

# PROCEEDING BOOK

**Volume 1, Issue 12**

**CISA-FEB-2020**

**Venue: Mercure Hotel Amsterdam City**

**Date: February 22-23, 2020**



**Institute of  
Applied Sciences  
& Engineering Technology**

# **IAET 2nd International Conference on Innovative Research in Computer Applications, Information Technology, System Engineering & Applied Sciences (CISA)**

Conference organized by:



This conference is dedicated to educators all over the world and to the members of the Institute of Applied Sciences and Engineering Technology (IAET) whose passion for teaching, learning, research, and service are helping to transform the academy in many positive ways.

#### **Mission, Vision, and Core Values**

Research & Innovation, Knowledge exploration and sharing, nurturing novel ideas, addressing challenges to Applied Sciences and Engineering Technology.

Lead the scholarly community through global communication and nurturing innovative ideas, developments and experiments in the field of Applied Sciences and Engineering Technology

We try to give our members a positive network/relation building experience by: 1) We have team building/socializing/gaming sessions where the members mix and talk and share with each other in an informal environment. 2) We arrange various customized events and capacity building activities for higher education institutions. 3) Dedicated and committed team to support individual and corporate members of our scholarly community.

#### **Membership, Conference, Publishing, and Research Information**

If you are interested in serving as the volunteer reviewer for the next conference, please contact:

mail: [contact@institute-aet.com](mailto:contact@institute-aet.com)

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**IAET 2nd International Conference on Innovative Research in Computer Applications, Information Technology, System Engineering & Applied Sciences**

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## Welcome Message

The Institute of Applied Sciences and Engineering Technology (IAET) welcomes you to the IAET 2nd International Conference on Innovative Research in Computer Applications, Information Technology, System Engineering & Applied Sciences

We are happy you decided to join your colleagues from around the world to explore innovative technologies, pioneering pedagogical strategies, and a sampling of international collaborations that are being used to engage and retain students, researchers and Scholars in the new millennium.

## Scientific Committee

Lobna Ali Al-Khalifa, National Authority for Qualifications & Quality Assurance of Education & Training (QQA), Bahrain  
Lothar Auchter, University of Applied Science, Kaiserslautern, Germany  
Louise van Scheers, Department of Marketing and Retail, University of South Africa  
Magorzata Magdalena Hybka, Pozna University of Economics and Business, Poland  
Marvin O. Bates, Lewis University, USA  
Maria Binti Abdulrahman, Universiti Utara Malaysia, Malaysia  
Michael D. MacColl, Vancouver Island University, Canada  
Mukherjee Farooq Anwar, The University of Lahore, Pakistan  
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Dr Mourad Mansour, King Fahd University of Petroleum and Minerals Saudi Arabia  
Majid Asadnabizadeh, Poland, UMCS  
Phongsakorn Methitham, Naresuan University Phitsanulok, Thailand  
Maduranga Pushpika Kumara Withanawasam, University of Sri Jayewardenepura Nugegoda, Sri Lanka  
Rodney Oudan, Worcester State University in Massachusetts, USA  
Roger B Mason, Cape Peninsula University of Technology, South Africa  
Sampath Kumar, University of Wisconsin Green Bay, USA  
Salil K Sen, NIDA Business School, Bangkok, Thailand  
Simon Best, Medgar Evers College, New York, USA  
Yongmei Bentley, University of Bedfordshire, UK

## Acknowledgements

The organizing committee would like to thank all those people who were involved in making the conference a success. A great amount of planning and organizing is required to hold a successful conference, so we are indebted to those who volunteered their time and energy.

We want to thank all the members of the Institute of Applied Sciences and Engineering Technology (IAET) who volunteered their time to help organize the conference.

