitioner of a Village Court benefits two-three times of the cost. As such, by saving the extra money Village Courts are indirectly boosting the economic growth serving justice to unprivileged.

\*BRAC Institute of Governance and Development. BRAC University, Email: shossain@bigd.bracu.ac.bd

\*\*Department of Economics, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: nabila@ewubd.edu

**Indian Journal of Economics**, University of Allahbad, India, Issue No.#390, Part III, Vol. XCVIII, ISSN 0019-5170, 2018.

## **Performance Evaluation of Selected State Owned Commercial Banks of Bangladesh**

**Tanbir Ahmed Chowdhury\*** and **Farzana Huda\*\***

### **ABSTRACT**

In a developing country like Bangladesh the banking system as a whole play a vital role in the progress of economic development. In this paper we have tried to analyze the development and growth of Selected State Owned Commercial Banks of Bangladesh. It is observed that the selected state owned commercial banks are not able to achieve a stable growth of branches, employees, loans and advances, net income, earnings per share during the period of 2011-2015. The credit management and loan recovery of state owned commercial banks are not satisfactory. Seven trend equations have been tested for different activities of the state owned commercial banks. Among them the trend value of branches, employees, deposits and net income are positive incase of all the banks. Square of correlation coefficient ( $r^2$ ) has also been tested for all trend equations. The  $r^2$  of branches, deposits, loans and advances is more than 0.5. Authors are also tried to identify the problems of state owned commercial banks and provide some suggestions to overcome the situation.

**Keywords:** Bank, Commercial Bank, Loans, Deposit, Net Income

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: tanbir@ewubd.edu

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: fzh@ewubd.edu

***An International Journal***, Vol. 25, Issue: 3, ABDC ranked B, pp.854-873,  
<https://doi.org/10.1108/BIJ-05-2017-0110>

**Associations Between Organisational Factors, TQM and Competitive Advantage:  
Evidence from an Emerging Economy**

**Farhana Ferdousi\***, Kevin Baird\*\*, Rahat Munir\*\*\* and Sophia Su\*\*\*

**ABSTRACT**

The purpose of this paper is to examine the association between the extent of adoption of TQM, using Kaynak's (2003) core TQM practices (quality data and reporting, supplier quality management, product/service design, process management) model and competitive advantage. In addition, the study examines the antecedent role of organisational-related factors (intensity of market competition, information technology (IT), expert systems and the supplier evaluation programme) in respect to the extent of adoption of TQM. A survey was conducted of 673 business units of garment organisations in a developing country, Bangladesh. The findings indicate that the extent of adoption of TQM practices was positively associated with competitive advantage. In addition, two organisational-related factors (intensity of market competition and IT) were positively associated with the extent of adoption of TQM. The findings provide an insight into the ability of TQM to facilitate competitive advantage in developing countries. Practitioners are also provided with an insight into which organizational factors facilitate the adoption of TQM practices. The findings provide an important insight into the use and value of TQM practices in developing countries.

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: farhana@ewubd.edu

\*\*Macquarie University, Sydney, Australia

\*\*\*Department of Accounting and Corporate Governance, Macquarie University, Sydney, Australia

**International Journal of Asian Social Science**, 8(10),808-8018, ISSN: 2226-5139, September, 2018 (ERA Journal ID- 200679)

**Study on Practice of Soft Skill among the Workforce: A Case from Ready Made Garment (RMG) Industry of Bangladesh**

**Laila Zaman\***, **Md Atiqur Rahman Sarker\*\*** and **Nargis Akter \*\*\***

**ABSTRACT**

The aim of this research is to identify the practice of soft skills in the workforce in the RMG sector. Data has been collected using a structured questionnaire. Stratified random sampling was used to determine the sample. Findings reveal that reliability is the most practiced skill whereas networking is the least practiced among the other given variables. In addition, the study showed that family and self-motivation are the sources of developing soft skills. The results indicate that the practice of soft skills are comparatively low in the RMG sector of Bangladesh. The findings of the research will assist the managers of RMG to review and incorporate the desired soft skills in their practice.

**Keywords:** Bangladesh RMG Workforce Soft Skills Practice

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: lz@ewubd.edu

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh & Ph.D Candidate, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia. Email: mars@ewubd.edu/ sarker.limon@gmail.com

\*\*\*School of Business Studies, Southeast University, Bangladesh. Email: nargis\_252@yahoo.com



***Saudi Journal of Business and Management Studies***, 3(7),812-821. ISSN 2415-6663. Scholars Middle East Publishers (UGC Approved), UAE, July.

**The Impact of Rewards on Task and Extra Task Behaviors in Regards to Gender and Job Position: A Case Study from the UK Retail Industry**

Fatima Kanis Nayan\* and Md Atiqur Rahman Sarker\*\*

**ABSTRACT**

Reward plays a vital role to establish the attitudes of employee towards their job and the organization. There are several forms of reward that an organization can provide. However, this paper examines which types of rewards play significant role to motivate employees for achieving task and extra task behaviors. Based on the previous research and the suitability of data collection, the research method has chosen for this study is a quantitative approach. A variety of the findings is available from this research, such as: the reward practices of the sector presented in this study, why employee thinks non-financial rewards are important to them rather than financial rewards or vice versa. At the same time, this study also identifies whether female employees are considering non-financial rewards as motivating factors for them than men or not. Furthermore, it discloses that job position (managerial and non-managerial) has a considerable impact on reward perceptions. However, the results and conclusion are only applicable to the chosen organization.

**Keywords:** Rewards, Employee perceptions, Task and Extra Task Behaviors

\*Department of Management School of Business & Economics North South University. Email: fatima.nayan@northsouth.edu/ amikanis@gmail.com

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh & Ph.D Candidate, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia. Email: mars@ewubd.edu/ sarker.limon@gmail.com

*Journal of Business & Retail Management Research*, 12 (3), 149-159.

**The Relationship Between Internal Marketing and Employee Job Satisfaction: A Study from Retail Shops in Bangladesh**

**Md Atiqur Rahman Sarker\*** and Dewan Mehrab Ashrafi \*\*

**ABSTRACT**

A Retail store is now a prevalent concept in Bangladesh offering a wide range of necessity goods for household and daily living. Within the last one decade, superstores have developed positive perceptions among customer and this is the attractive business to many investors. As retail shop business is based on service sector, customer satisfaction and service delivery are keys to the success where having satisfied employees are essential. Hence, to achieve sustainable organizational development and higher organizational performance in this competitive market, the need of having a special emphasis on effective internal marketing practice is worth mentioning. Viewing employees as an internal customer is essential and vital in internal marketing that contributes to job satisfaction. This paper aims to analyze the relationship between internal marketing factors and employee job satisfaction in the retail sector of Bangladesh. The essential assumptions in the research are internal marketing components namely training and development, organizational support, pay and rewards, and retention policy influence job satisfaction. A multiple regression analysis was used as an efficacious method to test the effect of internal marketing practices on employee's job satisfaction. The adjusted  $R^2$  is .751 which suggests that the four internal marketing elements explain close to 75.1 percent of the variance for the dimension of employee's job satisfaction. The results of the multiple regression analysis elucidate that there is variation in the effect of internal marketing factors on job satisfaction. So, it can be deduced that the stronger the internal marketing practice; the better will be the level of employee satisfaction. Organization should treat employees as an internal customer and give them opportunities for developing themselves. The company should ensure that they have the promotion opportunity and frequent feedback along with ensuring a healthy working environment. A company should induce financial rewards by providing bonus, commissions etc. to increase the satisfaction level. Since internal marketing practices act as a precursor to higher organizational performance and job satisfaction, special attention has been given in this paper to focus the importance of internal marketing practices.

**Keywords:** Internal Marketing, Job Satisfaction, Customer Satisfaction, and Organizational Performance

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh & Ph.D Candidate, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia. Email: mars@ewubd.edu/ sarker.limon@gmail.com

\*\*School of Business Administration, East Delta University, Bangladesh. Email: mehrab.ashrafi35@gmail.com

***Energies***, 11 (12):1-17, 3482; doi:10.3390/en11123482. Year of Publication: 2018

**Total Factor Energy Productivity and Efficiency Changes of the Gher (Prawn-Carp-Rice) Farming System in Bangladesh: A Stochastic Input Distance Function Approach**

Sanzidur Rahman\* and Basanta Kumar Barmon\*\*

**ABSTRACT**

This paper measures energy performance, Total Factor Energy Productivity (TFEP), technical change (TC) and energy efficiency change (EEC) of the gher (prawn-carp-rice) farming system using a unique panel data of 90 farmers covering a 14 year period (2002–2015) from southwest Bangladesh by employing a stochastic input distance function approach. Results reveal that all inputs contribute significantly to energy productivity of the gher farming system with male labor energy input being the major contributor followed by energy from machineries, seeds and chemicals. Energy performance of the High Yielding Variety (HYV) rice enterprise is highly efficient whereas the prawn enterprise is highly energy inefficient. Furthermore, energy performance of the HYV rice enterprise improved significantly over time. Significant competition exists between HYV rice and prawn enterprises as well as prawn and carp enterprises. Experience and education significantly improve energy efficiency whereas gher area and household size significantly reduces it. TFEP grew at the rate of 2.56% per annum (p.a.) solely powered by technical progress at the rate of 2.57% p.a. Gher system can be sustained in the long-run driven by technical progress and improvements in energy productivity of the HYV rice enterprise. Policy implications include investments in R&D and education targeted at the gher farmers.

\* School of Geography, Earth and Environmental Sciences, University of Plymouth, Drake Circus, Plymouth PL4 8AA, UK

\*\* Department of Economics, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: bkbarmon@ewubd.edu

***Asian Development Perspectives***, 9(2):188201. <https://doi.org/10.22681/adp.2018.9.2.188>

**Poverty, Income Inequality and Determinants of Income of the Ethnic Communities of Bangladesh**

Pangkoj Nokrek\*, **Basanta Kumar Barmon\*\*** and Sanzidur Rahman\*\*\*

**ABSTRACT**

The study examines the levels of poverty, income inequality and determinants of income of five major ethnic communities (i.e., Chakma, Garo, Khasi, Marma and Tripura) of Bangladesh using a survey data of 250 households. Results revealed that agriculture constitutes 72.6% of the total income followed by salaried employment at 13.4% and off-farm income at 6.1%. The amount of cultivated land, the share of land rented-in and the number of working family members significantly increase agricultural income whereas education, the number of working family members and experience significantly increase non-agricultural income. Income is significantly higher for the Garo and Khasi communities and lower for the Tripura community. Income inequality varies across communities with high level of inequality amongst the Khasi and Garo communities (Gini coefficient 0.39 and 0.35) while the Chama, Marma and Tripura communities have a low and similar level of inequality (Gini coefficient 0.23-0.26). Poverty level is high for the Garo community and low for the Chakma and Marma communities. However, the depth of poverty is highest for the Tripura community. Policy implications include investment in education and land and tenurial reform measures to consolidate farm size as well as smooth functioning of the land rental market in order to increase agricultural and/or total household income of the ethnic communities.

\* Moreau Seminary, Congregation of Holy Cross Priest Society, Bangladesh

\*\* Department of Economics, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [bkbarmon@ewubd.edu](mailto:bkbarmon@ewubd.edu)

\*\*\*School of Geography, Earth and Environmental Sciences, University of Plymouth, UK.

***East West Journal of Business and Social Science***, Vol. 7-8.

**The Impact of TQM Practices in Improving Product Quality: Bangladesh Garment Organizations as a Case**

**Farhana Ferdousi\* and Saadia Shabnam\*\***

**ABSTRACT**

The increase in competition, changes in import and export policies, and increased customer consciousness have resulted in organizations focusing on the use of TQM practices to remain competitive. This study identifies the practices of TQM. In addition, this study also examines the association between TQM practices and product quality. It uses data obtained from 133 garment organizations. Results reveal that TQM practices, including leadership (employee empowerment, resource allocation), employee participation (cross-functional teams, employee authority), supplier relationship (supplier audit), and customer focus (customer survey) have positive association with product quality. These findings lead to the conclusion that if sample organizations can achieve quality improvement thorough TQM practices, then other garment organizations of Bangladesh may also do so. It is important to create right awareness for all organizations to realize these improvements.

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: farhana@ewubd.edu

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: saadia@ewubd.edu

***Dhaka University Journal of Management***, 12(1), 161-170. January-June,2018

**Impact of Human Resource Management Practices on the Working Life of Tannery Workers in Bangladesh**

**Md Atiqur Rahman Sarker\* and Silvia Akter\*\***

**ABSTRACT**

This paper mainly explores existing Human Resource Management (HRM) practices and problems of tanneries in Bangladesh. The tannery sector of Bangladesh is considered as one of the oldest profitable manufacturing sectors and it places a significant role in the national economy. The chosen research method is Focus Group Discussion (FGD). Four FGDs have been conducted to collect data between August, 2017 and January, 2018 and all the discussions were tape recorded by the consent of the respondents. The research has found that HRM practices are mostly absent in the tannery sector of Bangladesh, and there is no formal and standardized HRM practice. Employees have serious observations about pay and benefits, hiring and job security, health and safety, etc. The paper concludes with observations that employee productivity of this sector is affected due to employee dissatisfaction and it recommends to introduce modern HRM practices to augment the confidence of the employees.

**Keywords:** Human Resources Management (HRM), Tannery, Employees, Bangladesh

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh & Ph.D Candidate, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia. Email: mars@ewubd.edu/ sarker.limon@gmail.com

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: Silvia@ewubd.edu / silvia.akter@yahoo.com

***The Agriculturists*** 16(1): 21-33 (2018) DOI: <http://dx.doi.org/10.3329/agric.v16i1.37531>, Year of Publication: 2018

**Comparative Advantages of Lentil (*Lens culinaris*) and Mustard (*Brassica nigra* L.) Production and their Profitability in a Selected District of Bangladesh**

Sabrina Momtaj Tithi and **Basanta Kumar Barmon\***

**ABSTRACT**

The present study was conducted to estimate the profitability, domestic resource cost (DRC) and comparative advantages of lentil and mustard production in Bangladesh. Primary data were used in this study, where a total of 100 randomly selected farm survey (Mustard 50 & Lentil 50) was conducted in Meherpur district using structured questionnaire. The study revealed that per hectare total cost and net profit of lentil production were about Tk. 78,442 and Tk. 86,590, respectively, whereas they were Tk. 62,527 and Tk. 38,718 for mustard production. The benefit cost ratios (BCR) of lentil and mustard production were 2.32 and 1.73, respectively, indicating that both lentil and mustard cultivation in Bangladesh are profitable. The domestic resource costs (DRC) of lentil and mustard production were 0.39 and 0.55, respectively which imply that Bangladesh has comparative advantage in producing both lentil and mustard. The Cobb-Douglas production function coefficients show that farm area, irrigation, pesticides, and chemical fertilizers (Gypsum, MP) were statistically significant factors affecting lentil production having increasing returns to scale. Farm area, irrigation and manure were statistically significant factors affecting mustard production with constant return to scale. In this study, production, technology and marketing problems have been listed down which will help the policy makers and the researchers to undertake proper steps for further improvement of lentil and mustard production in Bangladesh.

\*Department of Economics, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [bkbarmon@yahoo.com](mailto:bkbarmon@yahoo.com) / [bkbarmon@ewubd.edu](mailto:bkbarmon@ewubd.edu)

**24<sup>th</sup> EBES Conference-Bangkok.** 10<sup>th</sup> -12<sup>th</sup> January,2018. Jointly organized by The Faculty of Business Administration, Kasetsart University, Thailand and Eurasia Business and Economics Society, Turkey

**Engaging Graduates to be Social Entrepreneur in Bangladesh: Problems and Prospects**

**Md Atiqur Rahman Sarker\*** and Dewan Mehrab Ashrafi \*\*

**ABSTRACT**

A social entrepreneur is an individual who provides innovative solutions to most of the pressing societal problems with creativity, vision, persistence, and ambition- tackling major social issues by offering originative ideas for the greater good of society. A Social entrepreneur highlights the social needs by diagnosing and solving the problems and attempts to move the society towards different direction with a view to change the system. In other words, the key to social entrepreneurship is an explicit or implicit “theory of change. Social entrepreneurs aim to provide a positive push not only to augment and spur the economic growth but also to provide a strong ground for economic development by ensuring sustainability without leaving societal needs to be addressed by government or business sectors. This paper aims to explain the concept of social entrepreneurship and its significant role in the society. It also highlights the myriad challenges and difficulties faced by social entrepreneurs in Bangladesh followed by suggesting measures to overcome those challenges.

**Keywords:** Social Entrepreneurship, Societal Problems, Theory of Change, Economic Development

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh & Ph.D Candidate, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia. Email: mars@ewubd.edu/ sarker.limon@gmail.com

\*\*School of Business Administration East Delta University, Bangladesh. Email: mehrab.ashrafi35@gmail.com



**24<sup>th</sup> EBES Conference-Bangkok.** 10<sup>th</sup> -12<sup>th</sup> January,2018. Jointly organized by The Faculty of Business Administration, Kasetsart University, Thailand and Eurasia Business and Economics Society, Turkey.

