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# CONFERENCE PROCEEDINGS

## BOOK OF ABSTRACT ECBA-2016

**International Conference on  
“Engineering & Technology, Computer, Basic & Applied  
Science”  
(ECBA-2016), Hongkong**

# **Book of Abstracts Proceedings**

**International Conference on  
“ENGINEERING & TECHNOLOGY, COMPUTER, BASIC &  
APPLIED SCIENCE”  
(ECBA-2016)  
Hongkong**

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**International Conference on**  
**“Engineering & Technology, Computer, Basic & Applied**  
**Science**  
**Hongkong”**  
Venue: The Charterhouse Causeway Bay Hotel Hong  
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# **CONFERENCE PROGRAM COORDINATOR MESSAGE**

**Ms. Ani Wahyu**

International Conference on Engineering and Technology Basic & Applied Science” serves as platform that aims to help the scholarly community across nations to explore the critical role of multidisciplinary innovations for sustainability and growth of human societies. This conference provides opportunity to the academicians, practitioners, scientists, and scholars from across various disciplines to discuss avenues for interdisciplinary innovations and identify effective ways to address the challenges faced by our societies globally. The research ideas and studies that we received for this conference are very promising, unique, and impactful. I believe these studies have the potential to address key challenges in various sub-domains of social sciences and applied sciences.

I am really thankful to our honourable scientific and review committee for spending much of their time in reviewing the papers for this event. I am also thankful to all the participants for being here with us to create an environment of knowledge sharing and learning. We the scholars of this world belong to the elite educated class of this society and we owe a lot to return back to this society. Let’s break all the discriminating barriers and get free from all minor affiliations. Let’s contribute even a little or single step for betterment of society and welfare of humanity to bring prosperity, peace and harmony in this world. Stay blessed.

Thank you.

**Ms. Ani Wahyu**

Conference Program coordinator  
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ECBA-2016



# CONFERENCE PROGRAM

**DAY 01 Saturday (January 23, 2016)**  
**Welcome Reception & Registration**

**9:00– 9:30 am**

**Opening Ceremony (09:30 – 10:00 am)**  
**Venue: Room 1**

09:30 – 9:40 am	Introduction of Participants
09:40– 9:50 am	Welcome Remarks – <b>Santi Rahmanwati</b> - Conference Coordinator Academic Fora
09:50 – 10:00 am	Group Photo Session

**Grand Networking Session and Tea Break (10:00– 10:30 am)**

**DAY 01 Saturday (January 23, 2016)**

**Session 1 (10:30 am – 12:00 pm)**

**Venue: Room 1**

**Session Chair: Jae Gwon Shin**

**Track A: Engineering, Technology and Applied Sciences**

HKE-316-101	Le-Fric”, Freight Transportation Model with Magnetic Levitation System as Low Friction Postharvest Transportation	M Irham Taufik Nasution
HKE-316-102	"Suiti Bag" Patchwork Material Combined by Batik Cloth With Fashionable and Friendly Environment Design Bag Model	Siti Nizar Athfiyah
HKE-316-103	Skyscraper Sprinkler, A Permanent Solution to Reduce Air Pollution in Jakarta City	Muhamad Andi Saputra
HKE-316-104	“F-Robray”, Automatic Seeding Machine Based on Delta Parallel Robot for Seeding Process on the Seeding Tray	Sutan Muhamad Sadam Awal
HKE-316-106	Current Control Scheme for Power Quality Enhancement in Distributed Generation System Utilizing Renewable Energy Source	Kyeong Hwa Kim

**Lunch Break (12:00 – 1:00pm)**



**DAY 01 Saturday (January 23, 2016)**

**Session 2 (1:00 pm – 2:30 pm)**

**Venue: Room 1**

**Session Chair: Kyeong Hwa Kim**

**Track B: Business Economics, Social Science & Humanities Study**

HKS-316-102	Exploring the Networks of Patent Citation and Patent Transaction from the Social Network Analysis Perspective: The Case of TFT-LCD Technology	Hsin-Yu Shih,
HKS-316-103	Feasible ways of Strengthening the Public Transportation demand in Klang Valley (Malaysia).	Ing. Eliška Kleinová
HKS-316-108	Overpassivization of Unaccusatives in ESL: Effects from Tense and the Morphological Form - ed.	Joo Hyun Kim
HKS-316-108A	Overpassivization of Unaccusatives in ESL: Effects from Tense and the Morphological Form - ed.	Lu Jing-Hua,
HKS-316-115	A Study on the Factors of Innovation Resistance of Smart Watch	Jae Gwon Shin
HKS-316-110	Users Segmentation Model of Privacy Concerns for Mobile Social Networking Websites	Mihai Orzan
HKS-316-104	State Business Relations and Environmental Policy: Evidence from Economic Transition in Russia	Dai Yamawaki