## **ENGINEERING TECHNOLOGY**

Acoustical Engineering Aerospace Engineering, Agricultural Engineering Biological Engineering and Sciences, Biological Systems Engineering Biomedical Engineering, Bioprocess Engineering Biotechnology, Building Services Engineering Chemical Engineering, Industrial Engineering Information Engineering, Informational Technology Manufacturing Engineering and Technology, Materials Engineering Mechanical Engineering, Mechatronics Nanotechnology and Nanoengineering, Naval Engineering Nuclear Engineering, Technology for Cloud Computing Technology for Community, Technology for Digital Age Technology for Human Use, Technology for Learning Civil Engineering, Computer Engineering Current issues and challenges in Engineering, Electrical Engineering Electronic Engineering, Energy Engineering Environmental Engineering, Food Engineering Genetic Engineering, Geotechnical Engineering Ocean Engineering and Technology, Optical Engineering Petroleum Engineering, Power Engineering Process Engineering, Resource Engineering Sensing Technology, Structural Engineering Systems and Software Engineering, Technology for Big Data Textile Engineering, Thermal Engineering Transport Engineering, Web Engineering Vehicle Engineering.

## **APPLIED SCIENCES**

Artificial Intelligence, Architecture, Astronomy, Biological Sciences, Botany, Chemistry, Design, Earth Science, Ecology, Marine Science, Physics, Space Sciences, Life sciences, Computer Sciences, Logic, Mathematics, Statistics, Systems Science, Electrical Engineering, Information, Technology, Industrial Engineering, Mechanical Engineering, Applied Physics, Health Sciences and Medicine, Ceramic Engineering, Computing Technology, Electronics, Energy, Environmental Engineering Sciences, Engineering physics, Environmental Technology, Fisheries Science, Forestry Science, Materials Engineering Micro technology, Nanotechnology, Nuclear, Technology, Optics, Zoology Transportation

## Conference Schedule

### IAET 2nd International Conference on Innovative Research in Computer Applications, Information Technology, System Engineering & Applied Sciences

Mercure Hotel Amsterdam City  
February 22-23, 2020

CISA-2020

Saturday, February 22, 2020

#### Day-at-a-Glance

09:30 - 09:40 am	Arrivals, Doorstep and Handshake
09:40 am - 09:50 am	Introduction of Participants
09:50 am - 10:00 am	Inauguration and Opening address (Mr Bashar)
10:00 am - 10:30 am	Tea - Grand Networking Session/ Group Photo



## Session 01

10:30 am 12:00 pm

### Track 01: Business Economic, Management, Social Sciences & Humanities

Emotions, Self-Control, and Violence: Evidence from Ukraine

*Speaker: Olena Antonaccio — University of Miami, Coral Gables, Florida, USA*

The Development between Linguistic Characteristics of Brand Name and Brand Preference

*Speaker: Yasuko Koshikawa — The Faculty of Business Administration, Mejiro University Tokyo, Japan*

### Track 02: Engineering Technology, Computer Applications & Applied Sciences

Demand Forecasting of Boxed Lunch Meals through a State-Space Model using Time-Series Data

*Speaker: Sakura Kano —Field of Industrial Engineering and Management, Graduate School of Engineering Kanagawa University, Yokohama, Japan*

**Lunch Time (12:00 pm - 01:00 pm)**

## Conference Attendees

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

Participant Name: Prof. Hideki Katagiri

Affiliation: Field of Industrial Engineering and Management, Graduate School of Engineering Kanagawa University  
Yokohama, Japan

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**IAET 2nd International Conference on Innovative Research in Computer Applications, Information Technology, System Engineering & Applied Sciences**

**CISA-2020**

**Sunday, February 23, 2019**

Conference second day is reserved for participants own tourism activities.

## **Conference Abstracts**

**Track A: Business Management, Economics, Social Sciences and Humanities**

## Emotions, Self-Control, and Violence: Evidence from Ukraine

Olena Antonaccio <sup>1\*</sup>, Anastasiia Kuptsevych-Timmer <sup>2</sup>, Ekaterina Botchkovar <sup>3</sup>, Lorine Hughes <sup>4</sup>, Robert Johnson <sup>5</sup>  
University of Miami <sup>1,2,5</sup>  
Northeastern University <sup>3</sup>  
University of Colorado-Denver <sup>4</sup>

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Using a random sample of Ukrainian adults, the study draws on criminological and social psychological theories and explores the role of positive and negative emotions in violence causation. In particular, it examines how both types of individual emotions, neighborhood emotional climate, and personal self-control affect the likelihood of involvement in interpersonal violence. In addition, it investigates their interrelationships with self-control. The findings provide evidence in support of general strain theory on the individual level and for positive psychology on the neighborhood level. The results regarding an indirect role of self-control in the relationships between emotions and violence are mixed. The implications for the further development of integrated theoretical frameworks of emotions and violence are discussed.