**An Assessment of Soft Skill Awareness Level amongst Bangladeshi Managers: A Study from Ready Made Garments (RMG) Sector**  
**Md Atiqur Rahman Sarker\* and Laila Zaman\*\***

**ABSTRACT**

The globe of business is affected enormously because of globalization. It throws challenge for business executives to maintain good employment relations, and sustain economic growth in this era. Now the business executives have to deal with local as well as international competition. Considering the situation, more emphasize is now given not only on technical skills but on the soft skills also. Some researches reveal that in many situations, soft skills are even more significant than technical skills. Soft skills include personal accountability, strong work ethics, positive attitudes, self-motivation, the degree of collaboration, interpersonal skill, conflict resolution, negotiation skill, people's adaptability and flexibility, the clarity of communication, creative thinking, and the ability of coaching and mentoring, etc. Soft skills also refer to emotional intelligence that enables individual to build, develop and manage a team with strong conceptual and practical framework. Increasing globalization and internationalization has heightened the need for soft skills among business executives which can help them to affect the bottom line, influence effectiveness, and affect personal success. Soft skills are not only necessary for a person's professional career, but are even more contributing to one's so-called social competence. Bangladesh is one of the developing countries where there is rapid growth in trade and commerce. Business competition is increasing here due to the participation of both domestic and multinational companies. As a result, talent management is getting importance to remain competitive in this highly demanding workplace. Bangladesh has also realized the importance of the soft skills. That is why many institutes are now arranging training, workshop and seminar emphasizing these issues but so far no research has been done in Bangladesh about the soft skills issue especially in Ready Made Garment (RMG) sector. As Bangladesh wishes to enter into era of knowledge economy, corporate success will significantly depend on internal stakeholder's awareness and practice of soft skills. Therefore, this study attempts to reveal the practice of soft skills among managers in manufacturing sectors like RMG. The general aim of this research is to identify the manager's awareness regarding the importance of soft skills and its practice among managers in business organization. More specifically, it will investigate whether soft skills are practiced along with technical skills, and at what extent soft skills are important then technical skills.

**Keywords:** Bangladesh, Manager, RMG and Soft Skills

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh & Ph.D Candidate, Kulliyah of Economics and Management Sciences, International Islamic University Malaysia. Email: mars@ewubd.edu/sarker.limon@gmail.com

\*\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: lz@ewubd.edu

***Proceedings of the International Conference on Business and Sustainable Development(ICBSD) 2018*** Organized by Faculty of Business Studies, University of Rajshahi, March 8-9(2018), p.57 ISBN:978-984-34-4281-9

**Customer Retention for Small Brands, where Recovery Paradox is a Strategic Issue:  
A Study from Dhaka, Bangladesh**

**M Sayeed Alam\*** and **Shamsul Huq Bin Shahriar\*\***

**ABSTRACT**

This paper attempted to have a comprehensive understanding on two important concerns related to service recovery i.e. service recovery strategies of small or micro food service brands; besides, the study also tried to evaluate the service recovery paradox as a strategic advantage for these brands. Here researchers adopted a qualitative case study approach to fully construe its' strategies of recovery, where cost is a vital issue for small restaurant brands, on the other hand 'recovery paradox' is a strategic phenomenon to retain customer for them. Two micro restaurant brands were considered for the study, which were considered as 'cases of something'. Qualitative data were collected using in-depth interview technique. Results showed that 'right time' communication and involving the customers can solve half of the problem even before the recovery action perceived by the customer; an approach of "understanding the customer is crucial than understanding the problem", superlative service towards the 'recovery' can bring more responses in case of customers' satisfaction and loyalty as well. Additionally, the study confirms the presence of 'recovery paradox' as a strategic outline of essential action at the 'moment of truth' and enhances the brand experience.

**Keywords:** Micro-Brands, Service Recovery, Recovery Paradox, Customer Satisfaction, Retention

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: sayeed@ewubd.edu

\*\* Student, Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: shahriarhuq002@gmail.com

**International Conference on Business, Economics, Education and Social Sciences 2018, (ICBEESS 2018),** hosted by East West University, Dhaka, Year of publication: 2018

**Do Oil Price Shocks Affect Consumer Spending? Evidence from 5 OECD Countries**

**Nabila Zaman\***

**ABSTRACT**

Oil has been an important component for the global economy. In the historical periods, oil price shocks have affected economies of not only oil-producing countries but also of the oil-consuming countries in general. Traditionally, most of the oil price shocks arose from political conflicts or supply gaps. Although the impacts of oil price shocks on macroeconomic indicators such as GDP, exchange rates, balance of payments or interest rates can be analyzed substantially, its impact on consumer spending is not straightforward to assess. When there is a shock in the economy, the expectations of consumers about the persistence of shock is reflected on both their current and future consumption patterns. This, in turn, has other economic consequences affecting decisions for wage-earners as well as industrialists. Thus the paper addresses whether international oil price change has any impact on consumer spending or not. To conduct this study, five OECD nations have been chosen, classifying each into oil importing and exporting countries; Canada, Germany, Sweden, UK, and USA. Applying the empirical methodology of Vector Autoregressive Model (VAR), we find evidence that international oil price shocks have significant impact on the consumer spending. The analysis is performed with two set of specification for oil: an Oil price change and a Net oil price increase and the main tools used for diagnosis are Forecast Error Variance Decomposition (FEVD) and Impulse Response Functions (IRF). The results are strongly significant for Canada and USA. There are mixed inferences for Sweden, Germany and UK which lead to inconclusive decision about the impact on these countries. However, in general our empirical work supports the evidence that oil price has some predictive power in influencing consumption decision across oil-importing and oil-exporting countries.

**Keywords:** Oil Price Shock, Vector Autoregressive Model, Household Consumption, OECD

\*Department of Economics, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [nabila@ewubd.edu](mailto:nabila@ewubd.edu)

*1<sup>st</sup> National Conference on Contemporary Changes in Bangladesh Society*, organized by Department of Sociology, East West University, 12 May (2018), pp. 25, Bangladesh.

### **Sexual Harassment by Educator: A Glance at East West University**

**Kohinoor Biswas\*** and **Faiza E Rabbi Fiza\*\***

#### **ABSTRACT**

Sexual harassment in academia is pervasive crossing over the boundaries of nation, culture and ethnicity. While the role of an educator in the life of a student is well recognized, the transformed role of an educator into a ‘perpetrator’ through sexual harassment is indeed a barrier for the female students on the way of learning and development. The words “sexual harassment” appeared in academic research in 1960s though the root of this problem goes back to early 19<sup>th</sup> century. American Association of University Women (AAUW) reports that of all the ones who are harassed by the educators, a one-third of them remain mum, around half of them share but remain confined within the circle of friends, and a surprisingly thin 7% is found to report to the authority. This study will attempt to explore the case for East West University. SEQ (Sexual Experiences Questionnaire) that was primarily developed by Till (1980) and then was modified by Fitzgerald and Shullman (1988) in order to fit into the landscape of academia will be used as an instrument for our purpose. The modified SEQ for academia consists of five levels with altogether twenty-seven items. For the purpose of our study; first of all, a pre-testing is run through a few female Graduate Teaching Assistants who completed undergraduate from East West University. Female GTAs are better-suited to the purpose of pre-testing since they can serve as a ‘rich’ source of information due to greater exposure and proximity to the context of the ‘case’ i.e. East West University. The finding of pre-testing is: only two levels out of the five in SEQ are relevant in this ‘case’ with a sum of eight items. In the second level of the study a questionnaire survey has been conducted with a sample of 351 students of third and fourth year students since this cohort would better reflect on their experience about the ‘case’. Prevalence of sexual experience in East West University is mostly subtle, verbal and non-verbal type.

**Keywords:** Sexual Harassment, Educator, East West University

\*Department of Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: kohinoor\_sb@yahoo.com

\*\*Student, Masters in Business Administration, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: faizarabbi@gmail.com

# Faculty of Sciences and Engineering

**VLSI Design Volume 2018**, Article ID 6153274, 13 pages <https://doi.org/10.1155/2018/6153274>

### **First Steps in Creating Online Testable Reversible Sequential Circuits**

**Mozammel H. A. Khan\*** and Jacqueline E. Rice\*\*

#### **ABSTRACT**

Synthesis of reversible sequential circuits is a very new research area. It has been shown that such circuits can be implemented using quantum dot cellular automata. Other work has used traditional designs for sequential circuits and replaced the flip-flops and the gates with their reversible counterparts. Our earlier work uses a direct feedback method without any flip-flops, improving upon the replacement technique in both quantum cost and ancilla inputs. We present here a further improved version of the direct feedback method. Design examples show that the proposed method produces better results than our earlier method in terms of both quantum cost and ancilla inputs. We also propose the first technique for online testing of single line faults in sequential reversible circuits.

\*Department of Computer Science and Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [mhakhan@ewubd.edu](mailto:mhakhan@ewubd.edu)

\*\*Department of Mathematics and Computer Science, University of Lethbridge, Lethbridge, AB, Canada T1K 3M4. Email: [j.rice@uleth.ca](mailto:j.rice@uleth.ca)

**IEEE Journal of Photovoltaics**, vol. 8, no. 4, pp. 1082–1089, Jul. 2018. (Print ISSN: 2156-3381, Electronic ISSN: 2156-3403)

### **Thermodynamic Limit of Solar to Fuel Conversion for Generalized Photovoltaic-Electrochemical Systems**

M. T. Patel, **M. R. Khan\*** and M. A. Alam\*\*

#### **ABSTRACT**

Daily and seasonal variability of the solar irradiation poses a major hurdle to the widespread adoption of photovoltaic (PV) systems. An integrated photovoltaic-electrochemical (EC) storage system offers a solution, but the thermodynamic efficiency ( $\eta_{\text{sys}}$ ) of the “ideal” integrated system and the optimum configuration needed to realize the limit is known only for a few simple cases. Moreover, these limits are often derived through complex numerical simulations. In this paper, we show that a simple, conceptually transparent and physically intuitive analytical formula can precisely describe the  $\eta_{\text{sys}}$  of a “generalized” PV-EC integrated system. An  $N$ -cell PV module of  $N$ -junction bifacial tandem cells is illuminated under  $S$ -suns and mounted over ground of albedo  $R$ . There are  $K$ -EC cells in series, each defined by their reaction potential, exchange current, and Tafel slope. We derive the optimum thermodynamic limit  $\eta_{\text{sys}}$  ( $N, M, K, R, S$ ) for all possible combinations of a PV-EC design. For a setup with optimal- $(M, K)$  and large  $N$ , under 1-sun illumination and albedo = 0, the ultimate limit is  $\eta_{\text{sys}} \sim 52\%$ . A comparison of our results with experimental results published by various groups worldwide suggests opportunities for further progress toward the corresponding thermodynamic limit.

\*Department of Electrical and Electronics Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: ryyan@ewubd.edu

\*\*Department of Electrical and Computer Engineering, Purdue University, West Lafayette, IN, USA, Email: alam@purdue.edu

*Applied Energy*, vol. 212, pp. 1601–1610, Feb. 2018. (ISSN: 0306-2619)

### **Optimization and Performance of Bifacial Solar Modules: A Global Perspective**

X. Sun\*, M. A. Alam\*, C. Deline\*\* and M. R. Khan\*\*\*

#### **ABSTRACT**

With the rapidly growing interest in bifacial photovoltaics (PV), a worldwide map of their potential performance can help assess and accelerate the global deployment of this emerging technology. However, the existing literature only highlights optimized bifacial PV for a few geographic locations or develops worldwide performance maps for very specific configurations, such as the vertical installation. It is still difficult to translate these location- and configuration-specific conclusions to a general optimized performance of this technology. In this paper, we present a global study and optimization of bifacial solar modules using a rigorous and comprehensive modeling framework. Our results demonstrate that with a low albedo of 0.25, the bifacial gain of ground-mounted bifacial modules is less than 10% worldwide. However, increasing the albedo to 0.5 and elevating modules  $\ln$  above the ground can boost the bifacial gain to 30%. Moreover, we derive a set of empirical design rules, which optimize bifacial solar modules across the world and provide the groundwork for rapid assessment of the location-specific performance. We find that ground-mounted, vertical, east-west-facing bifacial modules will outperform their south-north-facing, optimally tilted counterparts by up to 15% below the latitude of  $30^\circ$ , for an albedo of 0.5. The relative energy output is reversed in latitudes above  $30^\circ$ . A detailed and systematic comparison with data from Asia, Africa, Europe, and North America validates the model presented in this paper.

\*Network of Photovoltaic Technology, Purdue University, West Lafayette, IN 47907, USA,  
Email: alam@purdue.edu

\*\*National Renewable Energy Laboratory, Golden, CO 80401, USA

\*\*\*Department of Electrical and Electronics Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: ryyan@ewubd.edu



*mBIO*<sup>®</sup>, March/April 2018 Volume 9 Issue 2 (1-13), e00483-18, Online ISSN: 2150-7511

## **Biofilms Comprise a Component of the Annual Cycle of *Vibrio cholerae* in the Bay of Bengal Estuary**

Abul K. Siddique\*, Marzia Sultana\*, Munirul Alam\*, Nur A. Hasan\*, Abdus Sadique\*, Kabir U. Ahmed\*, Atiqul Islam\*, **Suraia Nusrin\*\***, Anwar Hossain\*\*\*, Ira Longini\*\*\*\*, Azhar Nizam\*\*\*\*\*, Anwar Huq\*\*\*\*\*, David A. Sack\*\*\*\*\*, Richard B. Sack\*\*\*\*\* and Rita R. Colwell\*\*\*\*\*

### **ABSTRACT**

*Vibrio cholerae*, an estuarine bacterium, is the causative agent of cholera, a severe diarrheal disease that demonstrates seasonal incidence in Bangladesh. In an extensive study of *V. cholerae* occurrence in a natural aquatic environment, water and plankton samples were collected biweekly between December 2005 and November 2006 from Mathbaria, an estuarine village of Bangladesh near the mangrove forests of the Sundarbans. Toxigenic *V. cholerae* exhibited two seasonal growth peaks, one in spring (March to May) and another in autumn (September to November), corresponding to the two annual seasonal outbreaks of cholera in this region. The total numbers of bacteria determined by heterotrophic plate count (HPC), representing culturable bacteria, accounted for 1% to 2.7% of the total numbers obtained using acridine orange direct counting (AODC). The highest bacterial culture counts, including toxigenic *V. cholerae*, were recorded in the spring. The direct fluorescent antibody (DFA) assay was used to detect *V. cholerae* O1 cells throughout the year, as free-living cells, within clusters, or in association with plankton. *V. cholerae* O1 varied significantly in morphology, appearing as distinctly rodshaped cells in the spring months, while small coccoid cells within thick clusters of biofilm were observed during interepidemic periods of the year, notably during the winter months. Toxigenic *V. cholerae* O1 was culturable in natural water during the spring when the temperature rose sharply. The results of this study confirmed biofilms to be a means of persistence for bacteria and an integral component of the annual life cycle of toxigenic *V. cholerae* in the estuarine environment of Bangladesh.

\*International Centre for Diarrhoeal Disease Research, Bangladesh, Dhaka, Bangladesh

\*\* Department of Genetic Engineering and Biotechnology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: sunewu@ewubd.edu

\*\*\*Department of Microbiology, Dhaka University, Dhaka, Bangladesh

\*\*\*\*University of Florida, Gainesville, Florida, USA

\*\*\*\*\*Emory University, Atlanta, Georgia, USA

\*\*\*\*\*Maryland Pathogen Research Institute, University of Maryland, College Park, Maryland, USA

\*\*\*\*\*Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

**NATURE COMMUNICATIONS**, (2018) 9:4266, DOI: 10.1038/s41467-018-06591-6

## **HIV-1 Tat Interactions with Cellular 7SK and Viral TAR RNAs Identifies Dual Structural Mimicry**

Victoria M. D'Souza\*Vincent V. Pham\*, Carolina Salguero\*\*, **Shamsun Nahar Khan\*\*\***, Jennifer L. Meagher\*\*\*\*, W. Clay Brown\*\*\*\*, Nicolas Humbert\*\*\*\*\*, Hugues de Rocquigny\*\*\*\*\* and Janet L. Smith\*\*\*\*\*

### **ABSTRACT**

The HIV Tat protein competes with the 7SK:HEXIM interaction to hijack pTEFb from 7SK snRNP and recruit it to the TAR motif on stalled viral transcripts. Here we solve structures of 7SK stemloop-1 and TAR in complex with Tat's RNA binding domain (RBD) to gain insights into this process. We find that 7SK is peppered with arginine sandwich motifs (ASM)—three classical and one with a pseudo configuration. Despite having similar RBDs, the presence of an additional arginine, R52, confers Tat the ability to remodel the pseudo configuration, required for HEXIM binding, into a classical sandwich, thus displacing HEXIM. Tat also uses R52 to remodel the TAR bulge into an ASM whose structure is identical to that of the remodeled ASM in 7SK. Together, our structures reveal a dual structural mimicry wherein viral Tat and TAR have co-opted structural motifs present in cellular HEXIM and 7SK for productive transcription of its genome.