**Tea Break: (2:30 pm – 2:45 pm)**

**DAY 01 Saturday (January 23, 2016)**

**Session 3 (2:45 pm – 4:00 pm)**

**Venue: Room 1**

**Session Chair: Kyeong Hwa Kim**

**Track A: Engineering, Technology and Applied Sciences**

HKE-316-109	Detecting TCP based attacks using Data mining algorithms	Usukhbayar.B
HKE-316-110	Mal Detector: An Intelligent Malware Detection System	Ugtakhbayar.N,
HKE-316-114	The Study about Indoor Temperature Effect on Productivity by Brainwave Type of Occupants	Myung-Ho Kim

**(Closing Ceremony) (4:00 pm – 5:00 pm)**



## LIST OF CONFERENCE ATTENDEES

The following Scholars/ practitioners/educationist who don't have any paper presentation, however they will attending the conference as delegates & observers.

<b>Sr.no</b>	<b>Official ID</b>	<b>Name</b>	<b>Affiliation Details</b>
1	HKS-316-112A	Mark Swanson	Kwansei Gakuin University Japan
2	HKS-316-115A	Jae Woong An	Yonsei University,,South Korea
3	HKE-316-116A	Sungyoung Kim	Dept. of Computer Engineering, Kumoh National Institute of Technology, South Korea

# **DAY 02 Sunday (January 24, 2016)**

## **City Tour and Shopping Day**

All participants will be free to carry on their own tourism and shopping activities in Hongkong. It's a free day for this purpose

## **TRACK A: ENGINEERING & TECHNOLOGY STUDY**

## Le-Fric, Freight Transportation Model with Magnetic Levitation System as Low Friction Postharvest Transportation

**M Irham Taufik Nasution<sup>1\*</sup>, Sutan Muhamad Sadam Awal<sup>2</sup>,  
Siti Nizar Athfiyah<sup>3</sup>, Muhamad Andi Saputra<sup>4</sup>**

<sup>1, 2, 3, 4</sup>Mechanical and Biosystem Engineering Department, Bogor  
Agricultural University, Indonesia

### Abstract

The postharvest agricultural products state are worse in Indonesian traditional markets led to the sale value of the product is low. Postharvest product has the characteristic that the material is still alive and metabolism. However, these products do not perform metabolism at the original environment so that the damage is very easily happened. Transportation that the design does not fit, it will cause significant damage to the product. Le-Fric designed to pamper postharvest agricultural products. Magnetic levitation (Maglev) technology that has been thrived in developed countries utilize of the magnetic field. Electromagnetic force used against the force of gravity. Maglev can also be interpreted as a process to levitate objects at free space by counteracting the force of gravity working on it. Le-Fric would use a fan that would help in moving over the track. The method used in the realization of this transportation is to use the general design approach is based on a functional approach to design and prototype design approaches ranging from identification of problems to test performance. Le-Fric is expected to transform the ordinary into the image of a modern transport so that the sale value of the post-harvest agricultural products can be improved.

**Keywords:** Maglev, Transport, Less Friction, Le-Fric, cargo

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Email: [islamicstudent11@gmail.com](mailto:islamicstudent11@gmail.com)



## "Suiti Bag" Patchwork Material Combined by Batik Cloth with Fashionable and Friendly Environment Design Bag Model

**Siti Nizar Athfiah<sup>1\*</sup>, Sutan Muhamad Sadam Awal<sup>2</sup>, M Irham Taufik Nasution<sup>3</sup>, Muhamad Andi Saputra<sup>4</sup>**

<sup>1,2,3,4</sup>Mechanical and Biosystem Engineering Department, Bogor Agricultural University, Indonesia

