

# PROCEEDING BOOK



**Volume 1, Issue 1**

**ADEIN-JAN-2019**

**Venue: Mercure Hotel Amsterdam City**

**Date: January 26-27, 2019**



**Institute of  
Applied Sciences  
& Engineering Technology**

# **IAET International Conference on Advanced Research in Applied Sciences, Design Engineering, Information Technology & Networking (ADEIN)**

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**

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## IAET International Conference on Advanced Research in Applied Sciences, Design Engineering, Information Technology & Networking

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## Welcome Message

The Institute of Applied Sciences and Engineering Technology (IAET) welcomes you to the IAET International Conference on Advanced Research in Applied Sciences, Design Engineering, Information Technology & Networking (ADEIN). 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  
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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 International Conference on Advanced Research in Applied Sciences, Design Engineering, Information Technology & Networking (ADEIN)

Mercure Hotel Amsterdam City  
January 26-27, 2019

ADEIN-2019

Saturday, January 26, 2019

#### Day-at-a-Glance

09:00 am - 09:20 am	Registration and Kit Distribution
09:20 am - 09:30 am	Introduction of Participants
09:30 am - 09:40 am	Inauguration and Opening address
09:40 am - 09:50 am	Grand Networking Session
09:50 am - 10:00 am	Tea



## Session 01

10:00 am - 12:00 pm

### Track 01: Business, Economics, Social Sciences and Humanities

Europe-based Pharma giants' Cross-Culture Marketing in USA

*Speaker: Alpha Janga — Alliant International University, San Diego*

Developing an Interactively Integrated System Combining Learning Diagnoses and Remedial Instructions for the 3rd Grade Low-Achieving Elementary Students on Mathematics

*Speaker: Tsai-Wei Huang — National Chiayi University, Chiayi, Taiwan R.O.C.*

Institutional Change in Higher Education in Mexico: Reforms for U.S. Accreditation

*Speaker: Saritha Attuluri — Alliant International University, San Diego*

Organization<sup>S</sup> of Human Resource Management

*Speaker: Mohammad Abdur Rahim — Sukhoi State Technical University of Gomel, Gomel, Belarus*

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

Case study of Anomaly Detection and Trust Allocation in Cyber Security of Unstructured Data

*Speaker: JeongYeon Kim— Sangmyung University, Seoul, Republic of Korea*

**Closing Ceremony & Lunch (12:00 pm 01:00 pm)**

**AET International Conference on  
Advanced Research in Applied Sciences, Design Engineering, Information  
Technology & Networking**

**ADEIN-2019**

**Sunday, January 27, 2019**

Conference second day is reserved for participants own tourism activities.

## **Conference Abstracts**

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

# Europe-based Pharma giants Cross-Culture Marketing in USA

Alpha Janga <sup>1</sup>, Huiyu Qian <sup>2</sup>

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Culture matters the most in global marketing for two main reasons one of which is shaping a company's global marketing mix and secondly gaining market opportunities. It is very important for the global marketing managers to be cautious of the culture aspects in marketing strategies. Culture blunders can be a threat for many multinational companies if the concept of culture is not taken care of. Successfully implementing cross-cultural marketing can make the companies gain competitive advantage among the competitors. As the healthcare industry is in the midst of globalization, culture-value-based marketing strategies are very crucial for the pharmaceutical companies. Marketing Executives have to be cautious of not neglecting cultural values while planning on marketing in an area with diversified cultures like the United States. One important aspect of the pharmaceutical marketing is understanding the patient journey and how it differs across patient demographic segments. Social media also plays an important role in marketing of the pharmaceutical products by communicating in a relevant way. According to many sources, the number of pharma companies investing in multiethnic marketing has increased thrice within the last decade. Hispanics, Asians and African Americans are the majority of cultures that are spread in the United States and the therapeutic journey of different cultures differs from each other. This shows the gaps in the cultures within the disease diagnosis and treatment. In the last decade, three of the top pharmaceutical companies implemented multiethnic marketing strategies to promote their products. This paper focuses on studying large cross-cultural marketing campaigns launched recently by top European pharmaceutical giants operating in the United States and demonstrating the recent population distribution maps and trends of several major non-native cultures for the pharmaceutical industry in USA.

**Index Terms:** Cross-cultural marketing, Pharmaceuticals, Multiethnic, Demographics, United States population distribution, Trends of Culture, Social Media

# Developing an Interactively Integrated System Combining Learning Diagnoses and Remedial Instructions for the 3rd Grade Low-Achieving Elementary Students on Mathematics

Tsai-Wei Huang <sup>1</sup>

<sup>1,2</sup>Dep. of Counseling, National Chiayi University, Chiayi, Taiwan (R.O.C.)