\* Department of Molecular and Cellular Biology, Harvard University, Cambridge, MA 02138, USA.

\*\* Vice Presidency of Research, Universidad de los Andes, Bogotá 111711, Colombia.

\*\*\* Department of Pharmacy, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: shamsun@ewubd.edu

\*\*\*\*Life Sciences Institute, University of Michigan, 210 Washtenaw Ave, Ann Arbor, MI 48109, USA.

\*\*\*\*\*Faculté de Pharmacie, Laboratoire de Bioimagerie et Pathologies, UMR 7021 du CNRS, Université de Strasbourg, 74 route du Rhin, 67401 Illkirch, France.

\*\*\*\*\*Inserm - U1259 MAVIVH. Morphogenèse et Antigénicité du VIH et des Virus des Hépatites, 10 boulevard Tonnelle - BP 3223, 37032 Tours Cedex 1, France.

\*\*\*\*\*Department of Biological Chemistry, University of Michigan, Ann Arbor, MI 48109, USA.

Correspondence and requests for materials should be addressed to V.M.D'S. (email: dsouza@mcb.harvard.edu)

*Nanoscale*, Year: 2018, Volume/issue: 10(28), Page: 13485-13501, DOI: 10.1039/C8NR02132E, ISSN: 2040-3364

### **Enhanced and Preferential Internalization of Lipid Nanocapsules into Human Glioblastoma Cells: Effect of Surface-Functionalizing NFL Peptide**

**Reatul Karim\***, Elise Lepeltier\*\*, Lucille Esnault\*\*, Pascal Pigeon\*\*\*, Laurent Lemaire\*\*, Claire Lépinoux-Chambaud\*\*, Nicolas Clere\*\*, Gérard Jaouen\*\*\*\*\*, Joel Eyer\*\*, Géraldine Piel\*\*\*\*\*, and Catherine Passirani\*\*

#### **ABSTRACT**

Increasing intracellular drug concentration using nanocarriers can be a potential strategy to improve efficacy against glioblastoma (GBM). Here, the fluorescent-labelled NFL-TBS.40-63 peptide (fluoNFL) concentration on lipid nanocapsule (LNC) was studied to enhance nanovector internalization into human GBM cells. The LNC surface-functionalization with various fluoNFL concentrations was performed by adsorption. LNC size and surface charge altered gradually with increasing peptide concentration, but their complement protein consumption remained low. Desorption of fluoNFL from LNC surface was found to be slow. Furthermore, it was observed that the rate and extent of LNC internalization in the U87MG human glioblastoma cells were dependent on the surface-functionalizing fluoNFL concentration. In addition, we showed that the uptake of fluoNFL-functionalized LNCs was preferential towards U87MG cells compared to healthy human astrocytes. The fluoNFL-functionalized LNC internalization into the U87MG cells was energy-dependent and occurred possibly by macropinocytosis, clathrin-mediated and caveolin-mediated endocytosis. A new ferrocifen-type molecule (FcTriOH), as potent anticancer candidate, was then encapsulated in the LNCs and the functionalization improved its *in vitro* efficacy compared to other tested formulations against U87MG cells. In the preliminary study, on subcutaneous human GBM tumor model in nude mice, a significant reduction of relative tumor volume was observed at one week after the second intravenous injection with FcTriOH-loaded LNCs. These results showed that enhancing NFL peptide concentration on LNC surface is a promising approach for increased and preferential nanocarrier internalization into human GBM cells, and the FcTriOH-loaded LNCs are promising therapy approach for GBM.

**Keywords:** Lipid Nanocapsule, Glioblastoma, Ferrocifen, Cell-Penetrating Peptide, NFL-TBS.40-63.

\*Department of Pharmacy, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: drtk@ewubd.edu

\*\* MINT, UNIV Angers, INSERM 1066, CNRS 6021, Angers, France

\*\*\*PSL ChimieParisTech, 11 Rue Pierre & Marie Curie, F-75005 Paris, France

\*\*\*\* LTPB, CIRM, University of Liège, Liège, Belgium

\*\*\*\*\* Sorbonne Université, Université Pierre et Marie Curie, CNRS, Institut Parisien de Chimie Moléculaire (IPCM, UMR 8232), F-75005, Paris France

\*\* Corresponding author: elise.lepeltier@univ-angers.fr

**Arabian Journal of Science and Engineering**, Vol. 44, Issue 5, Pages 4395-4404.  
ISSN: 2193-567X (Print) 2191-4281 (Online)

### **Analysis of Distortion-Induced Stress and Retrofitting Technique of Curved Twin I-Girder Composite Bridge**

M. Hossain, M.B. Zisan and M.N. Haque\*

#### **ABSTRACT**

Distortion-induced fatigue problem at the web-diaphragm connection plays a major role in both durability and serviceability of composite bridges. Out-plane bending of the girder's web at the diaphragm - web connection of the plate girder is stated as a fundamental source of distortion stress. Also, the stress gets intensified by the presence of curvature at the diaphragm-web connection. Besides, the effect of slab thickness, web-gap depth and cross-frame stiffness on distortion-stress is not considered in the existing process of stress calculation. This paper demonstrates the possible causes of distortion stress, factors affecting distortion stress and appropriate, cost-effective countermeasure for distortion stress. For this purpose, a three-dimensional curved twin I-girder bridge model is developed and verified with existing work. The numerical problem formulation, model verification, retrofitting and analysis are performed using the ANSYS program. The validated model is used to investigate the effect of bridge curvature, slab thickness, cross-frame stiffness and web-gap depth on the differential deflection and the distortion-induced stress. A substantial effect of curvature is noticed on girder differential deflection which proportionally affects the distortion-induced stress. Lastly, this study proposed two retrofitting techniques which are found efficient to extenuate the differential deflection and distortion stress about 50-60%.

\*Department of Civil Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: naimul@ewubd.edu

**Transportation**, Vol. 45, Issue: 1, Pages 51-70. January 2018. DOI:10.1007/s11116-016-9722-6, ISSN: 0049-4488 (Print) 1572-9435 (Online), Page numbers: 51–70, January 2018

### **A Statistical Analysis of the Dynamics of Household Hurricane-Evacuation Decisions**

**Sarwar, M. T.\***, Anastasopoulos, P. Ch., Ukkusuri, S. V., Murray-Tuite, P., and Mannering, F. L.

#### **ABSTRACT**

With the increasing number of hurricanes in the last decade, efficient and timely evacuation remains a significant concern. Households' decisions to evacuate/stay and selection of departure time are complex phenomena. This study identifies the different factors that influence the decision making process, and if a household decides to evacuate, what affects the timing of the execution of that decision. While developing a random parameters binary logit model of the evacuate/stay decision, several factors, such as, socio-economic characteristics, actions by authority, and geographic location, have been considered along with the dynamic nature of the hurricane itself. In addition, taking the landfall as a base, how the evacuation timing varies, considering both the time-of-day and hours before landfall, has been analyzed rigorously. Influential factors in the joint model include the relative time until the hurricane's landfall, height of the coastal flooding, and approaching speed of the hurricane; household's geographic location (state); having more than one child in the household, vehicle ownership, and level of education; and type of evacuation notice received (voluntary or mandatory). Two time intervals from 30 to 42 h and 42 to 66 h before landfall resulted in random parameters, reflecting mixed effects on the likelihood to evacuate/stay. Possible sources of the unobserved heterogeneity captured by the random parameters include the respondents' risk perception or other unobserved physiological and psychological factors associated with how respondents comprehend a hurricane threat. Thus, the model serves the purpose of estimating evacuation decision and timing simultaneously using the data of Hurricane Ivan.

\*Department of Civil Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mdtawfiq@ewubd.edu

*Accident Analysis and Prevention*, Vol. 113, Pages 330-340, April 2018. DOI: <https://doi.org/10.1016/j.aap.2017.05.018>, ISSN number:0001-4575, Page numbers: 330 – 340. Year of publication: April 2018.

**Analysis of Stationary and Dynamic Factors Affecting Highway Accident Occurrence: A Dynamic Correlated Grouped Random Parameters Binary Logit Approach**

Fountas, G., Sarwar, M. T.\*, Anastasopoulos, P. Ch., Blatt, A., and Majka, K.

**ABSTRACT**

Traditional accident analysis typically explores non-time-varying (stationary) factors that affect accident occurrence on roadway segments. However, the impact of time-varying (dynamic) factors is not thoroughly investigated. This paper seeks to simultaneously identify pre-crash stationary and dynamic factors of accident occurrence, while accounting for unobserved heterogeneity. Using highly disaggregate information for the potential dynamic factors, and aggregate data for the traditional stationary elements, a dynamic binary random parameters (mixed) logit framework is employed. With this approach, the dynamic nature of weather-related, and driving- and pavement-condition information is jointly investigated with traditional roadway geometric and traffic characteristics. To additionally account for the combined effect of the dynamic and stationary factors on the accident occurrence, the developed random parameters logit framework allows for possible correlations among the random parameters. The analysis is based on crash and non-crash observations between 2011 and 2013, drawn from urban and rural highway segments in the state of Washington. The findings show that the proposed methodological framework can account for both stationary and dynamic factors affecting accident occurrence probabilities, for panel effects, for unobserved heterogeneity through the use of random parameters, and for possible correlation among the latter. The comparative evaluation among the correlated grouped random parameters, the uncorrelated random parameters logit models, and their fixed parameters logit counterpart, demonstrate the potential of the random parameters modeling, in general, and the benefits of the correlated grouped random parameters approach, specifically, in terms of statistical fit and explanatory power.

\*Department of Civil Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [mdtawfiq@ewubd.edu](mailto:mdtawfiq@ewubd.edu)

**International Journal of Advanced Research in Engineering & Management,**  
ISSN Number: 2456-2033, Page Number: 01-11, Year of Publication: 2018

**Correlation Development for Zeta Potential with Storage Time, Emulsion Concentration and the Stability of the Emulsion on the Droplet Size Distribution**

Ah Pis Yong\*, Md Aminul Islam\*, N Hasan\*\* and **Md. Fazlul Karim\*\*\***

**ABSTRACT**

Two fluids which are incapable of mixing together is known as an emulsion. Emulsifiers and little atomic surfactants are added to the framework in order to investigate the stabilities of the droplet size distribution. The aims of the work are to investigate the stabilities of the droplet size distribution with the influence of emulsifier and the correlation development of zeta potential value on emulsion stability. The results of the zeta potential on emulsion stability have been observed with storage time and emulsifier concentrations. Emulsifier added to the emulsion can affect the emulsion stability. The main type of emulsifier used in this study is sodium caseinate. Other emulsifiers used are such as chitosan, food hydrocolloids such as GA, SPS and SBP and the combination of SC with chitosan. An emulsion containing  $\beta$ -carotene after homogenization at 140 MPa used in this study for the droplet distribution sizes evaluation. An increase in oil concentration will need higher emulsifier concentration to stabilize the emulsion. The use of high pressure homogenization treatment in the emulsion helps to stabilize the emulsion by reducing the droplet sizes of the emulsion. For the zeta potential quality which has higher values of more than +30 mV and lower than -30 mV was observed to be electrostatically stable. During the investigation, the emulsion which contains SC and food hydrocolloids as an emulsifier was stable as they have higher zeta potential. In addition, the zeta potential for the emulsion which contains sodium caseinate is more stable compared to the emulsion which contains Skipjack Roe Protein Hydrolysate (SRPH) when the emulsion is put away for a specific measure of time."

\*Faculty of Science, Universiti Brunei Darussalam

\*\* Universiti Teknologi Brunei

\*\*\* Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: fkarim@ewubd.edu

***Communications in Statistics – Simulation and Computation***, Vol. 47, No.9, 2018, pp. 2792-2799. DOI: <https://doi.org/10.1080/03610918.2017.1359290>

**The Single-Index Support Vector Regression Model to Address the Problem of High Dimensionality**

Waleed Dhhan Sleabi\*, **Sohel Rana\*\***, Taha Alshaybawee\*\*\* and Habshah Midi\*\*\*\*

**ABSTRACT**

The last few years, the applications of Support Vector Machine (SVM) for solving classification and regression problems have been increasing, due to its high performance and ability to transform the non-linear relationships among variables to linear form by employing the kernel idea (kernel function). In this work, we develop a semi-parametric approach to fit single-index models to deal with high-dimensional problems. To achieve this goal, we use support vector regression (SVR) for estimating the unknown nonparametric link function, while the single-index is determined by using the semi-parametric least squares method (Ichimura 1993). This development enhances the ability of SVR to solve high-dimensional problem. We design a three simulation examples with high-dimensional problems (linear and nonlinear). The simulations demonstrate the superior performance of the proposed method versus the standard SVR method. This is further illustrated by applying the real data.

**Keywords:** Single-Index Model, High-Dimensional, Dimension Reduction, Sparsity, Support Vector Regression

\* Babylon municipalities, Ministry of municipalities and public work, Babylon, Iraq. Email: [w.dhhan@gmail.com](mailto:w.dhhan@gmail.com)

\*\*Department of Mathematical & Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [srana@ewube.edu](mailto:srana@ewube.edu)

\*\*\*Department of Mathematics/ Institute for Mathematical Research, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia. Email: [habshahmidi@gmail.com](mailto:habshahmidi@gmail.com)



***Economic Computation and Economic Cybernetics Studies and Research***, Vol. 52 No. 2, 2018, pp. 267-282. DOI: 10.24818/18423264/52.2.18.16

### **Fixed Parameters Support Vector Regression for Outlier Detection**

**Sohel Rana\***, Waleed Dhhan Sleabi\*\* and Habshah Midi\*\*\*

#### **ABSTRACT**

The support vector machine (SVM) is currently a very popular technique of outlier detection as it is a robust model and does not require the data to be of full rank. With a view to evaluate the approximate relationship among the variables, there is necessity to detect outliers that are commonly present in most of natural phenomena before beginning to construct the model. Both of the standard support vector machine(SVM) for regression and modified SV Regression ( $\mu$ - $\epsilon$ -SVR) techniques are effective for outlier detection in case of non-linear functions with multi-dimensional inputs; nevertheless, these methods still suffer from a few issues, such as the setting of free parameters and the cost of time. In this paper, we suggest a practical technique for outlier detection by utilising fixed parameters to build SVR model, which reduces computational costs. We apply this technique to real data, as well as simulation data in order to evaluate its efficiency.

**Keywords:** Outliers, Robustness, Sparseness, Learning Theory, Support Vector Machine

\*Department of Mathematical & Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: srana@ewube.edu

\*\* Nawroz University (NZU), Duhok, Iraq; Babylon municipalities, Ministry of municipalities and public work, Babylon, Iraq. Email: w.dhhan@gmail.com

\*\*\*Department of Mathematics/ Institute for Mathematical Research, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia. Email: habshahmidi@gmail.com

*Malaysian Journal of Mathematical Sciences*, Vol. 12 No. 3, 2018, pp. 401–419.

**Application of Classification and Regression Trees Algorithm to Classify Children Ever Born: BDHS 2011**

Mahsa Saadati\*, Arezoo Bagheri\*\* and Sohel Rana\*\*\*

**ABSTRACT**

Study the nature of fertility determinants as influential development indicators is a necessity in densely populated countries like as Bangladesh. In addition, investigating these factors without considering the convenient statistical methods may result in misleading conclusions. The main purpose of this article is to classify one of the most important principal of fertility, children ever born, by applying Classification and Regression Trees (CART) algorithm. To achieve this goal, children ever born of ever-married women age 12-49 years old from Bangladesh Demographic and Health Survey 2011 data has been classified by Classification and Regression Trees algorithm according to a number of candidate demographic and socio-economic predictors. Marriage duration, couple's educational level, division, and religion were determined to be the most influential predictors by extracted classification model. The efficiency of CART algorithm has been proved by accuracy of the model.

**Keywords:** Fertility, Children Ever Born, Decision Trees, Regression Trees, Bangladesh Demographic and Health Survey

\*National Population Studies & Comprehensive Management Institute, ShahidBeheshti Street, Tehran, Iran

\*\*National Population Studies & Comprehensive Management Institute, ShahidBeheshti Street, Tehran, Iran

\*\*\*Department of Mathematical & Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: srana@ewube.edu

**Far East Journal of Mathematical Sciences**, Vol. 103 No. 11, 2018, pp. 1757 - 1767. DOI: <http://dx.doi.org/10.17654/MS103111757>

### **The Performance of K-means Clustering Method Based on Robust Principal Components**

Ahmed Kadom\*, Habshah Midi\*\* and Sohel Rana\*\*\*

#### **ABSTRACT**

The k-means clustering method is the most widely used method to group  $n$  observations into  $k$  clusters. It is now evident that clustering results can be improved by applying classical principal component analysis (PCA) with the k-means clustering algorithm. However, the clustering results of PCA with k-means are adversely affected by the presence of outliers in a data set. To remedy this problem, we proposed to integrate robust principal component analysis (RPCA) with the k-means algorithm. Simulation study and real examples are carried out to compare the performance of the classical k-means, k-means based on PCA and k-means based on RPCA. The findings indicate that the k-means based on RPCA outperforms the other two methods.

