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جامعة الأمير سلطان
PRINCE SULTAN
UNIVERSITY
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4Th UNDERGRADUATE
RESEARCH FORUM

URF2018

Program and Book of Abstracts
March 13 -14, 2018

**Prince Sultan University
4th Undergraduate Research Forum
URF 2018
March 13 - 14, 2018**

Program and Book of Abstracts

http://info.psu.edu.sa/urf/

Call for URF 2018 Proceedings

The 4th Undergraduate Research Forum 2018

Proceedings Guidelines

The Proceedings of the 4th Undergraduate Research Forum 2018 will include the full research papers based on the paper/poster presentations delivered at the Forum. Hence, only the students who presented at the Forum are allowed to submit their papers for consideration of publication at the Proceedings.

Paper Submission Guidelines

1. Conforming to the rules of scientific research, especially with respect to the consultation of scientific resources.

2. The research must be in either sound Arabic or English.

3. The research paper must not exceed 20 pages including references and appendices, as well as: a cover page containing the title of the paper, the name of the participant and the name of the University and supervisor, if any, followed by an abstract, introduction, the research problem, methodology, results and discussion, conclusion, references and appendices.

4. The abstract must range between 150 and 250 words, which includes: an introduction of the research problem, the methodology, summarized results, recommendations and references.

5. The paper must be written using Microsoft Word, in A4 papers, double-spaced, 2.5 cm margins, with all pages numerated. The Arabic font is to be Traditional Arabic size 16, and the English report is TIMES NEW ROMAN size 14.

6. Email the full paper in one word document to urf4@psu.edu.sa by April 30, 2018.

Paper Acceptance Procedure

The research papers submitted for consideration of publication at the Forum Proceedings will be checked for plagiarism. Only the papers that pass the plagiarism test will be sent for double-bind peer-reviewing to assess their scientific value before a final decision regarding their inclusion in the Proceedings is made. Hence, all the students who submit research papers for publication at the Forum Proceedings must check their mail by the end of May 2018 to learn about the decision of the reviewers. Papers may be accepted as is, accepted after modifications or rejected.

الملتقى الرابع لأبحاث طلاب المرحلة الجامعية لعام ٢٠١٨

شروط النشر بمجلة الملتقى

ستتضمـن مجلـة الملتقـى الرابع لأبحاث طلاب المرحلـة الجامعية لعام ٢٠١٨ الأوراق البحثيـة الكاملة للأبحاث التي تم عرضـها أو تقديمها على هيئة عرض تقديمي أو ملصق بحثي في الملتقى. وعليه، فإن الطلاب أو الطالبات الذين قدموا عرض أو ملصق بحثي بالملتقى هم فقط من يسمح لهم بتسليم أوراقهم البحثية للنظر في نشرها في مجلة الملتقى الرابع لأبحاث طلاب المرحلة الجامعية لعام ٢٠١٨.

شروط تسليم الورقة البحثية

١. الالتزام بقواعد البحث العلمي خاصة تلك المتعلقة باستخدام المراجع العلمية.

٢. لا بد أن يكون البحث باللغة العربية أو الإنجليزية السليمة.

٣. يجب أن لا يتعدى طول الورقة عشرين صفحة، بما فيها المراجع والمرفقات، كما يجب أن تتضمن الورقة على:

صفحة غلاف تحوي اسم الطالب/ الطالبة، واسم الجامعة، واسم المشرف على البحث (ان وجد)، يلحقها ملخص البحث، و المقدمة، وأسئلة البحث، وأدبيات البحث، ومنهجية البحث، والنتائج ومناقشتها، والخاتمة، والمراجع والمرفقات.

٤. لا بد أن يتراوح طول ملخص البحث بين ١٥٠ و ٢٥٠ كلمة، و يحوي على: مقدمة حول موضوع البحث وسؤاله، و المنهجية المتبعة، وملخص النتائج، والتوصيات.

٥. لا بد من كتابة البحث على ملف Word بحجم A4، مزدوجة المسافات، بهامش 2.5، مع ترقيم الأوراق، واستخدام الخط العربي Traditional Arabic بحجم 16، أوالخط الإنجليزي Times New Roman بحجم ١٤.

٦. يجب ارسال البحث في ملف واحد إلى urf4@psu.edu.sa في موعد أقصاه 30 إبريل 2018.

إجراءات قبول البحث

سيتم الكشف على الأوراق البحثية المقدمة للنشر في مجلة الملتقى الرابع لأبحاث طلاب المرحلة الجامعية لعام ٢٠١٨ من حيث تضمنها لأي أثر للسرقة العلمية. وسـيتم رفض الأوراق التي يثبت تضمنها لأثار السـرقة العلمية، أما بالنسبة للأوراق التي تجتاز اختبار السرقة العلمية، فسوف يتم مراجعتها من قبل محكمين اثنين مراجعة مزدوجة التعمية لتقييمها علميا قبل إصدار الحكم النهائي لإصدارها في المجلة.

وعلى جميع الطلاب والطالبات الذين أرسـلوا أوراقهم للنشـر في مجلة الملتقى مراجعة بريدهم الإليكتروني بحلول نهاية شـهر مايو ٢٠١٨، لمعرفة قرار المحكمين، حيث يمكن قبول الورقة بلا تعديل، أو بعد التعديل، أو يمكن رفضها كليا.

URF 2018 Program

Women's Program
Day 1 – March 13, 2018
Registration and Opening

Welcome Desk/Registration: **8.30 - 9.00**

Outside Large Auditorium

Opening Session: **9.00 - 10.00**

(Large Auditorium)

9.00 - 9.05	Quran Recitation
9.05 - 9.10	**Welcome Word** Dr. Dina El-Dakhs, URF Chair
9.10 - 9.15	**Opening Word** Dr. Rimah Al-Yahya, Vice-Rector, Women's Campus
9.15 - 10.00	**Panel Discussion** Moderator: Dr. Romana Aziz, College of Computer & Information Sciences **Panelists:** Dr. Jolly Sahni, College of Business Administration Dr. Iman AlMomani, College of Computer & Information Sciences Dr. Hala Dalbani, College of Humanities

Women's Program

Day 1

March 13, 2018

Session (W1) 10.20 - 12.00

Session W1.1 Interior Design and Architecture (Large Auditorium)

10.20 - 10.40	تصميم مركز لإعادة تدوير الأثاث للحفاظ على البيئة. وجدان حسن زين الكاف - جامعة الملك عبدالعزيز
10.40 - 11.00	Ethnic Identity and Cultural Appropriation in Late Ottoman Architecture Kholoud Al-shwair - Al Yamamah University
11.00 - 11.20	Saudi Vision 2030: Towards a Policy of Conservation and Rehabilitation of the Traditional Built Environment: The Case of Al Ula Nada Ahmed AlAli - Prince Sultan University
11.20 - 11.40	Value Engineering in Sustainable Development. Nada Ahmed AlAli - Prince Sultan University
11.40 - 12.00	التصميم الداخلي لمراكز شاملة للعمل التطوعي وخدمة المجتمع مريم أحمد الزهراني - جامعة الملك عبدالعزيز