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Many studies discussed the 3rd grade students with mathematics deficits (e.g., Desoete, Roeyers, & De Clercq, 2004; Poncy, Skinner, & Axtell, 2010). In Taiwan, to ensure the quality of academic attainment, the Ministry of Education (MOE) enhanced remedial instruction programs for students on learning Mathematics. However, the MOEs diagnostic tests were conducted at the end of a semester and thus, as summative-oriented, not as formative-oriented, and were difficult to facilitate ongoing instructional activities in a practical classroom scenario. The study, thus, intended to develop an integrated system deemed as an ongoing diagnostic tool by combining mathematics learning diagnoses and remedial instructions for the 3rd grade low-achieving elementary students. Based on the BW Cognitive Diagnostic model (Huang, 2012; Huang & Wu, 2013), an online instant assessment system (BW-CDA) has been developed through which students responses on a test can be analyzed immediately and detected as the statuses of mastery, guessing, carelessness, or misconception. Through these reflective information, students can realize their strength and weakness on leaning mathematics. Meanwhile, teachers can use this system to construct and revise their test items from misfit information of hint, disturbance, power, and defenselessness. Besides, based on the Basic Learning Contents (BLC) of mathematics remedial instructions by the MOE, the system using the Scratch system to provide hundreds of the 3rd grade mathematics materials in the four domains of mathematics: Number & Quantity, Geometry, Algebra, and Statistics & Probability, to assist students self learning. Students can learn mathematics by demonstrating these animations and test their understandings on the 3rd grade mathematics contents.

**Index Terms:** Remedial Instruction, BW Cognitive Diagnostic Assessment, Low-Achieving Students

# Institutional Changes Mexico Higher Education: A Reform to U.S. Accreditations

Saritha Attuluri<sup>1</sup>, Dr. Ashish Mehta<sup>2</sup>

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Internationalization is a driver of institutional changes in higher education in recent decades. Even prior to this current era of globalization, with its pressure as an external influence, selected higher education institutions in Mexico had internal motivations to pursue international accreditation since the 1950s. This institutional change in Mexico may be described as an isomorphism - normative associated with professionalization or mimetic as a response to uncertainty (Powell & DiMaggio 1983). The research presents three case studies for qualitative analysis: Tecnológico de Monterrey (Tec or the Tech) (ITESM), Universidad de las America Puebla (UDLAP), and Centro de Enseñanza Técnica Y Superior (CETYS), in order of U.S. accreditation. Primarily, the research addresses why does institutional change take place, identifying internal institutional motivations and external competitiveness related to globalization as explanations. The research presents the multi-level governance context of global, national, and institutional levels of influence for these private universities Mexico. Additionally, the research addresses themes of educational quality, international academic recognition, and regional integration in North America.

**Index Terms:** Higher education, Globalization and education, Latin America, Accreditation

## Organization's Human Resources Management

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Culture matters the most in global marketing for two main reasons one of which is shaping a The object of the study is LLC "Managing Company of the Holding "Belarusian Leather and Shoes Company "Marco". The purpose of the thesis is the development of directions for improving the personnel management system. The paper discusses the theoretical aspects of personnel management, the nature, goals and objectives, the basic functions of human resource management and their interaction, approaches to evaluating the effectiveness of the HR management system, international experience in the management of personnel and the possibility of its use in the Republic of Belarus organizations. The analysis of the technical and economic indicators of activity of "Holding management company "Belarusian leather and footwear company "Marco", the factors that caused the change in financial results, made the appropriate conclusions, an analysis of the personnel management system, and an assessment of its effectiveness. Developed measures aimed at improving the personnel management system in OOO "Managing Company of the Holding "Belarusian Leather and Shoes Company "Marco".

**Index Terms:** Footwear Company "Marco", Theoretical Aspects, Human Resource Management

## **Conference Abstracts**

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



# Case study of Anomaly Detection and Trust Allocation in Cyber Security of Unstructured Data

ChangJin Koo <sup>1\*</sup>, JeongYeon Kim <sup>2</sup>

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To mitigate insider threats, unstructured data monitoring and anomaly detection are considered as big challenges for cyber-security enhancement. In this paper, we design and implement a user behavior monitoring system for unstructured data, which integrates the anomaly detection and trust allocation based on users document access patterns. A client application has been deployed to users devices to collect document access requests based on system calls and sort them according to users intentions. Anomaly detection and trust allocation mechanisms follow to prevent the identified user from using internal IT system. New monitoring system is capable to scrutinize all user behavior of unstructured data accesses in their local devices. Also the system will focus on how to manage an identified users trust level in addition to the correctness of detected anomalies.

**Index Terms:** Unstructured Data Monitoring, Cyber-security, Anomaly Detection, Allocation of Trust

**Acknowledgement:** This research was supported by the MSIT(Ministry of Science and ICT), Korea, under the ITRC(Information Technology Research Center) support program(IITP-2018-2018-0-01799) supervised by the IITP(Institute for Information & communications Technology Promotion)

## Upcoming Events

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