**Index Terms:** Emotions, Theoretical Frameworks, Ukraine

# The Development between Linguistic Characteristics of Brand Name and Brand Preference

Yasuko Koshikawa\*

The Faculty of Business Administration, Mejiro University Tokyo, Japan

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It is generally thought that the deciding factor in purchasing food is taste and preference. However, Professor Fushiki(2008, p.28) at Kyoto University said, humans eat with the brain and the information plays a major role in modern times. That is, the method of expressing information can change the preference of consumers. Here are some questions. One is are we really influenced by information about our food? Another is if expression and information are important, can we use brand name research for food and cuisine names? Two questionnaire surveys were conducted on Mejiro University students around the age of 20. The first round was 74 people and the second round was 60 people. For the naming, we will use the name of the dish to verify of the information and the linguistic expression. Word feeling research in Japanese has been done but only a few. Furthermore, there is little relationship between consumers and brand names. Therefore, we will survey dish names in Japanese according to the method in English. The information is found to be valid. The combination of Japanese language characteristics and plosives increases the effect. The most effective expression is a Japanese language that matches the image and food texture. Japanese language characteristics seem to produce stable preferences. Thus, the hypothesis results in both positive and negative parts. Finally, we discuss the implications of this study that the sound of the brand name which represents the meaning of the brand is unconsciously analogized by the empirical rules obtained from the consumer's cultural knowledge structure.

**Index Terms:** Development, Characteristics, Japanese language

## **Conference Abstracts**

**Track B: Engineering Technology, Computer Applications & Applied Sciences**

# Demand Forecasting of Boxed Lunch Meals through a State-Space Model using Time-Series Data

Sakura Kano <sup>1\*</sup> Kazuki Ota <sup>2</sup> Prof. Hideki Katagiri <sup>3</sup>

Field of Industrial Engineering and Management, Graduate School of Engineering Kanagawa University, Yokohama, Japan

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There are many companies in Japan which daily manufacture more than thousands of boxed lunch meals and deliver them to customers working at companies offices or factories. Lunch manufacturing companies usually offer several types of menus, such as daily lunch, rice bowl, noodle, and so on. It is very important for lunch manufacturing companies to exactly forecast the demand of individual types of menu in order to reduce food waste or opportunity loss. They must manufacture meals before knowing exact order quantities because it is too late to meet demand if they start manufacturing meals after receiving the order from customers. If the production volume is far from actual order quantities, then food waste or opportunity loss occurs, since manufactured box meals must be eaten within a few hours and cannot be stored. The purpose of this study is to propose a demand forecasting method through a state-space model using the time-series data of order quantities. Firstly, we analyzed the actual data provided by a company located in Kanagawa Prefecture which manufactures 13,000 meals every day. Secondly, using text mining, correlation analysis and regression analysis, we found that there were mainly three factors on sales fluctuation, such as menu popularity, temperature and seasonal influence. Based on the data analysis, we propose a demand forecasting method using a state-space model in which these three factors are considered as parameters to be estimated. Numerical experiments using the actual data showed that the accuracy measured by MAPE (Mean Absolute Percentage Error) of demand forecasting through the proposed model was better than that by an expert who has engaged in demand forecasting for ten years in the lunch manufacturing company. The ordering and production loss is expected to be reduced by applying the proposed model to the filed in the company.

**Index Terms:** Demand Forecasting, State-Space, Forecasting



## Upcoming Events

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<https://institute-aet.com/upcoming-conferences/>

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