Session W1.2 Computer and Information Sciences (Small Auditorium)

10.20 - 10.40	The impact of Augmented and Virtual Reality in Education AlaaAlrahman - Prince Sultan University
10.40 - 11.00	Significance of Fingerprint Authentication System in Medical Health Sector Ghina Haitham Ahmed Khalifeh - Prince Sultan University
11.00 - 11.20	Telecare for Stroke in Saudi Arabia Nora Alghanmi - Princess Nourah bint Abdulrahman University
11.20 - 11.40	Hackathon Visualization Application for the MENA Region:Visualizing Spatial and Temporal Dynamics of Time-Bound Events Haila Mohammed AlQufary - Princess Nourah bint Abdulrahman University

Prayer and Lunch Break 12.00 – 13.00
Building 2, First Floor

Session (W2) 13.00 - 14.20

Session W2.1 Engineering (Large Auditorium)

13.00 - 13.20	Wireless Power Transmission System Sara Alzahrani - King Abdulaziz University
13.20 - 13.40	Airplane Seat Pitch Design using Anthropometric Data Aljawhra Abdullah Aljebreen - Alfaisal University
13.40 - 14.00	Boeing_Solar_Dr. ne: Wireless Power Transfer, Control, and Communication Aram Sadig Monawar - Alfaisal University

Session W2.2 English Language Studies (Small Auditorium)

13.00 - 13.20	Editing News Headlines: The Case of Arabic into English Translation Renad Aljadid - Prince Sultan University
13.20 - 13.40	Women in the Eye of Western Thoughts & Literature: Their Rights for Education & Publishing Renad Aljadid - Prince Sultan University
13.40 - 14.00	Pragmatics in Humor Translation of Female Saudi Translators at PSU in Saudi Arabia Maha Meldah - Prince Sultan University
14.00 - 14.20	Discourse Analysis of King Salman Bin Abdulaziz Speech in the Arab Islamic American Summit Modhi Alsudairi - Prince Sultan University

Day 1

March 13, 2018

Poster Session (W) 14.00 - 15.00

Main Lobby, Building 2, PSU Women's Campus

Opportunities and Challenges of Augmented Reality in Education
Zara Ilyas - Prince Sultan University

Hasalti: An Educational Application that Teaches Children Financial Responsibilities
Loujane Gharbawi - King Abdulaziz University

Bus Tracker :A Mobile Application for Bus Tracking and Rerouting Pilgrimage Traffic Control
Norah Ahmad Alshomrani - King Abdulaziz University

Image Assistant : Noora Abdul Samad Mohammad WarisAlhindi - King Abdulaziz University

Interactive Home-Based Therapy Product for Stroke Rehabilitation Using Brain Computer Interface (BCI) & Leap Motion Sensors
Shahad Khalid Al Walan - Princess Nourahbint Abdulrahman University

Mathematics Game-Based Learning Application
Abrar Talea AlOtaibi – King Abdulaziz University

Arabic Alphabetic Puzzle Game Using Eye Tracking and Chatbot for Learning Disability (Dyslexia)
Anhar Hossain Almutairi - King Abdulaziz University

تصور البيانات المفتوحة في المملكة العربية السعودية
ملاك غازي حامد النفيعي –جامعة الملك عبدالعزيز

Smart Tutoring System for Arabic Sign Language Using Leap Motion
Shatha Khalaf Alsolami - King Abdulaziz university

Detecting Abnormal Dense Crowd Behavior
Maha Saud Alarifi - King Abdulaziz University

Day 2

March 14, 2018

Welcome Desk/Registration: **8.30 - 9.00**

Outside Large Auditorium

9.00- 10.00	Introduction to Research Groups / Labs Human-Computer Interaction Research Group Language Learning and Teaching Research Group Machine Learning Research Group Venue: Large Auditorium

Day 2

March 14, 2018

Session (W3) **10.20 - 12.00**

Session W3.1 Law MCL (Large Auditorium)

10.20 - 10.40	Bitcoin's: Legal Issues, Challenges and Regulations Alhanouf Alshoaibi - Prince Sultan University
10.40 - 11.00	Corporate Governance in Saudi Arabia Kholoud Alghamdi - Prince Sultan University
11.00 - 11.20	Moral Luck and Moral Responsibility Nouf Aljahdali -Prince Sultan University
11.20 - 11.40	Relevance of Plato's Teachings: A Dialogue between a Philosopher and a Student of Law May Al Sheikh - Prince Sultan University
11.40 - 12.00	The Application of Artificial Intelligence in Legal Industries Alanood Binarier - Prince Sultan University

Session W3.2 Computer & Information Sciences and General Sciences (Small Auditorium)

10.20 - 10.40	Benefits of Artificial Intelligence in Medicine Samira Yeasmin - Al Yamamah University
10.40 - 11.00	Advancements in Augmented Reality Raghad AlMady - Prince Sultan University
11.00 - 11.20	Opportunities and Challenges of Augmented Reality in Education Aya Aqeel - Prince Sultan University
11.20 - 11.40	الهندسة الوراثية في الأجنة رحمة احمد ابراهيم البوشقراء - جامعة الملك فيصل
11.40 - 12.00	Emotional Intelligence (EI) on the Relationship between Protean Career Attitudes (PCA) and its Individual Career Outcomes of Objective Career Success and Subjective Career Success Wasmi Woishi Mohammad Islam Khan - Al Yamamah University

Prayer and Lunch Break **12.00 – 13.00**
Building 2, First Floor
Session (W4) **13.00- 14.00**

Session W4.1 Law (Large Auditorium)

13.00 - 13.20	Limited Liability Company's (LLC) Incorporation in Saudi Arabia: In-depth Analysis of New Company Law Ghaida Abdulla Meaigel - Prince Sultan University
13.20 - 13.40	Vision 2030: A New Dawn of Women Empowerment in Saudi Arabia Hala Abdulrahman Alkhamis - Prince Sultan University
13.40 - 14.00	Role of Higher Education in Achieving Sustainability in the Kingdom of Saudi Arabia Tala Mustafa Khateeb - Prince Sultan University

Session W4.2 Business Administration (Small Auditorium)

13.00 - 13.20	Google Keyword Advertising Najla Almousa - Prince Sultan University
13.20 - 13.40	Study on the Impact of How Saudi Aramco's Decision to go Public in 2018 will Affect the Economy of KSA and Vision 2030 Samia Khan - Al Yamamah University
13.40 - 14.00	Future of Foreign Direct Investment (FDI) in Saudi Arabia Malak Alajmi – Al Yamamah University

Day 2

March 14, 2018

Poster Session (W) **2.00 - 3.00**

Main Lobby, Building 2, PSU Women's Campus

Broadband Rectenna For Energy Harvesting Application
Reem Hassan Ali Nahhas - King Abdulaziz University

Effect of Nano-Holes Arrays Patterned on a Solar Cell
Tasneem Saleh Ali Alghamdi - King Abdulaziz University

Wireless Power Transmission for Pacemaker Implementation
Hatoun Hany Bekdash – King Abdulaziz University

Smart Airport Solution for King Khalid International Airport
Reema AlMashari - Alfaisal University