### Abstract

Clothing product needs are constantly increasing along, it causes the accumulation of waste cloth remnants from the clothing material. This situation can disturbing the environment. Waste cloth remnants or so-called patchwork, difficult to reunite with the natural environment even though it had been many years buried in the soil. Besides, patchwork can disturb the environment when burned and clogged, causing flooding. Waste cloth remnants can be a cloth grafting techniques (craft patchwork). This craft is one of the traditional craft with contemporary touches. Patchwork is a combination of two pieces of cloth and the top layer patchwork crafts can consist of a combination or one of the patchwork. The third layer, sandwich shaped sewn by machine or hand stitching (Delujur). The application of this patchwork into a bag shape is also much in demand by the public, with the creation of patchwork bag will make a fashionable. Suiti Bag will use patchwork combined with Batik cloth waste and modification of layer waterproof cloth inside the bag and foam on the object carried in the hand bag. Suiti Bag expected to provide the convenience of users and provide high value to the cloth Batik.

**Keywords:** Patchwork, Cloth Waterproof, Suiti Bag, Delujur, Environment

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Email: [nizar.athfiah@gmail.com](mailto:nizar.athfiah@gmail.com)

## Skyscraper Sprinkler, A Permanent Solution to Reduce Air Pollution in Jakarta City

Muhamad Andi Saputra<sup>1\*</sup>, M Irham Taufik Nasution<sup>2</sup>, Sutan  
Muhamad Sadam Awal<sup>3</sup>, Siti Nizar Athfiah<sup>4</sup>

<sup>1,2,3,4</sup> Mechanical and Biosystem Engineering Department, Bogor  
Agricultural University, Indonesia

### Abstract

Air pollution is a big problem facing the Jakarta City. Pollution from vehicle emissions and industrial waste like the cement industry to public health. This situation causes the affected communities, respiratory tract infections. PM2.5 (particulate matter) Pollution with a less than 2.5 microns diameter is believed in trigger the onset of a respiratory infection. Spraying systems (Sprinkler) were designed on the building of skyscrapers with a height of 100 meters, able to spray water into the atmosphere to trigger rain. Skyscraper sprinkler aim to reduce pollutants. These tools apply the application of fluid mechanics. The water output Speed from the larger nozzle holes can be obtained by minimizing the aperture area, while working on the discharge of the system remains constant. Spraying system into the atmosphere becomes a permanent solution to reduce air pollution. Geoengineering mechanism could help reduce concentrations of PM2.5 pollution to a safer level of 35 micrograms per cubic meter in 30 minutes. This process naturally, full of technology, efficient and inexpensive. Materials needed to make it work, namely the building of skyscrapers, water resources and equipment spinkler. Spraying is done every day in order to avoid the accumulation of air pollution. This method effectively clean up pollution udaradan efficiently reduce air pollution. The system is designed to spray water with certain intensity. For the most efficient pollution reduction will depend on the conditions.

**Keywords:** Sprinkler, Geoengineering, nozzle, Air Pollution PM2.5

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Email: muhamadandisaputra@ymail.com

## “F-ROBRAY”, Automatic Seeding Machine Based on Delta Parallel Robot for Seeding Process on the Seeding Tray

**Sutan Muhamad Sadam Awal<sup>1\*</sup>, Quro Muta'in<sup>2</sup>, M Irham Taufik Nasution<sup>3</sup>, Muhamad Andi Saputra<sup>4</sup>**  
<sup>1, 2, 3, 4</sup> Bogor Agricultural University, Indonesia

### Abstract

Nowadays Robotic Technology has developed into agriculture world. But in practice Indonesian people have not fully applied this technology. One of most important processes in agriculture is seeding. Seeding media is including a seeding tray. On the implementation using seeding tray is needed a big precision and long time to put seeds into each hole. Therefore, automation is needed on this process in order to make this process continuously and efficiently. The purpose of this program is to design and build a machine or robot to make seeding process easier and more efficient. Robotics technology is easy to adapting in different work field, in this case seeding tray on different number of cells. The kind of robot to be used is Delta Robot. This robot has been much applied for industry sector that need quickness and high precision like collecting and placement process. F-ROBRAY worked with an end-effector, the mechanism system for managing seed out into tray (metering device). With this robot rationing of seeds could be done by high precision and more quick. Robot have been made, based on test the accuracy of this robot to reach cells on tray is 95% and seeding time 40% faster than a manual seeding.

**Keywords:** Delta Robot, Metering Device, Automation, Seeding

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## Current Control Scheme for Power Quality Enhancement in Distributed Generation System Utilizing Renewable Energy Source

**Kyeong Hwa Kim<sup>1\*</sup>, Ngoc Bao Lai<sup>2</sup>**

<sup>1, 2</sup>Seoul National University of Science and Technology, Korea.