**Keywords:** Cluster, Principal Component, Outliers, K-Means

\*Department of Mathematics/ Institute for Mathematical Research, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia. Email: [habshahmidi@gmail.com](mailto:habshahmidi@gmail.com)

\*\*Department of Mathematics/ Institute for Mathematical Research, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia. Email: [habshahmidi@gmail.com](mailto:habshahmidi@gmail.com)

\*\*\*Department of Mathematical & Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [srana@ewube.edu](mailto:srana@ewube.edu)

**Jurnal Fizik Malaysia**, Vol. 39, no. 01, pp. 10041-10053, 2018, e-ISSN: 2590-4191

**Collisions of Ion Acoustic Multi-solitons in Electron- Positron-Ion Plasma with the Presence of Nonthermal Nonextensive Electrons**

Kaushik Roy\*, **Gurudas Mandal\*\***, Malay Kumar Ghorui\*\*\*, Uday Narayan Ghosh\*\*\* and Prasanta Chatterjee\*\*\*

**ABSTRACT**

Face to face collision of ion acoustic multi-solitons is studied for the electron-positron-ion plasma with nonthermal non-extensive electrons using extended version of Poincare-Lighthill-Kuo (PLK) method. Three soliton expressions have been derived by Hirota's method. It is observed that there is a phase shift in each soliton due to collision. The change in phase shift is studied with nonthermal non-extensive parameter  $q$  in the range  $0 < q \leq 1$ . It has been seen that the nonthermal non-extensive parameter plays a significant role on phase shift.

\*Beluti M. K. M. High School, PO: Beluti, Dist.: Birbhum, West Bengal, India, 731301, Dr. Kaushik Roy. Email: kaushikbolpur@rediffmail.com

\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: gdmandal@ewubd.edu

\*\*\* Department of Mathematics, Siksha Bhavana, Visva Bharati University, Santiniketan-731235, India, Email: malaykr\_ghorui@rediffmail.com, unghosh1@rediffmail.com, and prasantachatterjee1@rediffmail.com

*Advances in Astrophysics*, Vol. 3, No. 3, pp. 171-184, 2018, ISSN: 2415-6450

### **The Modulation of a Dust Ion-Acoustic Wave in a Collisional Dusty Plasma**

**A. Paul\***, **G. Mandal\*\***, **M. R. Amin\*\*\*** and **A A Mamun\*\*\*\***

#### **ABSTRACT**

The modulation instability of a dust ion-acoustic (DIA) wave in a highly collisional dusty plasma is studied theoretically. In this investigation, effects of ionization, ion loss, and electron superthermality on the DIA wave are included. By employing the standard reductive perturbation technique, a modified-nonlinear Schrödinger equation (mNLSE) is developed for the evolution of the slowly varying amplitude of the DIA wave. A detailed analysis of the linear and nonlinear dispersions of the DIA wave is presented. Relevant to some astrophysical objects with typical parameters, it is found that the DIA wave is modulationally unstable below a certain critical wave number. Effects of the electron superthermality as well as the ionization and ion loss in the wave dynamics are also studied. It is found that the electron superthermality has a significant effect on the nonlinearity as well as on the damping of the DIA wave. It is also found that the critical wave number for the modulation instability is highly dependent on the parameter  $\beta$ , known as the spectral index of the electron superthermality. Numerical results on the linear and nonlinear dispersions of the DIA wave are described. A parameter study on the Rouge wave solution of the mNLSE is also presented.

\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: apaul@ewubd.edu

\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: gdmandal@ewubd.edu

\*\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: ramin@ewubd.edu

\*\*\*\* Department of Physics, Jahangirnagar University, Savar, Dhaka, Bangladesh. Email: mamun\_phys@yahoo.co.uk

**Coordination Chemistry Reviews**, Volume:376, ISSN number:0010-8545, Page numbers: 20-45, Year of publication:2018

**Beyond Pristine Metal-Organic Frameworks: Preparation and Application of Nano Structured, Nanosized, and Analogous Mofs**

Nazmul Abedin Khan\*, **Zubair Hasan\*\*** and Sung HwaJhung

**ABSTRACT**

Metal–organic frameworks (MOFs) have been fascinating because of their crystalline structures, permanent porosities, large surface areas, and potential applications. Moreover, the composition, pore architecture, morphology/size, and functionality of MOFs can be further tuned to enhance their efficiency in particular applications. Apparently, the modification of MOFs, including the formation of nanostructured and nanosized MOFs, has attracted intense interest in current MOF-related research and therefore widens their applicability in various research areas. In this review, the preparation of MOFs with various nanostructured features (such as hierarchical/hollow pore architectures and defected structure), together with MOF-based composites, analogous MOFs and nanosized MOFs, will be discussed systematically. Potential applications of such MOF-related materials, especially in adsorption/separation, catalysis, and drug delivery, will be addressed. Finally, some ideas on the possible future development of MOFs with various nanostructured features are suggested.

\*Department of Chemistry and Green-Nano Materials Research Center, Kyungpook National University, Daegu 41566, Republic of Korea

\*\*Department of Mathematics and Physical Sciences, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: zhasan@ewubd.edu

**8th International Workshop on Computer Science and Engineering (WCSE 2018)**, June 28-30, Bangkok, Thailand, ISBN: 978-981-11-7861-0, Publishing Year: 2018

**Design and Development of Smart Water Purification Level Tester for Visually Impaired Person**

**Mohammad Salah Uddin\***, Alinoor Hossain Olip, and Md. Khabbab Hossain Tusher

**ABSTRACT**

This paper presents a smart device for visually impaired persons, which helps them to determine the purification level of drinking water. Without water lives won't be exists means that water is life. The lifestyle of visually impaired person or blind people are too much challenging compared to normal people. We cannot say that, nobody can find a trouble-ness day for them. Due to their blindness they are facing huge troubles throughout their life. Smart and mobile devices are always trying to reduce their trouble-ness. In this paper we present a smart device for them for determining the purity level of drinking water based on conductivity properties. The conceptual model as well as the prototype design of the device is presented throughout this paper.

\*Department of Computer Science and Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: uddin@ewubd.edu, akash.bangla@gmail.com

**5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON)**, Madan Mohan Malaviya University of Technology, Gorakhpur (Uttar Pradesh), India. Conference Record Number: 43684, DOI: 10.1109/UPCON.2018.8597076, ISBN:978-1-5386-5002-8, Page Numbers:406-410, Year of Publication: 2018

### **Recognition of Bangla Handwritten Characters Using Feature Combinations**

**Halima Begum\***, Arshad Rafid and **Muhammed Mazharul Islam\*\***

#### **ABSTRACT**

The success of any character recognition system largely depends on how well the distinguishing features of different characters describe the classes of characters. This paper studies the effect of the combinations of three different feature sets (i.e. chain code histogram (CH), longest run (LR) and Gabor wavelet based (GW) feature) on Bangla handwritten character recognition in order to maximize the number of discriminative features among different character classes. Different combinations of the three feature sets (namely LR & GW, CH & GW, LR & CH, and LR, CH & GW), tested on a standard database of Bangla characters, revealed that the combination of LR and CH features yielded better recognition accuracy compared to the other cases. It was also observed that size of the feature vectors in the combination played a key role in the recognition process.

\*Department of Electrical & Electronic Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: hab@ewubd.edu

\*\*Department of Electrical & Electronic Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mmai@ewubd.edu



**Third International Conference on Photonics Solutions (ICPS2017)**, pp. 1071403-1to9 (5 March 2018); doi:10.1117/12.2296703

**Tailoring Light-Sound Interactions in a Single Mode Fiber for the High-Power Transmission or Sensing Applications, Proc. SPIE 10714**

Aamir Gulistan, **M. M. Rahman\***, Souvik Ghosh and B. M. A. Rahman

**ABSTRACT**

A full-vectorial numerically efficient Finite Element Method (FEM) based computer code is developed to study complex light-sound interactions in a single mode fiber (SMF). The SBS gain or SBS threshold in a fiber is highly related to the overlap between the optical and acoustic modes. For a typical SMF the acoustic-optic overlap strongly depends on the optical and acoustic mode profiles and it is observed that the acoustic mode is more confined in the core than the optical mode and reported overlap is around 94 % between these fundamental optical and acoustic modes. However, it is shown here that selective co-doping of Aluminum and Germanium in core reduces the acoustic index while keeping the optical index of the same value and thus results in increased acoustic- optic overlap of 99.7%. On the other hand, a design of acoustic anti-guide fiber for high-power transmission systems is also proposed, where the overlap between acoustic and optical modes is reduced. Here, we show that by keeping the optical properties same as a standard SMF and introducing a Boron doped 2<sup>nd</sup> layer in the cladding, a very low value of 2.7% overlap is achieved. Boron doping in cladding 2<sup>nd</sup> layer results in a high acoustic index and acoustic modes shifts in the cladding from the core, allowing much high power delivery through this SMF.

\*Department of Electronics and Communications Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: moseeur@ewubd.edu

***In Proceedings of IEEE WCNC***, April 15-18, 2018, Barcelona, Catalonia, Spain, pp.1-6.

**A New Hybrid Approach for Scalable Table-Driven Routing in MANETs**

Takuya Yoshihiro, Yuji Kitamura, **Anup Kumar Paul\***, Atsuo Tachibana, and Teruyuki Hasegawa

**ABSTRACT**

OLSR is one of the representative proactive routing protocol for MANETs. However, link-state routing scheme in general poses high load with control messages so that reducing the control load is highly required. On the other hand, table-driven distance-vector routing is known as a low-load routing protocol. However, since it requires large time for path convergence in face of topology changes, it is generally not suitable for MANETs. There are several hybrid routing protocols of link-state and distance-vector schemes in the literature to take advantages of both schemes. By applying link-state schemes only for destinations within k-hop distance, they can reduce control load significantly while keeping fast convergence for destinations within k-hop distance. However, they fundamentally have a drawback of slow convergence for destinations outside the k-hop area even if topology change occurs as close as within k-hop distance. In this paper, we propose a new fundamental mechanism of hybrid routing protocol that also apply link-state routing within k-hop area, but achieves fast convergence for all destinations. Our new proposal takes both fast convergence and low-load advantages for every destination, which namely means to achieve a new design of scalable table-driven routing protocols that have both advantages of link-state and distance-vector routing schemes in the fundamental mean.

\*Department of Electronics and Communications Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: anuppaul@ewubd.edu

**10th International Conference on Electrical and Computer Engineering (ICECE)**, Dhaka, Bangladesh, ISBN number: Electronic ISBN: 978-1-5386-7482-6; Print on Demand (PoD) ISBN: 978-1-5386-7483-3, Page numbers:421-424, Year of publication: 2018

**Over Two Octave Spanning Visible and Near-IR Supercontinuum Generation in Dual-Core PCF**

**Zahidur Rahman\***, Md. Ashfaqur Rahman\*\*, Md. Asiful Islam\*\* and M. Shah Alam\*\*

**ABSTRACT**

A dual-core photonic crystal fiber (DC-PCF) of hexagonal lattice is designed with a tailored dispersion profile possessing a large air-filling fraction. Numerical investigation of the PCF reveals a great potential for supercontinuum (SC) generation extending 0.4  $\mu\text{m}$  to 2.0  $\mu\text{m}$ , when excited by a 50 fs input pulse of 800 nm pumping wavelength, 79 MHz repetition rate and a coupled average power of 135 mW corresponding to pulse energy of 1.71 nJ in a 10 cm DC-PCF. The PCF and the SC spectra thus showed desirable properties for applications in biological sensors, optical fiber communication, frequency metrology and optical coherence tomography.

**Keywords:** Dual-core photonic crystal fiber, dispersion parameter, nonlinear coefficient, supercontinuum generation, nonlinear optical pulse propagation

\*Department of Electronics and Communications Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: zahid.ece@ewubd.edu

\*\*Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, 1205, Bangladesh, Email: shalam@buet.ac.bd

**International Conference on Computer, Communication, Chemical, Materials and Electronic Engineering** (IC4ME2, February 8-9, 2018), Rajshahi, Bangladesh, DOI: 10.1109/IC4ME2.2018.8465664, February 8-9, 2018, ISBN Information: Electronic ISBN: 978-1-5386-4775-2 , Print on Demand (PoD) ISBN: 978-1-5386-4776-9

### **Performance Analysis of a CPDM-QPSK Direct Detection Optical Transmission System Under the Effects of Cross-Polarization**

A. K. M Sharoar Jahan Choyon\*, **S. M. Raiyan Chowdhury\*\*** and Satya Prasad Majumder\*\*\*

#### **ABSTRACT**

Analysis is developed for a Circular Polarization Division Multiplexing Quadrature Phase Shift Keying (CPDMQPSK) with direct detection optical transmission system considering the impact of the crosstalk (Xtalk) owing to cross-polarization (XPoI) induced crosstalk by arbitrary misalignment of the SOPs. A thorough analysis is demonstrated to acquire the output expression of the Signal to Cross-talk plus Noise Ratio (SCNR) for a direct detection CPDM-QPSK receiver. Considering the Maxwellian distribution of the random misalignment angles, the outcome of Bit Error Rate (BER) performance is presented ultimately. Moreover, cross-polarization affects the BER performances and thus the system suffers a significant deterioration from the expected results. It can also be observed that, the system suffers power penalty of 0.18, 0.92 and 4.44 dB for misalignment angle of 10, 11 and 12 degrees respectively at BER of  $10^{-9}$ .

\*Department of EECE, MIST, Email: choyonsharoar@gmail.com

\*\* Department of Electronics and Communications Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: raiyan@ewubd.edu / smakash1306001@gmail.com

\*\*\*Department of EEE, BUET, Email: spmajumder@eee.buet.ac.bd

***In Proceedings of 3rd International Conference on Civil Engineering for Sustainable Development (ICCESD 2018)***, February 9-11, 2018, KUET, Khulna, Bangladesh, Pages 1-7, ISBN 978-984-34-3501-9

**Applicability of Unsteady RANS for Predicting Flow Fields Around Cylinders**

**Md. N. Haque\***

**ABSTRACT**

Accurate prediction of aerodynamic response mostly depends on the accurate modelling of turbulence. A number of turbulent modelling has been proposed over the years and each of them has its own merits and demerits. Unsteady RANS with  $k-\omega$ -SST turbulence model is one of the popular simulation techniques which is computationally less expensive as compared to the others. In the present study, the performance of unsteady RANS is checked for other bluff bodies such as rectangular ( $R = \text{width/depth} = 3$ ) and circular cylinders at Reynolds number ( $Re$ ) of  $1.2 \times 10^4$ . Simulations were conducted for a rectangular cylinder with a side ratio ( $R$ ) of 3 and circular cylinders by using an open source code called OpenFOAM. The mean and rms values of steady state force coefficients were evaluated and compared with the previous experimental data. The mean pressure coefficients were also calculated at the bluff body surface. It was found that the unsteady RANS with  $k-\omega$ -SST turbulence model can efficiently predict the aerodynamic responses around the selected bluff bodies.

\*Department of Civil Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: naimul@ewubd.edu

**15<sup>th</sup> International Conference on Travel Behavior Research**, July 15– 20, 2018, Santa Barbara, California, USA.

## **The Potential Use and Usefulness of Travel Time in Fully Automated Vehicles**

Zia Wadud and **Fuad Yasin Huda\***

### **ABSTRACT**

Traditionally, travel time has been seen to provide a disutility, i.e. the time during travelling is a 'cost' to the traveler. Fully automated vehicles (FAVs) have the ability to free the driver of the driving task and thus allow her to engage in other worthwhile activities while riding the car. This can substantially lower the value of travel time saved and have transformative effect on how people travel. However, there is little understanding about how travel time can be used and how worthwhile this time can be in FAVs. This paper fills this gap by conducting a questionnaire survey. Results show that users will likely engage in other non-driving activities while riding FAVs, and these differ by trip purposes (commute, business, leisure) and trip directions (outbound, return). The time spent travelling in FAVs is perceived to be more useful than in current modes. The interest in using FAVs is directly correlated with perceived usefulness of travel time in automated vehicles. There was strong similarity between intended activities in FAVs with current activities by primary car users in chauffeur driven cars, providing some validation to the stated intention responses. Results have important implications for policy making, time use and value of time research, and vehicle interior design.

**Keywords:** Intelligent Vehicles, Surveys, Travel Behavior, Travel, Time

\*Department Civil Engineering, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: fuad.huda@ewubd.edu

**International Conference on Applied Physics and Mathematics (ICAPM),**  
Putrajaya, Malaysia, December 19-20, 2018.

**Effects of Non-Extensive Q-Distributed Electrons on Dust Ion Acoustic Shock Structures in an Unbounded Dusty Plasma with Two Thermal States of Electrons**

**Gurudas Mandal\*** and **M. Asaduzzaman\*\***

**ABSTRACT**

Properties of dust ion-acoustic (DIA) shock waves in an unmagnetized dusty plasma consisting of inertial ions, nonextensive q-distributed two thermal states electrons, and negatively charged immobile dust are rigorously investigated using reductive perturbation technique. In this present investigation, Burgers equation is derived using ion continuity and momentum equations where two thermal states electrons provide restoring force. The Burgers equation contains a dissipative term arising from (i) the ion kinematic viscosity and (ii) the effects of two thermal states electrons. These two terms, ion kinematic viscosity and the effects of two thermal states electrons, control the dynamics of DIA shock waves. Numerical analysis is represented with figures. It is observed noticeably that the non-extensive electron distribution can significantly change the potential profile and width of shock waves. Finally, the importances of DIA shock waves with two thermal states electrons which are present in different astro-plasma environments are briefly addressed.