Survival Window
Rawan Baraji - King AbdulAziz University

Smart Shoes
Rahaf Bilaus - King Abdulaziz University

The Traffic Light Programming System
Reham Ahmed Fallatah - King Abdulaziz University

Enegry Producer Sand Clock
Joud Altunisi - King Abdullaziz University

اثر عمارة المعابد الهندوسية على عمارة المساجد في شبة القارة الهندية
أفنان محمد أحمد الفيفي - جامعة اليمامة

الاستغلال الاقتصادي للأطفال عبر برامج التواصل الأجتماعي
مها عتيق – جامعة الأمير سلطان

دور التصميم الداخلي في تفعيل مركز اجتماعي ثقافي تفاعلي بالملكة العربية السعودية
دعاء عمر محمد بامردوف - جامعة الملك عبدالعزيز

The Loss of Meaning through the Maze of Translation in Nizar Kabbani's Poetry
Balsam Bahatheq - Prince Sultan University

Safe Chat: Children Chats Classification
Ameera Nahar Milibari - King Abdulaziz University

Men's Program

Day 1

March 13, 2018

Registration and Opening

Welcome Desk/Registration: **8.30 - 9.00**

Outside Prince Sultan Hall

Opening Session: **9.00 - 10.00**

(Prince Sultan Hall)

9.00 - 9.05	Quran Recitation
9.05 - 9.15	**Opening Word** Dr. Khaled Mohamad Almustafa Director, Research and Innovation Center
9.15 - 10.00	**Panel Discussion** Moderator: Dr. Ihab Kattar, College of Engineering **Panelists** Dr. Anis Zarrad, College of Computer & Information Sciences Dr. Muhammad Asif, College of Business Administration Dr. Abdelhakim Abdelhadi, College of Engineering

Day 1

March 13, 2018

Venue for Technical Sessions: Prince Sultan Hall, Old Building, PSU Men's Campus

Session (M1) **10.20 - 12.00**

Session M1 Engineering

10.20 - 10.40	The Analysis of a Structure's Response to Blast-Resistance Techniques Monjee Khaled Almustafa - Prince Sultan University
10.40 - 11.00	Nanotechnology in Construction Field Abdulhafiz Jehad Daas Jamous - Prince Sultan University
11.00 - 11.20	Design of Quadcopters: Basics and Beyond Taha Khursheed Ahmed - Prince Sultan University
11.20 - 11.40	RF Energy Harvest Ghassan Bayounis - Alfaisal University
11.40 - 12.00	Improving the Quality of Service in PSU Central Library Abdulmalk Alkassim - Prince Sultan University

Prayer and Lunch Break   **12.00 – 13.00**
Prince Sultan Hall

Session (M2)   **13.00 - 14.00**

Session M2 Engineering

13.00 - 13.20	Prince Sultan University GYM Abdulmalk Alkassim - Prince Sultan University
13.20 - 13.40	Properties of Concrete Using Grass as a Fine Aggregate Replacer Yahya Jamal - Prince Sultan University
13.40 - 14.00	Road Accidents and their Causes in Saudi Arabia Ahmed Al-shuaibi - Prince Sultan University

Day 1

March 13, 2018

Poster Session (M) **14.00 - 15.00**

Venue for Poster Session (M): Old Building, Opposite to Prince Salman Hall, PSU Men's Campus

Engines Regarding Friction and Heat
Abdulhafiz Jehad Daas Jamous - Prince Sultan University

The Design of an Eye Directive Controller in a Motorized Wheelchair for Disabled People
Mahmoud Monir Anber - Prince Sultan University

Smart Parking Lots
Mohammad Abdulhameed Lahza - King Abdulaziz University

Guide System for Blind Students
Thamer Fahad Alqahtani - King Abdulaziz University

Improving the Cognitive Abilities of the Secondary School Students in the Kingdom
of Saudi Arabia through Reading Specific Text Colors
Abdulmalik Aloufi - Prince Sultan University

Sound Cup
Abdullah Saad Dahhan - Prince Sultan University

Sahara Sleeping Bag
Bader bin Shalhoub - Prince Sultan University

Pen with Embedded LED
Yaman Reda - Prince Sultan University

Screwdriver with Hammer
Faisal Abdullah Al-meshkhas - Prince Sultan University

Ethical Issues in Usage of Social Media
RaadAlkhaldi - Prince Sultan University

Design and Fabrication of a Vehicle Desert Cooler
Abdullah Abdulrahman Altheeb - MajmaahUniversity,KSA

Bacterial Contamination of Hand for Hospital Staff in Saudi Arabia
Bandar Alshuhri - Majmaah University

Design and Implementation of Energy Efficient Buildings
Abdullah Hamad A Almani - Majmaah University

The Current Update On DRO(Multidrug Resistant Organisms) In Saudi Hospitals
Mohammad Ali Kariri - Majmaah University

Isolation, Identification, and Antimicrobial Susceptibility of Bacteria Associated with
Mobile Phone Contaminants among Health Professionals at Hospitals in Saudi Arabia
Adil AL-maqati - Majmaah University

Infectious Diseases and Healthy Marriage Program in Saudi Arabia
Ahmed Abdulrahman Zuayr - Majmaah University

Investigation of Genetic Diseases in the Eastern Region of Saudi Arabia in the
Compulsory Premarital Screening program
Mohammad Alshahrani - Majmaah University

Design and Fabrication of Stirling Cycle Engine
Abdul Aziz Houran Alaniz - Majmaah University

The First Skyscraper in The World with Green Energy
Ammar Kachoua - Prince Sultan University

Hazards and Precautions in Oil Fields
Hamad Al-Khalidi - Prince Sultan University

Day 2

March 14, 2018

Welcome Desk/Registration: **8.30 - 9.00**

Outside Prince Sultan Hall

9.00 - 10.00	Introduction to Research Groups / Labs
	Dr. Anis Koubaa
	Robotics and Internet-of-Things Lab (RIOTU)
	Venue: Prince Sultan Hall

Day 2

March 14, 2018

Venue for Technical Sessions: Prince Sultan Hall, Old Building, PSU Men's Campus

Session (M3)   **10.20 – 12.20**

Session M3 Engineering and Computer & Information Sciences

10.20 - 10.40	Assessment of Fly Ash Properties in Concrete as a Fine Aggregate Replacement Ahmed Qubaja - Prince Sultan University
10.40 - 11.00	Experimental Study of Thermal Properties of Nanofluids Abdulaziz Essa Al-Khurayef - Majmaah University
11.00 - 11.20	A Comparative Study of Normal Concrete with Wood Ash Concrete Ahmed Essam Ibrahim - Prince Sultan University
11.20 - 11.40	Digital Document Notarization Using Cryptographic Key Systems and Blockchain Timestamping Abdullah Almoaiqel - Prince Sultan University
11.40 - 12.00	Privacy and Security Issues Regarding Drones Hamad Alaqeel - Prince Sultan University

Prayer and Lunch Break   **12.20 – 13.00**
Prince Sultan Hall

URF 2018 Abstracts

Women's Campus
Day 1

Session W1.1 Interior Design and Architecture (Large Auditorium)