### Abstract

To improve the power quality in distributed generation systems utilizing renewable energy source, a novel current control scheme of a grid-tied inverter is proposed. The main challenge associated with the grid-tied inverter in renewable energy generation systems is to maintain the power quality sufficiently high even under uncertain grid disturbances such as harmonic distortion. The proposed scheme is achieved by a model decomposition method, in which the fundamental and harmonic currents are independently controlled by a PI decoupling controller and a predictive basis controller, respectively. To validate the effectiveness of the proposed scheme, a 2 kVA laboratory prototype grid-tied inverter has been constructed using 32-bit floating-point DSP TMS320F28335. The performance of the proposed scheme has been proven through the comparative results. As a result, the proposed scheme is an effective solution to control a grid-tied inverter in renewable energy generation systems.

**Keywords:** Grid-Tied Inverter, Power Quality, Renewable Energy Generation

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## Detecting TCP Based Attacks Using Data Mining Algorithms

**Ugtakhbayar.N<sup>1</sup>, Usukhbayar.B<sup>2\*</sup>, Sodbileg.Sh<sup>3</sup>, Nyamjav.J<sup>4</sup>**  
<sup>1, 2, 3, 4</sup> Department of Electronics and Communication Engineering,  
National University of Mongolia.

### Abstract

Intrusion Detection Systems have become a necessary in computer networking security of largest networks. In the recent years, the system needs to identify new intrusion in largest datasets in a timely manner because internet to instantly access information at anytime from anywhere. That is a massive increasing of data traffic and internet nodes. Therefore, to refine an IDS's performance and computing time is a one of the important challenges in computer network security field. We are introducing by this paper studying the effects of TCP based attacks on AI algorithms computing time and detection ratio using KDDCUP dataset and our collected dataset. We are to gather network traffic; normal and abnormal containing attack are collected by SNORT. We extract features in TCP headers of the packets in the collected dataset such as sequence and acknowledge numbers, window size, control flags, and an event which is time between neighbor segments. First we normalize the feature set to reduce dimensionality of our input feature space and apply linear correlation to measure the dependability of the relationship. Finally, the selected subset of the features is given to learn the classifiers: J-48, Naïve Bayes and ANNs. By adopting the concepts of machine learning and data-mining, we could detect 98% of abnormal traffic containing attacks.

**Keywords:** Data Mining, Learning Algorithms, Network Attacks, Intrusion Detection, IDS

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## The Study about Indoor Temperature Effect on Productivity by Brainwave Type of Occupants

**Jung-Min Kim<sup>1</sup>, Myung-Ho Kim<sup>2\*</sup>**

<sup>1, 2</sup>Gachon University Department of Building Equipment & System Engineering 1342 Seongnam-daero, Sujeong-gu, Seongnam-si, Gyeonggi-do, Korea

### Abstract

In this study, EEG was compared and analyzed in the environmental test room by classifying subjects into two type: A and B. The condition of the environmental test room was in relative humidity 50[RH%], air current speed 0.02[m/s] and illuminance 1000[lux] with setting up different temperatures from 19[°C] to 30[°C] at intervals of 3[°C]. At 25[°C] for A type and 22[°C] for B type, relative  $\alpha$  wave, relative  $\beta$  wave and SEF50 were revitalized.  $\alpha$  wave asymmetry index, stress index and fatigue degree of both type at the 25[°C] and 22[°C] were decreased. It was found that A type was more sensitive than B type about temperature, and also they have different preferences for productivity and concentration about temperature.

**Keywords:** EEG,  $\alpha$  Wave,  $\beta$  Wave, SEF50, Productivity, Concentration

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Email: [ugtakhbayar@num.edu.mn](mailto:ugtakhbayar@num.edu.mn)

## MalDetector: An Intelligent Malware Detection System

Usukhbayar.B<sup>1</sup> Ugtakhbayar.N<sup>2\*</sup>, Nyamjav.J<sup>3</sup>

<sup>1, 2, 3</sup>Department of Electronics and Communication Engineering, National University of Mongolia

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### Abstract

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In this work we present a malware detection system using a static hybrid data mining method. We use a combination of two different kinds of features: executable PE header information and dynamic link library (DLL) call features. PE header information were extracted from windows executable PE table, whereas DLL call features were extracted from windows executable PE table's import description table. These features were related each other with one-to-many association. So our work is closely related to relational data mining. In this work, we build a transformation-based approach to relational data mining and implemented Dynamic Aggregation for Relational Attributes (DARA) algorithm that is capable of mapping one-to-many relationship into one-to-one relationship. Then our transformed features were applied to the well-known single-flat classifiers which can classify malicious and benign executable. Finally we implemented an application which can read any executable and then classify them as malicious or benign using trained the classifiers such as SMO and Decision Tree. By adopting the concepts of machine learning and data-mining, we construct a malware detection system which has a detection rate of 99.6%.