\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [gdmandal@ewubd.edu](mailto:gdmandal@ewubd.edu)

\*\*Institute of Natural Sciences, United International University, United City, Madani Avenue, Badda, Dhaka, Dhaka 1212, Bangladesh, Email: [asad@ins.uiu.ac.bd](mailto:asad@ins.uiu.ac.bd)

**International Conference of International Academy of Physical Sciences (CONIAPS XXIII)**, Kathmandu, Nepal, November 16-18, 2018.

### **Modulation of Heavy Nucleus Acoustic Wave in a Degenerate Relativistic Plasma**

**A. Paul\***, **G. Mandal\*\*** and **M. R. Amin\*\*\***

#### **ABSTRACT**

Basic features of a three-component (electron, light-ion and heavy-ion) degenerate relativistic plasma model for a ultra-low frequency heavy nucleus acoustic waves has been studied by taking the dynamics of the heavy nuclei. Here, the electrons and light ions are considered degenerate and relativistic. The nonlinear modified Schrödinger equation (mNLSE) is derived here, by employing the reductive perturbation technique. On the basis of the associated plasma parameters, the stability of the electrostatic wave mode, angular frequency, group velocity, dissipative damping coefficient, modulational instabilities etc are studied. The results of this paper would be useful in understanding the basic features of ultra-low frequency heavy nucleus acoustic wave in a degenerate relativistic plasma.

\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: apaul@ewubd.edu

\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: gdmandal@ewubd.edu

\*\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: ramin@ewubd.edu



**International Conference on Recent Advances in Mathematics and Physical Sciences (ICRAMPS)**, Jahangirnagar University, Dhaka, January 27-29, 2018.

**Effects of Vortex-Like Ion Distribution on Dust-Acoustic Solitary Waves in a Self-Gravitating Opposite Polarity Dust Plasma Medium**

**A. Paul\***, **G. Mandal\*\***, **M. R. Amin\*\*\*** and **A A Mamun\*\*\*\***

**ABSTRACT**

A self-gravitating opposite polarity dust plasma (SGOPDP) medium (containing both positively and negatively charged dust, vortex-like distributed ions and Maxwellian electrons) have been considered in order to examine the effects of vortex-like (trapped) ion distribution on dust-acoustic (DA) solitary waves (SWs) propagating in SGOPDP medium. The reductive perturbation method, which valid for small but finite amplitude SWs, is employed to derive a modified K-dV equation having stronger non-linearity. The basic features of the DA SWs in SGOPDP medium are found to be significantly modified by the combined effect of self-gravitational field and vortex-like electron distribution. The implications of our results in some space and laboratory dusty plasmas are briefly discussed.

\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: apaul@ewubd.edu

\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: gdmandal@ewubd.edu

\*\*\*Department of Mathematical and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: ramin@ewubd.edu

\*\*\*\* Department of Physics, Jahangirnagar University, Savar, Dhaka, Bangladesh. Email: mamun\_phys@yahoo.co.uk

**3rd International Conference on Mathematical Sciences and Statistics, 6-8 February 2018, Putrajaya, Malaysia.**

**On Eigenfunction Based Outlier Detection in High-Dimensional Datasets**

**Sohel Rana\*** and **Habshah Midi\*\***

**ABSTRACT**

Detection of outliers is one of the challenges in high-dimensional data. Because, with increasing dimensionality, many of the conventional outlier detection methods do not work very effectively. In high-dimensional space when analyzed in full dimensionality, the data becomes sparse, and the true outliers become masked by the noise effects of multiple irrelevant dimensions. Thus, in this article, we proposed an Eigenfunction based outlier detection method which is designed for high-dimensional datasets. Our results show that the proposed method is very effective to find outliers in high dimensional data sets.

**Keywords:** Eigenfunction, SVD, Spatial, Outliers, Data Mining

\*Department of Mathematical & Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [srana@ewube.edu](mailto:srana@ewube.edu)

\*\*Department of Mathematics/ Institute for Mathematical Research, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia. Email: [habshahmidi@gmail.com](mailto:habshahmidi@gmail.com)

**5<sup>th</sup> International Conference on Natural Science & Technology (ICNST 2018)**  
30<sup>th</sup>-31<sup>st</sup> March, Asian University of Women, Chittagong, Bangladesh

**Metal Organic Frameworks (Mofs) Derived Magnetic Co-Carbon Composites for the Reduction of *P*-Nitrophenol**

**Zubair Hasan<sup>\*</sup> and Hocheol Song<sup>\*\*</sup>**

**ABSTRACT**

Two cobalt-based metal organic frameworks (MOFs),  $\text{Co}_3(\text{BTC})_3 \cdot 12\text{H}_2\text{O}$  and ZIF-67, were used to prepare magnetic cobalt-carbon composites via one-step calcination and synthesized products were implemented for the catalytic reduction of *p*-nitrophenol. For synthesis of ZIF-67 and  $(\text{Co}_3(\text{BTC})_3 \cdot 12\text{H}_2\text{O})$ , 2-methylimidazole and 1,3,5-benzenetricarboxylic were used as organic precursors, respectively. After calcinations,  $\text{Co}_3(\text{BTC})_3 \cdot 12\text{H}_2\text{O}$  turned in to a Co-carbon composite (Co-CC) while ZIF-67 produced a Co-carbon composite containing N species (Co-NCC). The synthesized catalysts were characterized by a series of spectroscopic instruments and a surface analyzer. The presence of graphitic oxide phases in both of the composites was confirmed by Raman spectroscopy. Surface analyses indicated Co-NCC is highly porous with surface area of  $298 \text{ m}^2 \text{ g}^{-1}$ , and Co-CC has less porosity of  $110 \text{ m}^2 \text{ g}^{-1}$ . Both catalysts exhibited good catalytic activity for *p*-nitrophenol reduction. However, Co-NCC showed 6.7 times faster reduction kinetics compared to Co-CC. Moreover, Co-NCC exhibited robust re-usability up to complete five cycles with negligible loss of catalytic capability. The greater catalytic activity of Co-NCC might be ascribed for the existence of N-moieties that provided supplementary reduction sites along with considerable porosity of the material.

<sup>\*</sup>Department of Mathematics and Physical Sciences, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: zhasan@ewubd.edu

<sup>\*\*</sup>Department of Environment and Energy, Sejong University, Seoul 143-747, South Korea.

**International Conference on Mathematical Modeling and Computations**  
(ICMMC-2018), New Delhi, India, p. 45, December 01-03, 2018.

**Existence of Periodic Traveling Wave Solutions Correspond to Pattern Formation  
in the Brusselator Model**

**A. K. M. Nazimuddin\*** ,Md. Ariful Islam Arif\*\* and M. Osman Gan\*\*\*

**ABSTRACT**

Pattern dynamics can be modeled by spatiotemporal reaction-diffusion systems. We study the pattern formation of a two-component Brusselator reaction-diffusion model for two spatial dimensions. In order to understand the periodic pattern, it is important to investigate the periodic traveling wave solutions resulting from the model. However, we determine a two-dimensional parameter plane using the method of continuation where we establish the existence of periodic traveling wave solutions and find a good agreement between the continuation result and the periodic pattern formation.

\*Department of Mathematics and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: nazimuddin@ewubd.edu

\*\*Department of Mathematics, University of Dhaka, Dhaka-1000, Bangladesh. Email: md.arifulislarif@yahoo.com

\*\*\*Department of Mathematics, Jahangirnagar University, Dhaka-1342, Bangladesh. Email: osmangani2@juniv.edu

**International Conference on Mathematical Modeling and Computations (ICMMC-2018)**, New Delhi, India, p. 52, December 01-03, 2018.

**Spiral Pattern Formation of Periodic Traveling Wave Solutions in a Diffusive Epidemic Model with Nonlinear Incidence Rate**

Md. Ariful Islam Arif\*, **A. K. M. Nazimuddin\*\*** and Samir K. Bhowmik\*\*\*

**ABSTRACT**

Many large-scale spreading of disease in the human population can be modeled by reaction-diffusion systems. Spatio-temporal traveling waves of such systems are striking manifestations within epidemiology. The present study concerns a system of reaction-diffusion equations for a diffusive epidemic model (DEM) with nonlinear incidence rates. In particular, we focus on to research a rotating spiral wave for the two space dimensional DEM. We also study periodic traveling waves for DEM and determine a parameter plane to show the existence of periodic traveling waves in the one parameter family of solutions. We illustrate some numerical results to show our outcomes.

\*Department of Mathematics and Physical Sciences, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: nazimuddin@ewubd.edu

\*\*Department of Mathematics, University of Dhaka, Dhaka-1000, Bangladesh. Email: md.arifulislarif@yahoo.com

\*\*\*Department of Mathematics, University of Dhaka, Dhaka-1000, Bangladesh. Email: bhowmiksk@du.ac.bd

**4<sup>th</sup> Conference Bangladesh Crystallography Associations 20<sup>th</sup> January**, Dept of Chemistry, University of Dhaka

**Preparation of Metal Organic Framework (MOF) Derived Cu–Carbon Composite and its Catalytic Applications Towards Environmental Remediation**

**Zubair Hasan\*** and Hocheol Song\*\*

**ABSTRACT**

Porous Cu–carbon composite was synthesized via high temperature heating of metal organic frameworks (MOF), HKUST-1 under inert atmosphere. The prepared catalysts were characterized by X-ray powder diffraction (XRD), nitrogen adsorption, field emission scanning electron microscope (FE-SEM) and X-ray photoelectron spectrometer (XPS). The synthesized composites were used for several catalytic applications related to environmental remediation such as reduction of Cr(VI), pendimethalin, and azo dyes. The composite was very efficient in all of the tested reductions, completing the reactions in several minutes. Moreover, it also demonstrated sound reusability up to several cycle with a minimum loss of catalytic activities and structural integrity. As per our findings, the synthesized non-noble metal catalyst can be considered as an efficient, cost-effective and reusable catalyst for the alternative to noble metal catalysts.

\*Department of Mathematics and Physical Sciences, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: zhasan@ewubd.edu

\*\*Department of Environment and Energy, Sejong University, Seoul 143-747, South Korea.

Faculty of Liberal Arts and Social Sciences

***Advances in Language and Literary Studies***; (ISSN 2203-4714); Vol. 6 / Issue 6  
(December 2018); Pages: 153-157

### **Hyper-Elitism in Writing Literary Criticisms: Theories and References**

**Syed Mahmudur Rahman\***

#### **ABSTRACT**

Current day literary criticisms written in world englishes often seem to be a little hard to comprehend for readers because of critics' tendency to use too much decorative language with too many theoretical views, jargons, and references of different sorts just to stick to an assumed standard of scholarly writing. This paper, based on a generalized study though, considers that assumed standard hyper elitist, which is affecting the easy entrance of a considerable portion of literary audience into the literary realm where the popularity in the form of reader-friendliness and comprehensibility of literary criticisms are compromised, and thoughts of some creditable thinkers remain unnoticed only because those promising thoughts apparently fail to be expressed in that supposed standard of language. Keeping the purpose of literary criticisms in mind, this paper places forth a seemingly valid question whether this sophisticated way of expressing is really mandatory or not, as the word 'standard' itself is subjected to be modified when needed, and the postmodern approach to the literary regime really tends to unsettle the frame of any standardization and deny the distinctions between 'high' and 'low'. Thus, speculated implications of the paper included that the accessibility of greater number of audience into the arena of literary criticisms might be more liberally considered by established but elitist critics, while the stress of synthesized elitism in writing criticisms might also be mitigated for neophytes among critics.

\*Department of English, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: smrahman.ewu@gmail.com / s.mahmudurrahman@ewubd.edu



**International Journal of New Technology and Research (IJNTR)**, Volume no: 4, Issue no: 1, ISSN Number: 2454-4116, Page numbers: 18-23, Year of publication: 2018

**Thinking Unconventional: Alternative Assessment at Tertiary Level Education in Bangladesh**

**Naushin Nazifa Islam\*** and **Irtisam Ahmed\*\***

**ABSTRACT**

The contemporary developments in the sphere of teaching English as a second language have introduced some significant alternatives to the evaluation and assessment approaches of language classrooms. As a result, educators have started focusing on the implementation of the alternative assessment (AA) to empower their learners. This paper aims to explore the current status of the practice of AA and its effectiveness at tertiary level ESL classrooms in Bangladesh by conducting a research among the participating students and teachers. For this paper, researchers have evaluated the strategic outcomes and productiveness of three different tools of AA: portfolio, project-based learning, and oral presentation. They have applied both the qualitative and quantitative approaches for collecting and analyzing the data.

**Keywords:** Alternative Assessment, Portfolio, Project-Based Learning, Oral Presentation, Tertiary Level Education

\*Department of English, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [naushin@ewubd.edu](mailto:naushin@ewubd.edu)

\*\*Department of English, American International University Bangladesh. Email: [irtisam.ahmed@gmail.com](mailto:irtisam.ahmed@gmail.com)

*Asian Journal of English Studies (AJES)*, Volume No 7, Issue no. 1, ISSN: 2277-3606, Jan 2018, Pg. 175-183.

## **Comparative Studies on Films: Scopes of Digital Humanities**

**Israt Jahan\***

### **ABSTRACT**

Comparative studies on films may open a vast scope of dissemination of knowledge and it can rejuvenate and better analyze many of the ignored and neglected issues of past works. While teaching Comparative Literature course in summer 17, Satyajit Ray's *Ghare Baire* and Baz Luhrmann's *The Great Gatsby* opened new possibilities to emphasize on both the directors' techniques, cinematography, adaptation, and presentation of history among my students. Digital Humanities can be a broad field to study history in a very interesting way. This present paper highlights the factual realities like 'Swadeshi' movement, 'Radical nationalism', 'Jazz age', 'Renaissance Architect' presented in these two movies. The paper will also shade light on the reception of the movies and the impact in their societies during their release and the reaction of my students.

\*Department of English, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: shantiewu@ewubd.edu

***Society & Change***, Vol. XII, No.1, January -March 2018 ISSN :1997-1052  
(Print), 227-202X (Online)

**Ignorance of Rights: Politics of Religious Sentiments vs Human Rights in  
Bangladeshi School Textbooks**

**Farhana Islam\***

**ABSTRACT**

School textbooks are assumed correct and unbiased in their narrative, and most often prescribed to the young minds without questioning. However, due to the increasing interference of political parties in the government funded public education sector, the school textbooks must be critically analyzed before being considered as rightful sources of knowledge. Hence, this study posed two questions: i) how politics influences the narrative of the textbooks in Bangladesh, and ii) how these books play roles in managing ‘ignorance’ about Constitutional Laws and Human Rights among the learners by excluding crucial knowledge and information. To seek the answers, the research evaluated NCTB (National Curriculum and Textbook Board) authorized books in Bangladesh, Social Science (Choudhury et al.) and Bangladesh and Global Studies (Patwari et al.), followed in class 6 and 7 from 1996-2017, and observed how the issue of Human Rights was dealt differently by governments over this time period. The findings of this paper call for teachers and general people alike to recognize ‘ignorance’ as an active tool of political agenda embedded in the school textbooks.

\*Department of English, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: farhana.i@ewubd.edu

***Asiatic: IIUM Journal of English Language and Literature***. Vol. 12, no. 1, June 2018, pp. 93-107.

**Negotiating the Politics of Power: Tahmima Anam's *The Good Muslim* and Women's Role in War and Nation-building**

**Farzana Akhter\***

**ABSTRACT**

In the grand narratives of the history of Bangladesh's birth, women's wartime experiences and their contributions have been pushed to the periphery to institutionalise male monopoly on the annals of war. Even the voices of those who had been sexually violated have been silenced. Only a line or two can be found in the official stereotypical grand narrative of the Liberation War about their sacrifice. In this paper, analysing the personal narratives of Maya and Piya, the two central characters in Tahmima Anam's *The Good Muslim* (2011), I argue that although war mobilises women to be politically active, in the aftermath of war they are relegated to a subordinate status. Additionally, analysing Maya's reversal of roles from an active participant to a reproductive agent, I reiterate that female and male participation in nation-building is regulated by socially constructed ideas of masculinity and femininity.

**Keywords:** Bangladesh, Liberation War, Nation-building, The Good Muslim, Silenced Voices, Prescribed Gender Identities

\*Department of English, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: farzana@ewubd.edu, afarzana18@gmail.com

***Commonwealth Law Bulletin***, volume-43, issue 2, Publisher: Routledge, Taylor and Francis Group, ISSN: 0305-0718, pages 179- 202, January 2018

**An Old Issue of Protecting GIs for Culture: A New Insight from the Experience of India and Bangladesh**

**Mahua Zahur\***

**ABSTRACT**

This paper aims to reiterate the relatively beneficial role of geographical indication (GI) for its culture based potential. The Trade Related Aspects of Intellectual Property (TRIPs), undermined this aspect by accentuating the trade aspects of GIs. This paper reveals that, GI underpins culture within its concept through the notion terroir. The paper argues that the domestic protection regimes that have been designed in the TRIPs' paradigm have broadened the scope of culture based justification. For establishing this argument the paper examines the case studies of Darjeeling tea from India and Jamdani from Bangladesh. The paper draws the conclusion that this particular rationale is justifiable in reality.