تصميم مركز لإعادة تدوير الأثاث للحفاظ على البيئة

وجدان حسن زين الكاف
wejdan-alkaf@hotmail.com
مريم نواف المنصوري، رنده حمزه شلبي
المشرف: الدكتورة / نهى نقيطي
جامعة الملك عبدالعزيز

الملخص:

المقدمة ومشكلة الدراسة: يهدف البحث إلى تفعيل دور التصميم الداخلي في إعادة تدوير الأثاث. وذلك من خلال التعرف على احتياجات أفراد المجتمع في ما يخص قطع الأثاث ومدى تقبل العملاء لشراء أثاث معاد تدويره. ومن هنا تم صياغة التساؤل الاساسي للبحث كالتالي: كيف يمكن الحفاظ على البيئة بالتعاون مع المصممين لإقامة مركز متخصص لإعادة تدوير الاثاث التالف والمهدر وتصنيع منتجات اثاث معاد تدويرها ذات قيمة عالية؟ المنهج المتبع للدراسة: اعتمد منهج البحث على المنهج الوصفي الميداني وقد اجري البحث على بعض الأسر السعودية الموجودة في مدينة جدة حيث تقيم الباحثات. وقد تمت على عينة غرضية عشوائية عددها (٤٠٠). ملخص النتائج: وجد أن تغير قطع الأثاث يعود إلى سببين الأول تلف قطع الأثاث والثاني الرغبة في الشراء للتجديد وكانت طرق التخلص من قطع الأثاث القديمة واعطائها للغير هي الطريقة الغالبة لعينة الدراسة بنسبة ٥٣٫٨٪. ونسبة ٤٠٪ من الأشخاص واجهوا صعوبة في التخلص منها أما ٦٫٥٪ لم يتخلصوا من أثاثهم في حياتيهم وبذلك يتضح عدم وجود منشيآت صناعية ومعارض متخصصة تهتم بإعادة تدوير قطع الأثاث. وقد أيد ٧٨٪ من العينة وجود معارض أثاث معاد تدويره وذلك يبين مدى الوعي بالنسبة للعينة من حيث إعادة التدوير والمحافظة على البيئة،وأن نسبة ٨٨٫٨٪ من مؤيدين وجود معارض فضلوا التعامل مع المعارض مباشرة. وكان خيار الذهاب إلى المعرض هو الأهم. الخلاصة وأهم التوصيات: تأكيد أهمية العمل المشترك بين الجهات المختصة والمصممين لرفع جودة التصميم الداخلي لمركز إعادة تدوير الأثاث والمحافظة على البيئة. تفعيل دور التصميم الداخلي من خلال الإستفادة من إعادة تدوير قطع الأثاث وتحقيق المعايير التصميمية للفراغ. تشجيع الأسر على إعادة تدوير الأثاث عن طريق المراكز المختصة من خلال إبراز مزاياها وفوائدها المتعددة.

Session W1.1 Interior Design and Architecture (Large Auditorium)

Ethnic Identity and Cultural Appropriation in Late Ottoman Architecture

Kholoud Al-Shwair
khloud-shwair@hotmail.com
Aysha Daghstani
Supervisor: Dr. Saqer Sqour
Al-Yamamah University

Abstract:

The aim of this research paper is to study and analysis the influence of ethnic identity on Ottoman architecture. This research will start with a brief history about the stages of Ottoman architecture. it will discuss the development in the Ottoman architecture and how changing in the identity of culture and ethnicity can affect on architecture. According to that change, structural design and material selections will be affected. This research paper will talk about the most important Ottoman ethnicities that influence in the evolution and expand on the Ottoman culture and architecture. Moreover; this research will be supported with examples of the most famous constructions that exhibit the development in their architectural and structural design techniques and explain them in details. This research will try to answer these questions: Did the identity of Ottoman architecture disappear at the end of Ottoman culture? What were the most famous architects in that era of development? What was the most eras that showed the development in? How ethnic identity and cultural appropriation could affect on Ottoman architecture? What were the ethnic factors that affect on Ottoman architecture? Was the development positive or negative in the Ottoman architecture? What were changes in architectural and structural designs techniques which were done by the ethnic identity and cultural appropriation? What are the positive and negative sides of this development in Ottoman architecture in that era? This research is expected to study, analysis and answer different questions regarding to the study of ethnic identities in Ottoman architecture.

Session W1.1 Interior Design and Architecture (Large Auditorium)

Saudi Vision 2030: Towards a Policy of Conservation and Rehabilitation of the Traditional Built Environment: The Case of Al Ula

Nada Ahmed AlAli
nadadalali@gmail.com
Supervisor: Dr. Fiorella Vanini
Prince Sultan University

Abstract:

The aim of this of this research is to establish a clear guidance for conserving and rehabilitating heritage sites in Saudi Arabia. Some of the cultural sites have been already recorded as world heritage sites, yet others have been listed in their tentative list to be conserved and restore the natural life habitat in them. This research will provide a guideline that will help in giving the heritage sites in Saudi Arabia a full clear systematic program that must be followed to create a well conserved and maintained areas. In general, Saudi Arabia has plenty of cultural sites that are important in an architectural and a religious manner. In this research the methods and strategies in the case of al-Ula's conservation and rehabilitation will be investigated and reported to serve the proposed guideline. Information was gathered through surveys and a site visit that was done during 162 fall semester in PSU. AlUla's study case will work as a platform that will provide a guideline that applies sustainable conservative development for the cultural projects all around the country, reserving those sites will help in providing a sense of uniqueness and unity in a fast developing world for the forthcoming generations. The contribution in heritage maintenance — whether through rehabilitation, restoration, or preservation, — coordinates with sustainable methods that will drive cultural, economical, and environmental benefits to the county. This procedure will help in registering more than double of the accepted sites in UNESCO, therefore it will help in achieving one of Saudi Arabia 2030 visions.

Session W1.1 Interior Design and Architecture (Large Auditorium)

Value Engineering in Sustainable Development

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Abstract:

Value engineering (V.E) is an innovative key for construction companies to improve their services and products with least possible budgets. Moreover, It is a relatively new technique that started after World War II in The United States of America. Currently, V.E is used for ensuring projects' success by reducing the cost and maintaining the performance, concurrently with producing a positive impact on the environment and contributing to the new trend of green construction, making it sustainable. Sustainable value engineering is one that meets the present needs without compromising the future generations'. It takes into consideration the resources life cycle from their raw state until the end of their salvage cycle. The present study aims to present VE's history, its correlation with sustainability, their aim and definitions, a case study that shows their impact on real life projects, and methodologies and calculations of the aforementioned projects' results. That will be achieved by using schematic diagrams, lists and common terminologies. Improving building's sustainable outcomes and project's quality through VE helps building's owners make positive and tangible impact in quality in a timely manner. This research will illustrate the methodology used in integrating new approaches into the VE process through analysis and reliable surveys. The principle objective is to identify the correlation between VE process and green buildings projects. Secondly, another objective is to recognize the limitations in the current convention VE process and set out the present setting for change. Proposed models presented better VE sustainability oriented outcomes than a conventional VE model.