**Keywords:** Data Mining, Learning Algorithms, Malware Detection, Computer Security

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## **TRACK B: SOCIAL SCIENCE AND HUMANITIES**



## Exploring the Networks of Patent Citation and Patent Transaction from the Social Network Analysis Perspective: The Case of TFT-LCD Technology

**Hsin-Yu Shih<sup>1\*</sup>, Pei-Wen Liao<sup>2</sup>**

<sup>1,2</sup>National Chi Nan University, Taiwan

### Abstract

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As the time goes by, the development of technology has been advanced and changed rapidly in the few decades. For business companies, how to launch the key products are the important factors determining success or fail of the company fate. This study focuses on the TFT-LCD industry via the patent data of USPTO from 1976 to 2012 to construct the patent citation matrix and patent transaction matrix for the further explore. In addition, this paper applies the methodology Social Network Analysis (SNA) to measure the above networks. This study finds that it is to know most of the patents are from the citation side to the transaction side that after considering clearly the company would make the accurate action on the transaction steps. The phenomenon could be seen as the progress the TFT-LCD truly developed that is much likely to verify the situation from then on.

**Keywords:** TFT-LCD, Technology Diffusion, Patent Citation, Patent Transaction, Social Network Analysis (SNA)

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## Feasible Ways of Strengthening the Public Transportation Demand in Klang Valley (Malaysia)

**Ing. Eliška Kleinová\***  
Masaryk University, Malaysia

### Abstract

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The inclusive economic growth and increasing wealth in Malaysia have some negative effects on transportation, predominantly in form of rising demand for private vehicles and refusing attitude to use public transportation (PT). The government and local authorities support this occurrence by subsidizing the fuel costs, determining low highway tolls and lack in investments which would ensure an effective functioning of PT. This politics resulted in enormous traffic congestions and air pollution which can be evident especially in Kuala Lumpur and its suburban areas. Thus, the objective of this article is to investigate the characteristics of the transportation users in the mentioned area and specify factors that would convince the car/motorcycle users to switch to public transportation. With the help of the consumer survey the article also studied the willingness of private vehicle users to accept the potential travel time reductions and opt for PT. With respect to these preliminary survey findings we proposed several policies which can strengthen the number of public transportation users and reduce car/motorcycle utilization.

**Keywords:** Public Transportation in Klang Valley, Consumer Survey, Binary and Ordered Logit Model JEL code: R41, R48, C25

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## Overpassivization of Unaccusatives in ESL: Effects from Tense and the Morphological Form - ed

**JooHyun Kim<sup>1\*</sup>, Lu Jing-Hua<sup>2</sup>**

<sup>1</sup>Pusan National University, <sup>2</sup>Assistant Professor, Dept. of Chinese Studies,  
Kyungsung University, Korea

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### Abstract

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This paper concerns overpassivization phenomena with English unaccusative verbs by L2 learners. The factors of overpassivization are largely discussed in the L2 literature; verbs alternation (Balcom, 1997; Hirakawa, 2001; Hwang, 2001; No & Chung, 2006), subject animacy (Ju, 2000; No & Chung, 2006) and the existence of a conceptualizable agent in discourse (Ju, 2000; Lee, 2011). More lately, a line of researchers have turned their attention to the morphological properties depending on the tense of unaccusative verbs. White (2003) and Matin (2012) argued that L2 learners' difficulty with unaccusative verbs lies in morphology rather than the previous factors of unaccusatives. Therefore, this paper examines the possible role of tense and the morphological -ed (unaccusative verbs have two types : one is regular verb like die -died -died, and the other one is irregular verb like come - came - come) in the acceptance of overpassivized unaccusative verbs by second language learners of English. 101 second language learners of English answered a forced-choice task with 24 pairs of sentences, where one sentence presented an ungrammatical, overpassivized form of unaccusative verbs in the past tense more than in the present tense. Thus a problem in the mapping of morphological form to syntactic frame is argued to result in overpassivization errors.