\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mahua@ewubd.edu / zahurmahua@gmail.com

***International Journal of Law, Policy and the Family***, Volume 32, Issue 3, 1 December 2018, Pages 363–373, <https://doi.org/10.1093/lawfam/eby013>, Published: 24 September 2018

**What Do Grown Children Owe their Parents? A Moral Duty and Legal Responsibility in Bangladesh**

**Rafea Khatun\***

**ABSTRACT**

In most cultures, some care for elderly parents by their children is generally expected based on either morality or legal instruments. In Bangladesh, although society is guided by religion, in recent years, for a variety of socio-economic reasons, social and family structures are fragmenting and extended families are declining, which leads to other social problems such as the neglect of elderly parents, and decreasing social bonding and respect. In recent years there have been a number of occasions in various districts of Bangladesh where elderly parents have been inhumanely treated and neglected. In order to deal with this, in 2013 the government brought forward a Maintenance of Parents Act. This article tries to make a bridge between moral duty and legal responsibility towards parents. It will also make a comparative analysis of the 2013 Act with Acts of other jurisdictions and make some suggestions for improving the Act while criticizing various provisions of the existing legal framework for elder parents' care.

\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [rkn.law@ewubd.edu](mailto:rkn.law@ewubd.edu)

*Scientific Reports*, 8, 9826. Page number: 1-9, Year of Publication: 2018

### **Modeling and Mapping the Burden of Disease in Kenya**

Michael Frings\*, Tobia Lakes\*, Daniel Müller\*, **M.M.H. Khan\*\***, Michael Epprecht\*\*\*, Samuel Kipruto\*\*\*\*, Sandro Galea\*\*\*\*\* and Oliver Gruebner\*

#### **ABSTRACT**

Precision public health approaches are crucial for targeting health policies to regions most affected by disease. We present the first sub-national and spatially explicit burden of disease study in Africa. We used a cross-sectional study design and assessed data from the Kenya population and housing census of 2009 for calculating YLLs (years of life lost) due to premature mortality at the division level (N = 612). We conducted spatial autocorrelation analysis to identify spatial clusters of YLLs and applied boosted regression trees to find statistical associations between locational risk factors and YLLs. We found statistically significant spatial clusters of high numbers of YLLs at the division level in western, northwestern, and northeastern areas of Kenya. Ethnicity and household crowding were the most important and significant risk factors for YLL. Further positive and significantly associated variables were malaria endemicity, northern geographic location, and higher YLL in neighboring divisions. In contrast, higher rates of married people and more precipitation in a division were significantly associated with less YLL. We provide an evidence base and a transferable approach that can guide health policy and intervention in sub-national regions afflicted by disease burden in Kenya and other areas of comparable settings.

\*Humboldt-Universität zu Berlin, Geography Department, Berlin, Germany.

\*\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mmhkhan@ewub.edu

\*\*\*University of Bern, Center for Development and Environment (CDE), Bern, Switzerland.

\*\*\*\*Kenya National Bureau of Statistics, Nairobi, Kenya.

\*\*\*\*\*Boston University, Department of Epidemiology, Boston, MA, USA.

***IFLA Journal*** ,Vol. 44, Issue 2, ISSN Number: 0340-0352, Page Number: pp.132-142, Year of Publication: 2018

## **Open Access Repositories of Bangladesh: An Analysis of the Present Status**

**Md. Hasinul Elahi\*** and Muhammad Mezbah-ul-Islam\*\*

### **ABSTRACT**

This study examines the present status of open access repositories in Bangladesh. The main aim of the study is to find out the characteristics of open access repositories, their development scenario and ranking in web repositories as well as to recommend some suggestions for the development of open access repositories in Bangladesh. The methodology includes a quantitative approach. The data were collected from OpenDOAR from 20 to 29 August 2017. The scope of the study is confined to Bangladeshi repositories indexed in the OpenDOAR database. The findings of the study show that the Bangladeshi repositories are embodied in the Ranking of Web Repositories. The study also clearly indicates the very slow progress of open access repositories in Bangladesh. The repositories in Bangladesh listed in OpenDOAR are mostly institutional in nature. The study also reveals that a maximum number of repositories are small in terms of collection. It can be easily summarized that there is a need for public awareness regarding the concept of open access repositories in Bangladesh to support research and development. This paper is the first attempt in Bangladesh to discuss and analyze the overall scenario of open access repositories. It also suggests some recommendations for developing the open access repository system in Bangladesh which will surely add value to the future research of open access in Bangladesh.

**Keywords:** Bangladesh, Institutional Repositories, Open Access, Open Access Repositories

\*Department of Information Studies and Library Management, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: h.elahi@ewubd.edu ; elahi.islm@gmail.com

\*\* Department of Information Science and Library Management, University of Dhaka. Email: mezbah2000@du.ac.bd



**International Journal of Knowledge Content Development and Technology**, Vol. 8 Issue 1, ISSN Number: 2234-0068. Page Number: pp.37-50, Year of Publication: 2018

**Perception on the Use of Mobile Phones in Retrieving Information from Academic Libraries: A Developing Country Perspective**

**Md. Hasinul Elahi\***, Md.Shiful Islam \*\* and **Dilara Begum\*\*\***

**ABSTRACT**

The purpose of the study is to identify the perception of the Library and Information Science (LIS) specialists about the use of mobile phones in retrieving information. It investigates the present status of the LIS specialists regarding mobile phone usage, perceptions regarding the use of mobile phones in retrieving information from libraries and points out the possible drawbacks and their solutions for embracing mobile phones in retrieving information from libraries and providing some suggestions. The methodology includes a quantitative approach. The authors used a survey method using a structured questionnaire to measure the perception of LIS specialists regarding the use of mobile phones in retrieving information from libraries. The findings confirmed that the majority (72%) of LIS specialists have the experience of using mobile phones for more than 10 years. Findings also indicate that the LIS specialists have agreed with the statements of advantages of using mobile phones. This paper concludes that the respondents also agreed regarding the possible advantages of introducing mobile phones in retrieving information from libraries. The paper explores the original perceptions of LIS specialists regarding the use of mobile phones in retrieving information from libraries.

**Keywords:** Mobile Phones, Information Retrieval, Mobile-Based Information Retrieval System, Mobile Applications, Library Services

\*Department of Information Studies and Library Management, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: h.elahi@ewubd.edu, elahi.islm@gmail.com

\*\* Department of Information Science and Library Management, University of Dhaka. Email: shiful@du.ac.bd

\*\*\* Department of Information Studies and Library Management, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: dilara@ewubd.edu

**SAGE Open, SAGE Publications**, October-December 2018: 1–9 © The Author(s)  
2018 DOI: 10.1177/2158244018812620 journals.sagepub.com/home/sgo

## **The Influence of Gender Relations On Women’s Involvement and Experience in Climate Change Adaptation Programs in Bangladesh**

**Mumita Tanjeela\*** and Shannon Rutherford

### **ABSTRACT**

The nexus between poverty and climate change is a major concern, especially in a country like Bangladesh where lack of resources is a significant problem in both rural and urban areas. Climate change affects a wide demographic of the population in Bangladesh, and among those affected, women are more vulnerable to climate change impacts, as is evident from the history of climate-induced disasters in the country. Climate change increases women’s socio-economic vulnerabilities by directly impacting their family’s food security, water consumption, and livelihood. Hence, their roles and contributions are critical in responding through adaptation. Nonetheless, in Bangladesh, challenges remain to incorporate women as distinct actors and active agents in climate adaptation programs considering the gender power dynamics that exist. In this context, this study focuses on women’s contributions as individuals or as a group and reveals their significant influence in climate change adaptation practices

**Keywords:** Women, Adaptation Practices, Gender Relations

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mtanjeela@ewubd.edu

\*\*Global Public Health Program, Griffith university Australia

***Journal of Society & Change***, Vol. XII, No.2, April-June 2018, ISSN: 1997-1052  
(Print), 227-202X (Online) Page: 33-44

**Child Murder Issues in Bangladesh: Reasoning from Socio-Ethical Observation**

Tahmina Yesmin Shova\* and **Rasel Hussain\*\***

**ABSTRACT**

Since last one and half decades, Bangladesh has confronting a growing number of childkilling issues. For different social, economic and political reasons innocent child are being tortured, raped, sexually assaulted, and killed brutally in heinous means. According to the statistics of Bangladesh ShishuAdhikar Forum (BSAF) in 2015, Bangladesh has witnessed 1,714 murders of children just over the last five years in which 968 children were put into atrocious death. The number explicit the fact that on average one child is being killed in each day. While legal actions and investigations on such cases are taking place but even though, that does not seem to hindering continuous child killing occurrences. Such incidents have made real threat to the rights to life of children. This paper is an endeavor to frame out a sociological and ethical examination on the possible reasons of child killing incidents in Bangladesh. Methodologically, the discussion and analysis will be followed inductively relying on a considerable number of literature reviews, empirical data and practical examples throughout the whole paper. We shall argue that child murder issues hoist responsibilities and accountability of both government and public, and therefore, required special consideration; child as a subject of unreasonable and terrible killing cannot be morally acceptable instead, they should be protected from any vulnerable position of the society.

**Keywords:** Child's Rights, Social Perspectives, Killing Reasons and Context, Moral Arguments, Government-Public Responsibilities

\*Department of Philosophy, University of Dhaka, Bangladesh. Email: tutun6350@yahoo.com

\*\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: raseldu1971@ewubd.edu

***International Journal of Research and Innovation in Social Science (IJRISS)***  
Volume II, Issue XII, December 2018, ISSN 2454-6186, Page 449-453

**Web Technology and the Changing Pattern of Relationship: A Study on Urban Youth in Dhaka City**

Irin Pervin\* and Rassel Hussain\*\*

**ABSTRACT**

In the era of neoliberal society, a phenomenon is taking place dramatically and is changing the previous modes of communication very sharply and every age people especially the active part (Youth) of internet user are facing more changes than anybody else. The pattern of communication using internet technology has changed the way we manage our everyday interaction with our near and dear ones and it is very important as it is a supplement of the close of face to face interaction. Using quantitative method data were collected through semi structured questioner from two universities namely Dhaka University and BRAC University located in Dhaka city to get a better understanding between public and private university students internet using behavior. The study results reveal that there are some significant difference between public and private university students in the case of internet using behavior as well as their mentality and tastes. Due to over use of internet technology relationship pattern is changing and it is becoming very much fragile which makes them isolated from the close relationship. In this modern time period people are becoming very busy with their respective jobs and to mitigate their everyday growing demand. As a result, they are becoming dependent on internet technology to maintain relation with relatives and for various purposes. Young generation as an advanced part of technology user is facing more problems for changing relationship in recent years.

**Keywords:** Web Technology, Urban Youth, Relationship Pattern, Changes in Relationship

\*Department of Sociology, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, Bangladesh, Email: irindu125@yahoo.com

\*\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: raseldu1971@ewubd.edu

***Journal of Indian Research ISSN:*** (Online) 2321 -4155, VOLUME : 6, ISSUE : 1, JIR ( JAN-March, 2018 )

**Media and Consumption Behavior of Urban Youth in Dhaka City**

**Masum Billah\*** and Muhammad Anwar Hossain\*\*

**ABSTRACT**

The overall objective of the study is to correlate media exposure of urban youths with patterns of consumption behavior in Dhaka. The study argues that globalization especially media exposure has reshaped consumption behavior of youth and injector a global homogeneous culture. A total of 387 youths were interviewed through a predesigned structured questionnaire. Watching TV, using internet and social media were found significantly correlated with consumption of Fast Food, wearing branded dress and western dress. Further researches might explore the changing behavior of consumption pattern among urban youths because the future impact of this transformation in digital penetration could be enormous.

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: masum.sr@ewubd.edu

\*\*Department of Sociology, Begum Rokeya University, Rangpur, Bangladesh. Email: anwardu21@yahoo.com

***Journal of Indian Research*** (ISSN: 2321-4155) Vol.6, No.4, October-December, 2018, 52-58

### **Analyzing Disaster Risk Factors of Cyclone Survivors in Bangladesh**

**Masum Billah\***, Pedro Arcos González\*\* and Rafael Castro Delgado\*\*\*

#### **ABSTRACT**

Tropical cyclone causes enormous socio-economic, environmental and health burdens to vulnerable people residing in coastal regions in Bangladesh. Recent debates on climatic shifts and old fashioned disaster management models often referred as disaster preparedness and response have created an opportunity for framing concrete decisions to formulate national policy and advance adaptive capacity building in addressing climatic loss and damage. This paper discusses epidemiological, environmental and socioeconomic risk factors in the post-cyclone phase in Bangladesh.

**Keywords:** Cyclone, Cyclone Aila, Hyogo Framework For Action 2015, Morbidity, Mortality, Risk, Sidr, Tropical Cyclone

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mbsumonbd@gmail.com

\*\* Department of Medicine, University of Oviedo, Oviedo, Spain. Email: arcos@uniovi.es

\*\*\*Rafael Castro Delgado is an Associate Professor at the Department of Medicine, University of Oviedo, Oviedo, Spain. Email: castrorafael@uniovi.es

***Environment and Urbanization ASIA journal, Sage Publication***, Published in Volume 9 Issue 1 of the journal, March 2018. (<http://journals.sagepub.com/doi/abs/10.1177/0975425317748534>)

**Are Organizations Accountable? Disconnect Between Gender and Sanitation in Bangladesh**

**Fouzia Mannan\***

**ABSTRACT**

Deep-rooted gender inequalities exist in organizations responsible for provisioning sanitation facilities in Bangladesh with regard to organizational culture, financial status and power axis within and beyond the organizations. There are huge gaps between these organizations as these have differential gender sensitive policies or even lack proper understanding of gender. Without having a gender-sensitive leadership within organizations, sanitation issues continue to have a male-dominated bias. Given the patriarchal organizational culture and mindset in Bangladesh, serious rethinking is needed to bring about a gender-sensitive sanitation policy. This article aims to investigate gender issues in sanitation through qualitative analysis of select sanitation and water-implementing organizations in Dhaka and explore how they understand, interpret and practice 'gender'.

**Keywords:** Gender, Sanitation, Organization

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [fouzia@ewubd.edu](mailto:fouzia@ewubd.edu)

***East West Journal of Business and Social Studies***, 2018; 6-7: 100-115. Page number: 100 -115, Year of Publication: 2018

**Mental Health Well-Being Among Undergraduate Students of East West University: Evidence from a Cross-Sectional Survey**

**Md. Mobarak Hossain Khan\***

**ABSTRACT**

Poor mental health is common among university students everywhere, including in Bangladesh. Since information about mental health well-being (MHWB) of private university students are still scarce, this study aims to estimate the prevalence of poor mental health and associated determinants, using cross-sectional data (N=670) collected from undergraduate students of East West University. The WHO Well-Being Index, composed of five Likert Scale questions with possible answers from 0 (not at all) to 5 (all the time), was used to measure the state of MHWB using a cut-off 13 for the total score. The overall prevalence of poor mental health was 34.7%, and was significantly higher among female (38.8%) than among male (30.8%) students. Its prevalence was also significantly higher among students who had no close friends for sharing problems, and among students with low level of satisfaction about their current residences in Dhaka, academic performance at EWU, and relationship with faculty members. Since a large proportion of students suffer from poor MHWB, EWU administration should consider this as a serious issue and apply feasible prevention strategies in a comprehensive manner.

**Keywords:** Mental Health Well-being, Undergraduate Students, East West University, Academic Performance

\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mmhkhan@ewub.edu



***East West Journal of Business and Social Studies***. vols. 6-7, Year of publication: 2018

**Landslide in Chattogram City: Spatial Vulnerability and Risk Mitigations Options**

**Md Rezwan Siddiqui\***

**ABSTRACT**

Landslides have been among the most alarming disasters in the hilly regions of Bangladesh for the past few years. This hazard has become an unprecedented cause of human and economic losses. This paper attempts a spatial vulnerability analysis of landslides in the hilly regions of Bangladesh using hotspots, cluster and time-series analysis. It also discusses the risk mitigation options practiced by the inhabitants of landslide vulnerable areas of Chattogram City. Deadly landslides are found to be concentrated in South- eastern hilly towns and cities of Bangladesh. Larger clusters of landslides are found in Chattogram City, Teknaf, Cox's Bazar cities, followed by Bandarban, Chattogram university area and Rangamati. Landslide hotspots are especially prominent in Chattogram city and Bandarban districts. Both landslide incidents and fatality have been increasing with highest number deaths of 162 in 2012. From the late 90s, the rate of landslide occurrences began to increase sharply at an average annual growth rate of 132.75 percent. Landslides are found prominent in urban settings. Growing rural-urban migration of low-income population leads to occupation of hills, unplanned urban growth and risks. Poor economic condition, lack of awareness and education, poorly built structures are some sources of vulnerability. There is severe lack of awareness, motivation and training about personal and community preparations and interventions to reduce landslide vulnerability. Most vulnerable populations know very little about techniques of avoiding landslide risk, prevention and mitigation options. They are only aware of emergency evacuation during heavy rainfall and is dependent extremely on external assistance and relief.