Session W1.1 Interior Design and Architecture (Large Auditorium)

التصميم الداخلي لمراكز شاملة للعمل التطوعي وخدمة المجتمع

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الملخص:

مستخلص البحث: تهدف الدراسة الى التعرف على أهمية تصميم مراكز للعمل التطوعي وخدمة المجتمع. والتعرف على مدى وعي المجتمع بأهمية التطوع وآثاره. وتكمن المشكلة الأساسية بالإجابة عن التساؤل التالي: ما دور التصميم الداخلي في إيجاد مراكز شاملة للعمل التطوعي وخدمة المجتمع؟ وقد اعتمدت الدراسة على المنهج التحليلي الوصفي. وتم دراسة الحالة على مركز الملك عبد العزيز الثقافي العالمي للإثراء المعرفي واعدت الباحثات لتحقيق اهداف الدراسة واستخلاص النتائج. الادوات التالية: استبيان الكتروني موجهه الى عينة عشوائية يشتمل معلومات عامة (ديموغرافية) للعينة واسئلة خاصة في تصميم المركز وفراغاته الداخلية. ومن اهم النتائج التي توصلنا لها هي ان الوعي بمفهوم العمل التطوعي وخدمة المجتمع لعينة الدراسة بالملكة العربية السعودية متوسط نسبياً. حيث تساوت نسبة من سبق لهم التطوع مع من لم يسبق لهم المشاركة بالأعمال التطوعية. وان هناك عوامل تؤثر على انتشار ثقافة التطوع بالمملكة من اهمها التنظيم الاداري. ووسائل الاعلان حيث ان اكثر من نصف العينة اجابت في عدم اشتراكهم بالأعمال التطوعية كان بسبب عدم معرفتهم ببرنامج وآليه واضحة للعمل التطوعي. وأوصت الباحثات من خلال دراسة المشكلة البحثية وعلى ضوء النتائج في استبيان العينة الى الافراد والمتخصصين في مجال التصميم الداخلي والمجتمع ما يلي: • الافراد: تحفيز الأفراد للخدمة المجتمعية والعمل التطوعي وتوعيتهم بأهمية التطوع وأثرها على نهوض وتطور الحضارة. • المتخصصين: تفعيل دور التصميم الداخلي في تصميم مراكز العمل التطوعي بطرق مهيئة وشاملة والاستفادة من نموذج تصميم مركز التطوع وخدمة المجتمع. • المجتمع: ربط المتطوعين بشبكة الكترونياً في كل انحاء المملكة العربية السعودية لتحفيزهم على العمل والاستمرارية في العطاء. وضمه ضمن المقررات التعليمية بساعات محددة بمراحل المدارس والجامعة لبناء مجتمع حيوي ومتعاون.

Session W1.2 Computer and Information Sciences (Small Auditorium)

The impact of Augmented and Virtual Reality in Education

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Abstract:

"The impact of Augmented and Virtual Reality in Education" Done BY: Nada Altair, Nada Abu-Raida, Alaa Alrahman Barakat The purpose of this study is to identify one of the most popular technologies which are Virtual reality (VR) and Augmented reality (AR). Their impacts have spread widely to cover so many fields including science, entertainment, medicine, engineering, education, training and many other fields. These technologies have served people in achieving their goals and in easing their lifes as well. AR and VR technologies had started their active implementation few years ago and are evolving nowadays in a revolutionary manner in a way that makes human perception that VR and AR will shape our future and will be based on them these technologies. Although, VR and AR are similar in serving the customers in many various fields, their delivery methods significantly differ. For instance, VR immerses the user with virtual pictures by making them feel like they are experiencing the simulated reality, mainly by stimulating the user senses in specific visions and hearing. On the other hand, AR works on mixing up digital components with the real world ones in such a way that these components enhance one another, but can also be differentiated easily. VR and AR have been shown many influential effects on people's life and success in leaving a very remarkable impression in many fields especially, in education. Using VR and AR in education helps many people from different ages to have better knowledge about things they are studying about. Making visual representations for the subject explained for students also helps them in linking theoretical information with the practical one that should be demonstrated to fill up the complete vision of the information taken. Moreover, AR and VR had been implemented in many educational fields which is further discussed in this research such as in medical education, civil engineering, and educational trainings.

Session W1.2 Computer and Information Sciences (Small Auditorium)

Significance of Fingerprint Authentication System in Medical Health Sector

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Abstract:

The safety and confidentiality of patient information are vital in achieving positive health outcomes. In Saudi Arabia, many hospitals still rely on manual documents to record, store, and retrieve patient data. Manual systems of verification may lead to invasion of privacy and confidentiality as unauthorized users can access them easily. Additionally, there is a possibility that patient data can be used without his/her consent. Nevertheless, many institutions still use non-biometric techniques to store information such as e-mail addresses. The greatest motivation for engaging in the current research is to identify the effectiveness of the fingerprint authentication systems in ensuring privacy and confidentiality of patient data. In addition, the researchers aim at establishing whether the application of the HER can assist practitioners in improving service delivery, especially in making correct diagnosis and treatment. A system flow chart was developed to conduct this study and qualitative analysis was carried out to investigate the experiences of the practitioners. The researchers reviewed the articles and documents to ascertain the perception of physicians and clients regarding fingerprint authentication systems. In particular, the diffusion of innovation framework was deployed in this study to show the flow of the work. Through qualitative analysis, the researchers investigated the experiences of the practitioners and patients with regards to fingerprint authentication systems. Since the systems are highly integrated, one does not need an ID to access his/her medical profile if the hospital can verify information through fingerprint authentication systems. Based on the findings, it is clear that fingerprint authentication systems increase the accuracy and safety of patient information. In addition, they increase the speed at which the practitioners access information .In a similar fashion, they ease accessibility on the side of the patients .Since the systems are highly integrated, one does not need an ID to access his/her medical profile if the hospital can verify information through fingerprint authentication systems. In the future, researchers should focus on examining the impact of cultural and religious factors on effective implementation of fingerprint authentication systems in Saudi Arabia hospitals.

**Women's Campus
Day 1**

Session W1.2 Computer and Information Sciences (Small Auditorium)

Telecare for Stroke in Saudi Arabia

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Abstract:

Stroke is a major health issue worldwide. In Saudi Arabia, the number of stroke patients has increased in the past years becoming the 8th leading cause of death and disabilities combined, which made it a problem that requires attention. However, the number of equipped rehabilitation centers for stroke is still limited. This raised the problems for stroke patients and made getting medical care harder especially for those in rural areas. The difficulty is due to the limited staff abilities and training in addition to the lack of efficient medical equipment in the local hospitals. A model in telecare that could address this problem is telerehabilitaion. It is a virtual care model that enables consultations and care of remote patients at their local hospitals by specialists at a reference hospital. It provides them with the tools needed to monitor the patients remotely and eliminates the need for travelling. Based on this, the idea of telerehabilitaion system tailored for the needs of stroke physicians and patients arose. The system aims to provide the appropriate and organized medical rehabilitation for stroke patients in rural areas. It will help stroke patients and make their stroke journey easier by eliminating the need for traveling. Also, the system will address the special needs of stroke rehabilitation that could not be provided with general telerehabilitaion systems. A web system will be designed and developed for connecting general hospitals in rural areas with top-level rehabilitation hospitals for post-stroke follow up and rehabilitation. The system will be specific to stroke and it will provide physicians with the tools needed for stroke rehabilitation. The usage of telecare for stroke system will aid in mitigating the lack of stroke rehabilitation centers by enabling the communication between remote hospitals and providing the rehabilitation care required to stroke patients during their stroke journey remotely. In the end, getting rehabilitation after stroke is difficult for patients in rural areas these days. However, using technology to help them by implementing a telecare system for stroke will enable them to get good rehabilitation at the comfort of their hometowns surrounded by their families.