**Keywords:** Overpassivization, Unaccusative Verb, Regular Verbs,  
Morphological Form L2 Learners

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Email: [sjoani@naver.com](mailto:sjoani@naver.com)

## Users Segmentation Model of Privacy Concerns for Mobile Social Networking Websites

**Mihai Orzan<sup>1\*</sup>, Călin Vegheș<sup>2</sup>, Octav Macovei<sup>3</sup>, Claudia  
Iconaru<sup>4</sup>**

<sup>1, 2, 3, 4</sup>Economic Studies University of Bucharest, Romania

### Abstract

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Social media has been, in the last decade, the foremost type of online communication throughout the world. Still boasting incredible growth rates, social media users are poised to reach 3 billion during 2016 and most of them (about 1.8 billion) access their accounts through mobile phones. This phenomenon has led to marketers shifting their attention from traditional media to social websites were, in addition, they are treated with a wealth of personal information, habits and other forms of targeting data impossible to grasp only a few decades ago. Furthermore, social media websites manage to link users' data to their friends and their mobile phone records, thus allowing unprecedented access for marketers to consumer habits. However, this has its downside, as more entities have unrestricted access to personal and private data, a fact that more and more users are becoming painfully aware. Using this data we used discriminant analysis to validate a clustering model of privacy concerns for modern mobile social media websites and applications, taking into account such metrics as privacy perceptions, trust, users' utilitarian and hedonic motivations to use social media, their perceptions with regards to social media websites, perceived self-efficacy in using social media, their perceptions regarding the risks associated with the use social media, various psychological and lifestyle characteristics, as well as their overall Internet usage. We ended up with three clusters, which explained about 93% of our original variation, segments that can be used for improved users' experience on social media websites and application, as well as improved management decision with regard to online marketing strategy

**Keywords:** Social Media, Privacy, Customer Segmentation, Online Marketing, Theory of Reasoned Action

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## State Business Relations and Environmental Policy: Evidence from Economic Transition in Russia

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### Abstract

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Russia is one of the world's most resource-rich countries and, concurrently, the biggest transitional one from the socialist planned economy towards the market-oriented economic system. Experiencing an economic tailspin in the 1990s, Russian economy revived with steep rise in crude oil price from the beginning of the 2000s. In this context, the 'National Champions' industrial policy for its extractive industries of hydrocarbon resources could be described to bear fruit. The recent global crisis in 2008-2009 and the current world affairs besieging Russia have, however, put the brakes on its ever-spiralling extractive companies, besides continuous lower crude oil and gas prices. In fact, there existed severe environmental problems in the Soviet Union where market failure did not theoretically occur, due to inefficiency of its industries and quantitative expansion policy for resource production. Economic development and natural resource exploitation have been always prioritised beyond environmental preservation, which generated urgent economic and environmental policy issues for Russia in the context of modernisation., this paper tries to answer the following two questions; firstly, how state business relations and environmental policy have changed or unchanged in the process of economic transition in Russia, starting from the collapse of the Soviet Union in 1990, and their correlations; secondly, whether there are any continuity and discontinuity from the Soviet era in terms of low priority of environmental policy formation behind economic development with natural resource exploitation. These points are very suggestive not only for a trajectory of Russian economic growth and its future development, but also for deeper comprehension on the diversity of economic systems and institutions.

**Keywords:** Russia, State Business Relations, Environmental Policy, Economic System, Transition

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## A Study on the Factors of Innovation Resistance of Smart Watch

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### Abstract

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As the internet of things has come into the spotlight, wearable devices have been emerging as a new and growing market and the next hot thing in the world. However, wearable device growth in the market has not met expectations. For continued growth and diffusion of wearable devices, it is important to investigate user resistance factors to them. This study gives attention to people who have resistance to wearable devices\' tendency towards innovative uses. Specifically, this study is intended to find out which factors influence consumers\' resistance to use smart watches, which are in high demand among wearable device. Results of the study show that the relative advantage, complexity, financial risk, physical risk are the predictors of innovation resistance on smart watches. This study provides further understanding of what inhibits smart watch adoption by non-users with respect to their resistance to smart watches. It also has implications for management in overcoming consumers\' resistance to the innovation.

**Keywords:** Smart Watch, Wearable Device, Internet of Things, Innovation Resistance

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