\*Department of Social Relation, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: rezsid@gmail.com

***Journal of Social Science Review, The Dhaka University Studies, Part-D Volume 35, Number-2, ISSN 1562-269X, Page:146-170, December 2018***

**Unusual and Unnecessary C-section Practice in Bangladesh: Violation of Respect for Autonomy Principle and Social Equity in Healthcare**

**Rasel Hussain\* and Tahmina Yesmin Shova\*\***

**ABSTRACT**

Since last decade, Bangladesh has witnessed alarming acceleration in caesarean surgery childbirth rates that facilitates health service providers with some social and moral charges. At the end of 2016, such practice exceeds the standard perimeter of C-section which is 31% while it was only at 3% in 2001 (WHO,2017). This paper examines the foremost socio-moral influential factors that inflame women and medical professionals to perform C-section frequently in Bangladesh. How this practice infringes the biomedical principle of respect for autonomy has been focused in the light of Beauchamp & Childress's idea of biomedical ethics along with the concept of social equity in health of Dahlgren-Whitehead (1991) 'Rainbow Model'. Data from Bangladesh Demographic and Health Survey (DHS) and World Health Organization(WHO), a number of empirical case study, reports, books, articles, and some web resources have been used for this mixed methodological study. Finding shows that financial incentives and maternal preferences are significantly contributing in such uprising number of C-Section practice which severely contravenes the ethical principles of health care. Therefore, some reformed medical policies are required for both patients and medical professionals.

**Keywords:** Caesarean Section, Child Birth, Impact Factors, Rights, Autonomy, Medical Policy

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: raseldu1971@gmail.com

\*\*Department of Philosophy, University of Dhaka, Bangladesh. Email: tutun6350@yahoo.com

**3rd Works-in-Progress Conference “IPScholars Asia”**, School of Law, Singapore Management University 1 – 2 March 2018, Singapore, Organizer: Applied Research Centre for Intellectual Assets and the Law in Asia, SMU , Sponsor: WIPO Academy

**Mandate of Safeguarding Intangible Cultural Heritage: Is IP Domain a Suitable One? A Missing Opportunity for Bangladesh**

**Mahua Zahur\***

**ABSTRACT**

‘Culture’- comprising both good and bad practices - lacks any universal official definition. However, its protection is mandated through various international multilateral instruments. These instruments have suggested a range of options to be adopted by the state parties to protect a whole range of practices that may be included in the expression ‘culture’ in tangible and intangible elements. In this paper, the mandate of protection of intangible cultural heritage undertaken by UNESCO through the Convention for the Safeguarding of Intangible Cultural Heritage has been appreciated. Every year UNESCO inscribes new elements in its list of intangible cultural heritage from different jurisdictions. For the protection of these elements a good number of measures, legislative, administrative and so forth, have been suggested by these instruments. This paper argues that, in the absence of any standard mechanism for the effective protection of intangible cultural heritage, IP domain may contribute extensively to supplement the UNESCO mandate. To establish the argument, the paper takes some examples from Bangladesh. To date, three elements from Bangladesh, namely, ‘baul’ songs, traditional art of ‘jamdani’ weaving and ‘Mangal Shobhajatra’ on PahelaBaishakh(Bengali New Year) have been inscribed in the representative list of intangible cultural heritage of UNESCO. However, recently ‘jamdani’ has been registered in the category of fabric as the first geographical indication of Bangladesh under The Geographical Indication of Products (Registration and Protection) Act, 2013. The term after being recognized as a ‘property’ may contribute to the commercial exploitation of the traditional art of the weaving pattern (the intangible component) of the ‘jamdani’ fabric (the tangible component). The international legal scholarships have already embarked upon this theoretical justification, whereas some practical instances have established the actual benefits of recognition under IP regime (specifically through GI system) in protecting the intangible cultural components of a given product. This paper deals with the issue whether similar benefit can be brought for the other elements, namely ‘baul’ song (a form of folk music) from Bangladesh, under the copyright regime. In the Copyright Act, 2000, no specific provision is made for the protection of folklore. The paper argues for the justification of protecting folklore within the copyright regime recognizing that the ‘property’ in folklore shall encourage the community for preservation of folklore. The paper also aims to suggest how the community may avail this benefit under the copyright regime. This paper concludes that the intangible cultural heritage can be effectively safeguarded by attributing proprietary value to them.

\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mahua@ewubd.edu / zahurmahua@gmail.com

**15<sup>th</sup> WIPO-WTO Colloquium of IP Teachers and Researchers, Geneva, Switzerland, June 18-29, 2018**

**An Overview of the Challenges of ‘Jamdani’ and ‘Hilsha’- The Two Registered GIs from Bangladesh in Post Registration Epoch**

**Mahua Zahur\***

**ABSTRACT**

In November 2013, Bangladesh enacted the ‘Geographical Indications of Goods (Registration and Protection) Act’ which is country’s first legislative effort to protect the goods of the land that are renowned as the products exclusively of Bangladesh. The Act is enacted considering the minimum standard set forth in TRIPs (Trade Related Aspects of Intellectual Property Rights) for the protection of geographical indications. This Act is a pragmatic step towards the country’s obligation as a member of WTO (World Trade Organization), and the enactment can also be seen as an important implementation of the demand of the traditional knowledge-holders of Bangladesh who have for long been demanding the protection of their traditional agricultural products and the products of craftsmanship from the possible threat of globalization. In 2015 Bangladesh has adopted the ‘Geographical Indications of Goods (Registration and Protection) Rules that provides provisions for the procedure of registration of GIs in Bangladesh. After the enactment of the Act, two products namely- Jamdani and Bangladesh Hilsha are registered as GIs from Bangladesh. Jamdani is an intricate woven fabric which is registered in class 25 for saree that is used as a traditional wear of Bangladeshi women. Hilsha is a variety of fish and is registered in class 29 and 31. These two products are granted registration as they both are associated clearly from the certain territories of Bangladesh. The registration of these two products is expected to bring positive trade impact benefitting the overall economic condition of the country. It is hoped that the once declined jamdani industry will get back its historical glory, and the community associated with Hilsha fishing will be economically revitalized through the successful implementation of the GI Act. However, in any jurisdiction, the success of GI depends on the recognition, commercialization and the management of GI- denominated products. Similarly, the fate of these two registered GIs depends on the efficient post-registration mechanism namely, quality management, price control, fair competition etc. This proposal embarks upon the enquiry as to what extent a developing economy like Bangladesh can respond to these challenges that may follow in post-registration regime. This paper seeks to address the challenges that are atypical to the products mentioned in the perspective of Bangladesh. The factors like the wake of modernization responsible for declining the overall saree industry, the increase of price, widespread generic use, the influence of intermediaries in the market, inter alia, have reduced the success of jamdani in the state of vulnerability. The similar fate is apprehended in case of Hilsha for the factors like environmental degradation, absence of quality surveillance, lack of awareness among the stakeholders etc. Moreover, the construction of development works has adversely affected the natural habitat of this product of terroir. The proposal will critically analyze the steps of the state that have been taken in the post-registration era to combat the challenges mentioned. This goes without saying that the successful GIs are actors contributing in a country’s economy, culture and community development. The apathy of a state in constructing an effective ecosystem for fostering GIs in national level may translate GIs’ incidental benefits a mere theoretical rhetoric. The proposal concludes with the view that, the success of the two registered GIs in the overall reality of Bangladesh is a big challenge.

\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mahua@ewubd.edu / zahurmahua@gmail.com

**2nd International Conference on International Law**, Organized by Department of Law, East West University Place of conference: East West University Held on, 2018

**The Importance of the Arbitral Award in the Bangladesh-India Maritime Delimitation in the Aspect of International Maritime Boundary Law**

**Monira Nazmi Jahan\***

**ABSTRACT**

As for both living and non-living resources, such as fish and mineral resources including hydrocarbons, sea area has immense importance in Bangladesh. It is a matter of fact, that, like territorial or land boundary maritime boundary is a politically sensitive issue as it has a massive affects on a state's sovereign rights concerning the fisheries, hydrocarbons and other resources as well as uses of the sea including the national security issue. Bangladesh is located in the northeast corner of the Bay of Bengal, which is concave in nature and the Bay of Bengal is situated in the north- eastern Indian Ocean, covering an area of approximately 2.2 million square kilometers, and is bordered by India, Bangladesh, Myanmar and Sri Lanka. There were some disputed areas which kept unresolved for a long time with the neighbors of Bangladesh, specifically with India and Myanmar. However, Bangladesh had gracefully resolved maritime boundary disputes with both India and Myanmar. For having a peaceful solution and keeping harmony between concerning states, Bangladesh applied for Annex VII mandatory arbitration procedures, entailing binding decision, to seek judicial settlement of the dispute against India. The Arbitral Tribunal rendered its Award in the maritime delimitation dispute between Bangladesh and India in the Bay of Bengal on 7 July 2014 where it delimited the parties' territorial sea, exclusive economic zone and the continental shelf, including the area beyond 200 nautical miles. This arbitral award opens the way for Bangladesh to explore for oil and gas in the Bay of Bengal, the site of important energy reserves. As the tribunal gave its decision based on "equitable solution" hence, it's a win-win situation for both the states as each state got their lawful rights over the sea. The settlement of maritime boundary through UN's Permanent Court of Arbitration is surely a remarkable approach from Bangladesh and India to solve various international issues in South Asian Region regarding maritime boundary disputes.

**Keywords:** Bay of Bengal, Maritime Delimitation, Territorial Sea, Exclusive Economic Zone, Continental Shelf Within and Beyond 200 Nm

\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: monira@ewubd.edu

**4<sup>th</sup> International Conference on Women Studies held in Srilanka, 5<sup>th</sup> -7<sup>th</sup> May, 2018**

**A Critical Study on Hindu Woman's Right to Property and to Divorce: Bangladesh Perspective**

**Rafea Khatun\* and Fariha Abedin\*\***

**ABSTRACT**

Much has been debated on the issue of hindu woman's right to property and right to divorce under the orthodox hindu legal regime in Bangladesh. Hindu being the minor community in Bangladesh has been in deprivation of the utility of the expected changes and hence a flagrant non-compliance with the universal human rights normative framework as to twin principles of equality and non-discrimination and its own constitutional fundamental rights. Instead of being hindu majority-based country, India has brought a radical change in their personal laws affecting hindu women rights along with other areas. This paper demonstrates the laws that apply in Bangladesh comparing with India and some other countries and it has been tried to find out the practical reasons behind unwillingness to reform the hindu personal laws regarding property and divorce right in Bangladesh. At the same time this article aims to focus on constitutional validity of un-unified personal laws in Bangladesh which affect the hindu women and create a safeguard for sustaining of age old patriarchal system of our society. In spite of having many limitations it is our belief that our little attempt will create a robust voice for woman's right in Bangladesh which already declared by Vienna Declaration as human rights for all the country. Besides, this study will try to find out the non-equality between right based and liability creating legislations for the women in Bangladesh.

\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: rkn.law@ewubd.edu

\*\*Department of Law, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: fariha@ewubd.edu

***Seventh Global Conference*** on Public Policy and Administration in the Middle East at the American University in Cairo held on November 26-28, 2018

**Parents Maintenance Act 2013 of Bangladesh: An Analysis of the provisions and the Implementation Context Strategy**

Nusrat Jahan Chowdhury\* and **Touhida Tasnima\*\***

**ABSTRACT**

World is aging as well as the people. The number of aging people is increasing all over the world so is the concern of elderly care. Many countries of the world have enacted laws to ensure the dignity and due care of the elderly by family, society and institutions. The government of Bangladesh enacted 'Parents Maintenance Act' in 2013 to deal with the increasing trend of abandonment and abuse of aged people and imposes some legal bindings on the children. This paper analyses this act and its different provisions to understand the extent to which the act can ensure the safety and care of elderly people. It argues that the act fails to be inclusive and biased towards a class of elderly people in absence of clear framework of regulation, awareness programme and mechanism of implementation. Moreover, it posits that the socio economic and cultural reality remains the biggest challenge for the successful implementation of the act especially in a context where ethos of neo liberalism and modernization has transforming the society into individualistic and materialistic one. Finally, the paper suggests some measures from the experiences of other countries which can be considered to make the act a comprehensive and sustainable mechanism to ensure the dignity and care of elderly people.

**keywords:** Aging, Elderly Care; Parents Maintenance Act, Neo Liberalism; Gender; Care Index, Policy Implementation

\*Department of Public Administration, University of Dhaka

\*\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [touhida@ewubd.edu](mailto:touhida@ewubd.edu)

**5<sup>th</sup> International Conference on Governance and Modernization in Changing Environment**, held on 18-19 December at Bangladesh Academy for Rural Development (BARD), Comilla, Bangladesh

**User's Perception of Quality in Residential Aged Care in Bangladesh**

**Touhida Tasnima\***

**ABSTRACT**

The importance of quality in aged care services cannot be underestimated. It has become the prime agenda for countries worldwide with the changing context of user service experience, geographic areas and demographic groups. In Bangladesh, quality standards are set by professionals and policymakers like other developing countries and only minimal standards currently exist for the regulation of providers of social services including elderly care. There are number of problems and gaps related to assessment of quality in the existing guidelines and it is rare to find user involvement and viewpoint in making decisions related to quality assessment and improvement. This study aimed to provide a framework for aged care services quality by exploring the factors of user's satisfaction in Bangladesh. The broad objective of this paper is to assess the factors from the perspective of user's satisfaction that influence the standards, provisions and quality of residential aged care services in Bangladesh. For the purpose of the study quality is defined here as compliance to users' needs and excellence in experience to answer the research question. The paper is based on a case study on a residential aged care and has explored the factors that influence the quality from the user's perspective. In addition, the paper also analyses the internal and external quality assurance policies as practised by the selected aged care that was studied as part of the research, with focus on quality of services provided for the residents.

**keywords:** Quality Assurance, Residential Aged Care, Bangladesh

\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [touhida@ewubd.edu](mailto:touhida@ewubd.edu)



**5<sup>th</sup> International Integrative Research Conference on Governance and Modernization in Changing Environment**, BARD, Comilla, Bangladesh on December 18-19, 2018, Year of Publication: 2018

**Integration of Health Care and Social Support in Specialized School for Children with Autism: A Case Study from Dhaka City**

**Marzia Zaman Sultana\*** and **Rubayat Kabir\*\***

**ABSTRACT**

Background: Autism spectrum disorders (ASD) are complex cognitive and neuro-behavioral disorders that affect a person's ability to communicate, to form relationships with others and to respond appropriately to the environment. This spectrum of disorder includes – Childhood autism, Asperger's syndrome, Rett's syndrome etc. Worldwide 1 in 160 children are affected with autism which begin in childhood and persists into adolescents and adulthood. Some people with ASD live independently and others have severe disabilities. Some need lifelong care and support. Objectives: This study aimed to explore the methodology of developing the children with autism and other disabilities by the specialized school and also to find out the benefits of integration of health care and social support system in the regular activities of such schools. Theoretical Framework: As the children with autism are mostly associated with some diseases which need regular assessment and health care for which integration of health care and social support would provide positive impact. Methodology: This was a qualitative study carried out from March to August 2018 in a specialized school for children with autism and other disabilities. Data were collected from passive observation, informal discussions with the school authority and participating formal workshop and discussion sessions carried out by the school. Descriptive qualitative analysis was done to get the results of the study. Key Findings: This school follows one teacher for one student methodology to develop the life skills and day to day activities of the children and provide regular occupational therapy, speech and language therapy, psychotherapy, vocational training, music and dance therapy, teach cycling, swimming and provide computer training. They conduct regular training session for the teachers and parents. They have developed collaboration with a nearby hospital that is committed to provide free health care support, doctor consultation, and dental care with minimum waiting time on priority basis. The school arranges regular nutritional assessment of these children with expert dietician. The school has also developed a parent teacher association to ensure the social support system for these special children. Besides the regular school activities, the integration of health care and social support is providing a positive thrust to the development of these children and improving their social acceptance.

**Keywords:** Children with Autism, Health Care, Social Support, Specialized School, Dhaka City

\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: nizhumyashfee@gmail.com

\*\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: krubayat@gmail.com

**4<sup>th</sup> International Conference on Education –ICEDU 2018**, Bangkok, Thailand, April 05-07, 2018, Year of Publication: 2018, ISSN 2424 - 6700 online DOI: <https://doi.org/10.17501/icedu.2018.4107>, Page number: 62-68

**Designing Classroom Activity: To understand the Key Psychological Perspectives in an Introductory Course**

**Rubayat Kabir\***

**ABSTRACT**

Introductory classes are essential for understanding any course. In a traditional class format, the instructor delivers lecture to students who passively grasps the information presented to them. However, recent researches emphasize on the importance of active student engagement in classroom for better retention. The paper presents a demonstration of class activity designed to engage students in introductory psychology course for undergraduate students. It tries to foster critical thinking and application of various viewpoints through class participation. The study took place in two sections of Introduction to Psychology course with 84 participants in Dhaka, Bangladesh. In one section, a class of one hour and thirty minutes was allocated for the activity, i.e. five groups were created to represent five Psychological perspectives, case reading and presentation was done in groups as well as question and answer round took place among each group. In another section, the case was presented to students for reading and analyzing it during their free time after class. The responses were marked from their examination scripts. The result indicates a significant difference in responses from those who took part in the class activity than those who did not. The students had better recall of elements from the case and could relate more to real life situations.