Session W1.2 Computer and Information Sciences (Small Auditorium)

Hackathon Visualization Application for the MENA Region: Visualizing Spatial and Temporal Dynamics of Time-Bound Events

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Abstract:

Abstract. Hackathons are poised to accelerate technological progress and redefine the technology innovation lifecycle. Time-bounded events have spawned a raw form of creativity that is rarely seen elsewhere in the digital innovation landscape. Efficient monitoring and analysis of data emerging from time- bounded events - and trends in the technology innovation process that emerge from encouraging developers, designers and entrepreneurs to go from the drawing board to a working demo - is of interest to both professional analysts and the general public. This project identifies the distinguishing characteristics of hackathons in the Middle East and North Africa (MENA) region. It also introduces a visual analytics application for uniquely identifying the technical, socio- cultural and contextual differences that define hackathon practices and the emerging hacking communities in the region. The benefit of such understanding not only supports the continued growth of such activities in the region, but it also helps to disambiguate hackathon activities from other productive practices for software development, entrepreneurship and computing education. The aim of this project is design and develop a system for interactive information visualizations for time- bounded events such as hackathons. By using D3 libraries which serve the purpose of fostering access to scattered information of hackathons in the MENA region, and fostering the recognition of structures in abstract data about the hackathons across different regions, and supporting information retrieval and exploratory analytics of these events and trends related to the phenomenon. Existing web applications are not sufficient for analysis-driven recommendations. Sophisticated tools were needed for analysts, policy makers and researchers to track, process, and communicate data about the phenomenon of hackathons and time-bounded events and how they contribute toward innovation eco-systems in the region. This motivated us to developing an interactive web platform, to visualize the phenomenon of hackathons and time-bounded events in the region and to provide the capability to visually explore the crowdsourced data sets spatially by zooming in and out of regions and countries, and temporally by exploring the data sets across different time frames.

Session W2.1 Engineering (Large Auditorium)

Wireless Power Transmission System

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Abstract:

Wireless Power Transmission (WPT) began in the early 20th century when Nikola Tesla discovered that energy could be transferred by electromagnetic waves without the need of conductors. At that time, his ideas were not considered; however, they show the path to the development of wireless power transmission technology. WPT technology has become a necessity because it is an efficient, safe, nonhazardous solution for recharging electronic mobile devices. The motivation for wireless power comes from physical wires being cumbersome, complicated and dangerous. Also, WPT eradicates the hazardous use of electrical wires which involve a complicated connections and difficult organizing. Furthermore, transmitting power without using wires is an effective, cheap and efficient, which can efficiently transmit electrical power to a required area varying in distance without affecting the surrounding environment. The objective of this project is to develop an efficient power transceiver for mobile phone charging system. For this project, we have generated three alternative solutions each of them utilizes different WPT method. The first solution is based on the radio frequency method and the second solution is based on the capacitive inductive method whereas the third solution is based on the inductive coupling method. The chosen solution is the first one which is the one that based on radio frequency method. It was chosen because it got the highest score after using Pugh's method which is an effective technique that used for selecting the best solution. The project was analyzed, designed and fabricated by using FR-4 substrate material and thin film and photolithographic technique. Finally, the circuit was measured by using the vector network analyzer. The results meet our goal.

Session W2.1 Engineering (Large Auditorium)

Airplane Seat Pitch Design using Anthropometric Data

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Abstract:

In a tenacious debate of airline profit versus passenger safety due to shrinking seat pitches and adding more rows in airplanes, this research is conducted to find appropriate seat measurements that allow for a brace position in a typical economy seat. In the last 40 years, airlines have been decreasing seat pitches steadily. In the 1970s, average seat pitch is around 35 inches and currently it is around 28 inches. The distance reduction between rows of seats raises the safety concerns as it can be extremely harmful during an emergency landing when passengers need to adopt the brace position but cannot due to cramped space. Bracing during an emergency landing is extremely vital in reducing impact forces on passengers as many studies showed that the brace position is necessary to increase the chances of surviving a plane crash. The purpose of this research is to use anthropometric measurements to provide airplane designers with different body dimensions needed to design for appropriate and safe seating that accommodates the majority of passengers. The findings of this research provides the body dimensions at different bracing postures to ensure that the largest percentage of adults are able to perform a safe bracing position. The data was collected for a hundred male and a hundred female Saudis subjects resides in Riyadh. The output is listed in a standard anthropometric table that can be utilized from different prospective. It is believed that this research is the first to address the problem from anthropometric point of view and it can be used as a base to regulate the distance between rows of seats by government agencies.

Session W2.1 Engineering (Large Auditorium)

Boeing_Solar_Dr. ne: Wireless Power Transfer, Control and Communication

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Abstract:

This project's aim is to wirelessly power, communicate with, and control a solar-power driven drone. In this day and age, small-scale drones are mainly used for enjoyment purposes, such as to cinematically capture and record flight and aerial landscapes. Through this capstone, we will be offering an innovative control system (Stewart-platform based joystick controller), wireless communication module (the new and efficient Bluetooth Low Energy BLE technology), and a research-centric wireless charging module made especially to service this drone. To accomplish these feats, collaboration will be formed between electrical, mechanical, and industrial engineering students. The main objective of the electrical team is to build a complete and working wireless power charging station (WPCS). The WPCS system will be broken down into several blocks, which include a DC-to-AC converter, 2 coils with a reasonable separation to serve as transmitter and receiver, and an AC-to-DC converter connected to the battery load. The full design is currently drafted and in the prototyping phase and will be scaled and implemented in stages until the desired output is achieved. For the drone control system, a 6DOF joystick is likely to be an intuitive controller for flying vehicles. In order to use this in real-time, the computational burden of calculating the inverse kinematics (finding position of end effector using leg lengths) must be reduced. This is to be done by the use of a machine-learning algorithm based on artificial neural networks, which has been implemented successfully in a simulated quadcopter. The mechanical team will be responsible for designing and fabricating an appropriate frame to suit all the different aspects of the project. They will also be designing, manufacturing and programing the 6DOF joystick to solve the inverse kinematic matrix using a Neural Network machine-learning algorithm. The expected outcome of this project is having a drone that is able to power itself by solar panels, wirelessly recharge itself to reduce fuel consumption, use sophisticated techniques for flight and power control, and finally feature the use of the BLE technology for communication. Together this, according to our research, would be the first-ever implementation of its kind.

Session W2.2 English Language Studies (Small Auditorium)

Editing News Headlines: The Case of Arabic into English Translation

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Abstract:

When reading newspapers, magazines, or news posts, the news headlines are the first to be caught by the readers' eyes. Headlines would play a crucial role in the reader's decision whether or whether not to read the full article. They can, as a result, positively serve in increasing the reads of the article, and may also decrease them notably. Therefore, as much as editing the content is important, editing the headline is even of greater importance. News headlines shall be structured very carefully to be as informative as possible, and at the same time, as concise as possible. English news headlines have a set of rules and linguistic features that publishers shall abide by. However, when news headlines are translated from Arabic into English, translators usually feel chained by the source text structure and style, so this leads to a tendency to follow the Arabic style rather than the English one. This usually results in oddly-read headlines. The present paper aims to address this issue in the form of a problem\solution project, adopting a qualitative approach with descriptive analysis. Looking at Arabic to English translations done by a group of translation students, the main problems faced by translators working in the domain of journalism can be investigated. The results show that the translation problems were mainly in regard to lexical choices, tense rendering, and word order. Using these examples, the problems were highlighted along with suggested solutions and recommendations in light of the general rules and characteristics of news headlines.

Session W2.2 English Language Studies (Small Auditorium)

Women in the Eye of Western Thoughts & Literature: Their Rights for Education & Publishing

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Abstract:

Women in all their different roles whether a mother, a sister, a wife or a daughter, are the builders of the society. Women are, indeed, a major contributor to the society's development and flourishment if and only if they were well-educated and enlightened. For centuries, women were denied the right for education let alone the right to express their thoughts through publishing. However, now in the 21st century, education has finally become a necessity for women, and their right for publishing is also guaranteed. The question is, how did women reach to this end? To answer this question, this paper investigates the development of women's access to these two intellectual rights namely education and publishing throughout the ages. This longitudinal study starts from the 13th century until the 21st century mainly tackling on the Medieval ages, the Renaissance, Age of Reason, Age of Enlightenment, Victorian Age, the 20th Century, and finally the 21st century. Western history and literature are the main sources for collecting data. Each age is viewed from both a historical and a literary point of view. After displaying a historical background of women's situation, a representative literary work is analysed as an evidence and reflection of reality. The study eventually reveals that the struggles of all women throughout the ages and their strife to seek further rights are what have paved the way for the today's women to enjoy the right of equal education as men as well as expressing thoughts freely through publishing. Till the moment, women of the 21st century are pushing even harder and stronger to devote their power to establish the hopes and dreams of every woman through every century.

Session W2.2 English Language Studies (Small Auditorium)

Pragmatics in Humor Translation of Female Saudi Translators at PSU in Saudi Arabia

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Abstract:

Abstract Translation is a very tricky business, and errors may occur. Therefore, a professional translator should be well familiar with cultural, religious, social and political differences around the world when it is needed. However, humor translation is considered the most challenging type of translation, because it requires familiarity with pragmatics and previous knowledge of both cultures. In addition, the translation of humor can be affected by the translator's ideology or the audience's. Therefore, this study is conducted on female Saudi translators at Prince Sultan University to measure to how extent they do consider pragmatics in their translation of humor. This study is using both qualitative and quantitative data collection methods. The research question is investigated from both students and teachers perspectives, using surveys and interviews as data collection tools. The study was conducted at Prince Sultan University, where the survey participants included twenty-seven Translation students and instructors, and two translation PhD instructors were interviewed. After analyzing the data collected, the findings showed that the majority of female translation students at Prince Sultan University in Saudi Arabia consider the pragmatic aspect in humor translation, with a slight consideration of the ethnic background of the SL and TL. Humor translation requires more than mere translation. A translator's job is to be able to transfer the message accurately from the source language to the target, without missing the main idea of it. Therefore, it takes a smart and skilled translator to reproduce the humor to the target text while preserving its sense and emotions. Keywords: humor translation/ pragmatic sense/ ethnic/ culture/ religion/ free translation/ creativity/ implicitness/ explicitness

Session W2.2 English Language Studies (Small Auditorium)

Discourse Analysis of King Salman Bin Abdulaziz Speech in the Arab Islamic American Summit

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Abstract:

This study presents a critical discourse analysis of King Salman Bin AbdulAziz AlSaud's speech at The Arab Islamic American summit in Riyadh, Saudi Arabia on May 20-21, 2017. The study gains its significance from the fact that it is the first to examine a speech by King Salman from a Critical Discourse Analysis (CDA) perspective. In addition, the speech was delivered at a difficult time for the Arab World due to the spread of extremism and terrorism. The aim of this study is doublefold; (1) to identify King Salman's intended ideologies and (2) to analyze the linguistic strategies he employs to convince the audience of his ideas and beliefs. The study relies on a two-level analysis that makes use of Fairclough's (1992) CDA model with respect to the social context of the speech and the specific characteristics of its production, and van Dijk's (1997) model that focuses on language use and the linguistic aspects of the speech. The study findings identified the key ideologies of the King in the speech as the adoption of a strong stance against terrorism and extremism and playing an active role to combat terrorism on the international arena. The King also placed great emphasis on clearing the name of Islam from the acts of terrorism and extremism and limiting this horrendous image to specific "so-called Muslims", such as Iran and its allies. It is also important to note that King Salman emphasized the unity of the Arab and Muslim World throughout the speech. In addition, the study findings highlight King Salman's use of specific lexical features to convey his ideologies, including religious expressions, synonymy and collocation, the rhetorical features of repetition and figures of speech. The study supports its findings with illustrative examples from the speech and puts forward recommendations for future research.

Poster Session (W)

Opportunities and Challenges of Augmented Reality in Education

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Abstract:

The world is rapidly being transformed right before our eyes with the help of technology. Many applications considered impossible, only a few decades ago have been brought to life through Augmented Reality (AR). This research paper provides general information on the definition of AR and its importance and relevance to the modern age. It also covers the role AR plays in educational fields. The uses of AR are uncountable, but our primary focus centers on AR in contemporary education. AR is known to have offered many opportunities to students of the modern age as well as the inevitable challenges. This paper covers the opportunities provided in many educational aspects in depth. The most promising opportunities we have found AR to offer are: 1) audience participation. AR has allowed for a more interactive teaching method to prevail in modern teaching systems. This interactive learning has proven to be way more beneficial for all students alike. 2) Higher retention. Various studies have shown that active learning offered by AR contributes to a higher information retention rate by students. Education nowadays has transformed immensely concerning technology. Gone are the days of traditional whiteboard teaching methods. AR and VR have now made learning much more active and interactive for students all over the world. The results of our research are that AR has undeniably offered many opportunities to modern day students. These opportunities have allowed for the success and prosperity of these students. This paper also touches on the challenges students face with AR. The primary challenge found in this study is digital fatigue. Various experiments have shown that digital fatigue is a rising issue among many of today's youth. It is almost inevitable that while AR may be one of the greatest things to touch the educational field, it comes with many challenges. Our results show that these challenges can sometimes be the reason schools and universities have decided against implementing this specific type of method in their teaching systems. Therefore, the purpose of this paper is to tackle the impact AR has had on education.