**Keywords:** Psychological Perspectives, Classroom Activity, Introduction to Psychology Course

\*Department of Social Relations, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [krubayat@gmail.com](mailto:krubayat@gmail.com)

**5th International Integrative Research Conference on Governance and Modernization in Changing Environment. BARD, Comilla, Bangladesh, Year of publication: 2018**

**Assessing the Role Public Participation in Safeguarding the Good Governance of Climate Finance**

**Md Rezwana Siddiqui\***

**ABSTRACT**

Public participation - whether as a tool or as an end result, is now regularly used in climate change project and research. As the world is now advancing toward a long-term solution for climate change, participatory approaches have made its firm place as the key organising principle of climate governance initiatives. However, the lack of transparency is one of the many challenges commonly faced by climate change projects in Bangladesh. There are extensive efforts in ensuring good governance in this sector. On the other hand, the allegations of using participation as an elusive tool of empowerment are frequent. Despite criticism, use of participation as a tool to ensure transparency of climate change project is a common practice. However, little is explored about the relationship between the participation level and the level of transparency. This paper aims to explore this association if any. Using the systematic analysis of the climate change adaption projects completed in Bangladesh in last five years, this research aims to explore the relationship between transparency level of climate change finance with the degree and mode of participation. The result of participation varies significantly depending on the scale, mode and extent of it. The transparency of climate finance can fluctuate depending on the design and successful implementation of the participation tool also. The efficiency of participation and level transparency also varies depending on the implementing authority of the project; whether a government agency or non-governmental entity. Merely incorporating one or more participatory approaches without considering the appropriate level of participation necessary for the best possible outcome – is now a common practice. Therefore, climate change projects should be more careful in designing public engagement tools and approaches to ensure good governance of climate finance.

\*Department of Social Relation, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: rezsid@gmail.com

**Adaptation Future 2018 conference in Cape Town, South Africa, Year of publication: 2018**

**Adaptation Process of the Climate Change Migrants in the Dhaka Metropolitan Region**

**Md Rezwan Siddiqui\* and Nurul Islam Nazem\*\***

**ABSTRACT**

Bangladesh is considered one of the most vulnerable countries of the world due to climate change impact. The geographical location and the socio-economic circumstances of the country make it more vulnerabilities. The consequences of such vulnerable conditions are to be borne by the cities and towns of the country mostly, as the rural areas will not be able to absorb the displaced migrants. Dhaka, the capital of Bangladesh, is thus the destination of most of these displaced people. The city is thus facing much adverse impact of climate change, both directly and indirectly, as it shelters a large number of internally displaced persons. The objective of this research is to analyse the situation that climate change migrants went through during the process of migrating to a climate change vulnerable area to a megacity. It will also explore the adaptation techniques practiced by the migrants or the city to accommodate them in the urban environment. This study is based on the household survey of 12,078 migrants' in the greater Dhaka Metropolitan region. Afterwards 553 climate migrants' household were randomly selected and surveyed from them to extract both quantitative and qualitative data to understand the adaptation process. Survey found that 20.9 percent of all the migrant households left their place of origin due to climate change induced factors. The majority of the CC induced migrants came from southern coastal districts where cyclones, and riverbank/ coastal erosions triggers their movement, while from the northern districts vulnerable people move due to floods and river bank erosion. The study shows that climate migrants have higher rates of unemployment and illiteracy if compared with other migrants. The study postulates detail survival strategy of the climate migrants in the city and suggest policy recommendations. Recently, the National Strategy on the Management of Disaster and Climate Induced Internal Displacement (2015) has been prepared, but does not show clearly how the vulnerable people in the City are being adapted. The Draft National Urban Sector Policy (NUSP, 2014) also has no suggestions for accommodating the Climate Migrants in urban areas, particularly in Dhaka City. The 7th Five Year Plan (2016-202) of the government acknowledged the issue but did not deliver any action plan for them. In this context, the present research will help to furnish these policies to be more effective with evidence-based guidance with data and recommendation.

\*Department of Social Relation, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: rezsid@gmail.com

\*\*Department of Geography and environment, University of Dhaka.

***International Seminar on Digital Humanities and Digital Societies in the Contemporary World***, Page Number: p.30, Year of Publication: 2018

**Public Engagement in Nation Development Through Open Data Platform:  
Bangladesh Government Initiatives**

**Dilara Begum\***, **Tamanna Hossain\*\***, **Md. Hasinul Elahi\*\*\*** and **Shaharima Parvin\*\*\*\***

**ABSTRACT**

Open government portals are the centralized point of access to government data which is likely to increase accountability and transparency as well as promote rich research outputs. Recent years have witnessed a mounting interest in Open Government Data around the world. Open government cannot be considered as truly open unless it also enhances citizen participation and engagement. Bangladesh open government portal was launched in 2016. In this portal, there are publicly available datasets from more than 35 Ministries and related agencies. The current Government of Bangladesh has taken many praiseworthy initiatives to engage the citizens in the welfare of the country. Among these initiatives, open government portal is acting as pivotal role which leads to ensure effective citizen services and citizen participation as well as to support policy reform. The author's intention is to delineate elaborately open government portal in Bangladesh, which is explored using a case study method. The scope of the study has been limited to examine country's few open data platforms which contribute to the distribution of data. This article focuses on how these portals facilitate collaboration between the citizens and government, as well as the implications for government in the future. A systematic literature review has been conducted for the preparation of this study. Open data portals from some selected countries are also studied to determine the significance of open data portals for public engagement in nation development.

**Keywords:** Open Data, Open Government Portal, Access to Information (a2i), Citizen Participation, Bangladesh

\* Department of Information Studies and Library Management, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: dilara@ewubd.edu

\*\*Department of Information Studies and Library Management, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: hossain.tamanna@ewubd.edu

\*\*\*Department of Information Studies and Library Management, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: h.elahi@ewubd.edu, elahi.islm@gmail.com

\*\*\*\* Office of the Library, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: shaharima@ewubd.edu

***International Conference on “Bridging the Digital Divide: Role of Libraries & Information Centers with Special Reference to North Eastern Region”***, Shillong College, Shillong, Page Number: 20, Year of Publication: 2018

**Users Perception of E-Resources in the Private University Libraries of Bangladesh**

**Rumana Rahman\***

**ABSTRACT**

The aim and objectives of the study is investigating user’s perception, use and challenges of e-resources at the library of Private Universities in Bangladesh and to provide some suitable measures that can be applied for the benefits of users. An interview method was employed to gather data from sixty-five(65) users in the selected highly top ranked five private university libraries of Bangladesh. Among the users, academics were fifteen (15) and students were fifty (50). A set of well-structured questionnaires was used for data collection. Descriptive analysis technique of SPSS 16.0 version was used to analyze quantitative data and qualitative data was described thematically under headings. Findings revealed that e-resources are now very common and popular in Private Universities. E-resources are used at different level by the users with E-mail, E-newspaper, Reference book, E-journal are recording high usage. Students and academics perceive that e-resource is useful and it influences academics efficiency. Though the study showed positive growth of e-resource, it suggests library to create awareness of available e-resources, training of all level of users, improve electricity and Internet access, ensure databases of available resources, arranging workshop, seminars on e-resources, conduction campaign programs. The results of the study will be beneficial for the both types of users (i.e. academics and students). They will get a proper concept and distinctive usage of e-resources in libraries. The findings also express the user’s expectation from e-resources section. This will be beneficial for all libraries for further improvement. The insights and views obtained from the users are original.

**Keywords :** E-Resource, Users Perception, Private University Libraries, Bangladesh

\*Department of Information Studies and Library Management, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: shithi@ewubd.edu

***International Conference on “Pathways to a Sustainable Economy: Vision 2041 Agenda for Bangladesh”***, Organized by: Dhaka School of Economics, Dhaka University (DU) Bangladesh, Jagannath University (JU), Dhaka, Griffith University (GU) Australia, University of Bath (UB) UK, and Bremen University, Germany, Date: 30-31 October 2018, Dhaka, Bangladesh

**What Makes Women Resilient in Climate Vulnerable Situation? Untold Stories of Bangladeshi Women in the Era of Climate Change**

**Mumita Tanjeela\***

**ABSTRACT**

Even though Bangladesh is considered as one of the most climate vulnerable countries in the world, the diverse coping strategies practiced by the affected population are not less valuable or insignificant. As evident, climate induced disasters affect a wide range of communities in Bangladesh among the affected, women are more vulnerable than men. In Bangladesh, climate change increases women's socio-economic vulnerabilities by directly impacting on their families' food security, water consumption and traditional livelihoods. Hence, women have had to develop a wide range of coping strategies in order to deal with the hostile situation. This paper explores women's narratives from both personal and community level experiences, which provide a deeper insight into how and why women build resiliency at household level, and how this resilience transcends to macro levels. The study was conducted in four selected districts of Bangladesh focusing on four types of climate-induced disasters using qualitative research methods. Data and information was collected through FGDs, In-depth interviews of women and observation of their homes and their community based activities. Further, key informant interviews with local level experts, government officials and development workers added various perspectives on this issue. The findings suggest that women are not simply victims of climate change rather women's own skills and knowledge make critical contributions to their households as well as in communities for adapting. Women's roles as individuals or as a group reveal their significant presence in climate change adaptation as well as disaster management.

**Keywords:** Women, Household, Climate Change, Community Based Adaptation, Bangladesh, Resilience

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: mtanjeela@ewubd.edu

***International Conference on 'South Asian Sociology and Beyond'*** 19-20 January, 2018, Organized by Department of Sociology, University of Dhaka, Dhaka-1000, Bangladesh, Page-62

**Information Economy and the New Urban Marginality in Dhaka City, Bangladesh**

**Rasel Hussain\***

**ABSTRACT**

The paper aims to explore the newly emerged urban marginality due to the rise of information-based economy in the city of Dhaka, Bangladesh, the study is based on the theoretical frameworks of Castells, Sassen, Fainstein, Friedman and Wolf. It combined both qualitative and quantitative methodologies. The data collected through household surveys were supplemented by qualitative data gathered through in-depth interviews. The study reveals that the poor people living in these neighborhoods are involved in the informal sectors of the economy where they have to work long hours with low income. It further reveals that the poor are marginalized due to their poverty and lack of access to the urban services. The study argues that due to the intervention of information-based economy many changes are taking place in the economy particularly in job market which discriminate the urban poor making them further vulnerable and marginalized.

**Keywords:** Information Economy, New Urban Marginality, Restructuration of Economy, Dhaka City

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: [raseldu1971@ewubd.edu](mailto:raseldu1971@ewubd.edu)



***English Studies and the Market Place***, organized by Department of English, EWU, Page numbers: page 83 – 96, Year of Publication: 2018

**From Classroom Discourse to a Business Product: The Commercialization of English in Bangladesh**

Tasneem Siraj Mahboob and **Md. Shazed Ul Hoq Khan Abir\***

**ABSTRACT**

Living in a world where almost 60 percent of the people are multilingual, English is creating the bridge among people with different cultural background, ethnicity and business. The history of teaching and learning English can be traced back to centuries. With the span of time, its role changed along with its functions. Its early treatment as a subject, where only students passionate of reading literature used to come, has been replaced by its practical usages in the era of globalization. This paper tries to find whether these uprising diverse functions of English is modulating the career preferences of current tertiary level students of Bangladesh. It also explores the career options that a degree in English offers to its graduates. The study follows a mixed-methods approach. Quantitative data analysis will show how the relationship between the multifaceted functions of English has motivated the students to opt for a degree in English. Then, based on discussions both with students and teachers, this paper will try to find out why and how these changes are happening in Bangladesh. There will also be some suggestions for the policy makers, material designers and other stakeholders about managing the current situation with the modulated reality behind teaching and learning of English in Bangladesh.

\*Department of English, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: shkaabir@ewubd.edu

**First National Conference on ‘Contemporary Changes in Bangladesh Society’**  
12th May 2018. Organized by Department of Sociology, East West University.  
Page- 08

**The Alienation of Bachelor in the Metropolitan Areas: A Case of Dhaka City, Bangladesh**

**Rasel Hussain\***

**ABSTRACT**

In the era of neoliberal society people are moving forward to a new form of cosmopolitan society and thus are encountering with different forms of new risk, hazards as well as alienation. The common trends of globalized society are the migration of people towards the more developed and occupied urban centers and among this enclave the bachelor youth is representing the lion portion of them. They are mostly gathering in the metropolitan areas like Dhaka city for better education purpose or to get involved in different kinds of professional activities being the victims of push factor or pull factors and became a part of the competitive world and the main purpose of most of the migrant's bachelors are to support their families who are residing in the satellite areas of the country. Once they came in the city areas the untold and often unswung stories of the miseries started following them and they started facing multidimensional forms of alienation. Bachelors the most neglected and avoided portion of the city dwellers have to encounter those problems from dawn to dusk. The paper aims to highlight the process of exclusion and alienation that are mostly encounter by the bachelors in the metropolitan areas and the research will follow mostly the qualitative methodology including the case study, secondary data review and participatory observation methods. Thematic analysis will be taken place which will explain the marginal condition of the married and unmarried bachelors struggling in the metropolitan regions.

**Keywords:** Alienation, Bachelor, Social Exclusion, Metropolitan Areas, Dhaka City

\*Department of Sociology, East West University, A/2, Jahurul Islam Avenue, Jahurul Islam City, Aftabnagar, Dhaka-1212, Bangladesh. Email: raseldu1971@ewubd.edu

## INDEX OF EWU AUTHORS

- A. K. M. Nazimuddin, 50, 51  
Anup Kumar Paul, 40  
A. Paul, 35, 46, 47  
Basanta Kumar Barmon, 10, 11, 14  
Bushra Humyra Esha, 1  
Dilara Begum, 62, 82  
Farhana Ferdousi, 6, 12  
Farhana Islam, 56  
Fariha Abedin, 75  
Farzana Akhter, 57  
Farzana Huda, 5  
Fouzia Mannan, 68  
Fuad Yasin Huda, 44  
Gurudas Mandal, 34, 35, 45, 46, 47  
Halima Begum, 38  
Israt Jahan, 55  
Kohinoor Biswas, 19  
Laila Zaman, 7, 16  
Mahua Zahur, 58, 72, 73  
Marzia Zaman Sultana, 78  
Masum Billah, 66, 67  
Md Atiqur Rahman Sarker, 7, 8, 9, 13, 15, 16  
Md. Fazlul Karim, 29  
Md. Hasinul Elahi, 61, 62, 82  
Md. Mobarak Hossain Khan, 60, 69  
Md. Pizuar Hossain, 60  
Md Rezwan Siddiqui, 70, 80, 81  
Md. Shazed Ul Hoq Khan Abir, 86  
M. M. Rahman, 39  
M.N. Haque, 26, 43  
Mohammad Salah Uddin, 37  
Monira Nazmi Jahan, 74  
Mozammel H. A. Khan, 20  
M. R. Amin, 35, 46, 47  
M. R. Khan, 21, 22  
M Sayeed Alam, 1, 2, 3, 17  
Muhammed Mazharul Islam, 38  
Mumita Tanjeela, 63, 84  
Nabila Zaman, 4, 18  
Naharin Binte Rab, 1  
Naushin Nazifa Islam, 54  
Rafea Khatun, 59, 75  
Rasel Hussain, 64, 65, 71, 85, 87  
Reatul Karim, 25  
Rubayat Kabir, 78, 79  
Rumana Rahman, 83  
Saadia Shabnam, 12  
Sarwar, M. T., 27, 28  
Shaharima Parvin, 82  
Shamsun Nahar Khan, 24  
Silvia Akter, 13  
S. M. Raiyan Chowdhury, 42  
Sohel Rana, 30, 31, 32, 33, 48  
Suraia Nusrin, 23  
Syed Mahmudur Rahman, 53  
Tamanna Hossain, 82  
Tanbir Ahmed Chowdhury, 5  
Touhida Tasnima, 76, 77  
Tureen Afroz, 60  
Zubair Hasan, 36, 49, 52  
Zahidur Rahman, 41



## **East West University Center for Research and Training**

East West University Center for Research and Training (EWUCRT) promotes academic and applied research for creation and dissemination of new knowledge. With this goal the Center is dedicated to developing the research potentialities of faculty members of the East West University. In this effort EWUCRT provides generous financial grants to support faculty research and training on research methodology, publications of research reports and journals and sharing of research results with academia, researchers and policy makers. To facilitate dissemination and exchange of knowledge EWUCRT organizes seminars and symposiums.