Poster Session (W)

Hasalti: An Educational Application that Teaches Children Financial Responsibilities

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Abstract:

As a child grows they need to learn about the importance of money; where it comes from, what's its purpose and how it works, in doing so they'll strive to gain independence by taking on small tasks in return for a sum or a reward. Also understand what others in need feel and why they're in that position, which will encourage them to give back to the community later on in their future. This Arabic Android application will target two users who are children from the ages 7 to 12 and their parents, and will expectantly teach the following ideas: • It would encourage a child to save part of their allowance to keep for a "rainy day" or just to buy something special. • By assigning the children tasks by their parents to complete and later be evaluated on their work, this help children comprehend that for every service a payment is made and teaches them the responsibility towards their work. • The App will also suggest to donate some of the money that they made to charity, discouraging materialism. • Encourages children later on to take part time jobs to save for a higher level of education and improving their knowledge in general. • For fun, the app provides a guessing game, for the child to guess the value of items. This project started as the final step to graduate from King Abdulaziz University, Faculty of Computing & Information Technology. By following the Rational Unified Process methodology; this ensures user feedback when needed to adjust important requirements and to verify what they expect. To conclude; so far very few and slightly similar applications exist, but unfortunately haven't been on anyone's popular list. Launching this application and "shedding the light" will first of all spread an awareness to all parents, which will affect society positively in the years to come, hopefully by teaching financial responsibility, independence and charity to children; parents will take the initiative to teach them about other important aspects in life as well.

Poster Session (W)

Bus Tracker: A Mobile Application for Bus Tracking and Rerouting Pilgrimage Traffic Control

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Abstract:

1.1 Context and motivation Pilgrimage to Mecca (Hajj) is composed of several activities that each pilgrim must do in a timely manner. These activities being in different places, pilgrims often need to ride buses within organized campaigns (Hamla). Given the large number of busses, which often causes traffic congestion, traffic police (al-Muroor) often must change buss itineraries in a timely manner. To do so, a large number of traffic police agents must be promptly dispatched to the appropriate places in order to resolve or avoid traffic congestion as fast as possible. Furthermore, because several bus drivers do not know well the areas, itinerary changes may lead to some buses getting lost and missing an appointment set by their campaign leaders. This jeopardizes the pilgrimage, and it may induce penalties on the campaign leaders. 1.2 Problem Statement Given the aforementioned problems, we identify two main questions: First, how to improve the communication between the traffic police control unit and bus drivers during the Hajj in order to reduce traffic congestion while minimizing the required human resources? Second, how to ensure that campaign leaders have precise and timely information about their buses? 1.3 Project Scope and Target Users Bus Tracker is a native Android mobile application. It provides services for tracking buses and redirecting them for a better management of roads in the Holy sites. It can be used by the General Traffic Department to communicate with bus drivers to provide them with rerouting information. On the one hand, this would keep bus drivers informed about their itineraries, and it would facilitate traffic management for the General Traffic Department, on the other hand. In addition, Campaign Leaders can track their buses in a timely manner. To facilitate communication, Bus Tracker is targeting the following end-users: 1. the General Traffic Department (al-Muroor) in the Hajj sites 2. Pilgrim bus drivers 3. Pilgrimage Campaign Leader 1.4 conclusion The aim of bus tracker is to help traffic management to control the routes of the buses by directing them to the best roads. Campaign leaders can also follow the bus traffic to see their arrival at the destination ,Bus Tracker application can help pilgrims to save time.

Poster Session (W)

Image Assistant

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Abstract:

Nowadays, people are using smart phones for capturing every single important moment. In addition, smart phones are used extensively for screen capturing which is also called screen shotting. Screenshot is a static image that is captured from any digital screen. These static images varies in their contents such objects, faces, diagrams, and text. However, with that a large amount of images, it is hard to search for ones that contain specific text and object. Image assistant is our proposed mobile application for image processing. It will improve how users deal with stored images in their smart phones. Image assistant main function allows user to search and find a saved screen shot image that includes a photograph and text by typing a key word present in the text of the target image(s), the user is looking for. Thus, it can help the users in the process of searching for an image. In the first step, the Arabic text written is extracted from images, so it supports Arabic language. The next step is searching for images. For example, if the user wants to find a specific image, for example a screenshot for food recipe, s/he can type a key word text written in the required image. Also, the user can find images which contain faces, by inserting an image which has a face s/he is looking for. Moreover, this mobile application will be able to read the required text from image or document. The image assistant seeks a specific technology for applying each of its functions. For extracting Arabic text from image, it will use the OCR (Optical Character Recognition) technology. Also, it will utilize the image recognition process for finding similar images. TTS (text to speech) technology will be used for reading text from image or document.

Poster Session (W)

Interactive Home-Based Therapy Product for Stroke Rehabilitation Using Brain Computer Interface (BCI) & Leap Motion Sensors

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Abstract:

Weakness of one entire side of the body resulting in functional limitation of an upper extremity is common among stroke survivors. However, researchers have proven that the continuity of stroke rehabilitation therapy results in better motor recovery. The neuroplasticity of the brain after acute stroke highlights the efficacy and importance of the rehabilitation process following strokes for patients to regain control, strength and recovery. This opens up prospects in the search for innovative ways for rehabilitation. The rapid advances in technology have an effective impact on healthcare fields. In addition, there seem to be a trend toward making treatment processes more enjoyable to motivate patients to participate on it, as well as decrease attrition rates. Gaming technologies has proven that they are a safe, feasible, and potentially effective alternative to facilitate rehabilitation therapy and promote motor recovery after stroke. In this project, we propose the creation of a game-based system for motor function rehabilitation, particularly upper-limb physical rehabilitation. It is an interactive home-based therapy product for stroke rehabilitation, which combines the Leap Motion gesture movement sensors with the Brain Computer Interface (BCI) system Emotiv for emotion recognition. The Leap Motion recognizes the hand gesture immediately while the BCI receives inputs from brain waves. The combination of these technologies is used for interaction in a rehabilitation game for patients with motor and/or cognitive impairments due to stroke. The interaction with the BCI system occurs by changing the interface of the game based on the patient's emotions using an adaptive interface concept. This solution can provide specialists the ability to perform objective assessments of patients, as well as motivate patients to keep going rehabilitation exercises, and thus decrease attrition rates and increase adoption rates. It is designed as an easily transportable, wearable device that could improve rehabilitation after discharge, in an outpatient or home-based setting. Please watch the video embedded below, which explains basic concepts of the project in an infographic video. https://www.youtube.com/watch?v=EGeGOUJ8iww

Poster Session (W)

Mathematics Game-Based Learning Application

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Abstract:

The traditional learning process used in schools is outdated. Students nowadays spend most of their time using technologies for entertainment and to communicate with their friends. Technology can also be used to present opportunities to teaching difficult subjects, such as mathematics, in a better environment. This project aims to improve the mathematical skills of addition and subtraction in young children aged 6 to 8 by combining education and entertainment in a simple math learning game. Using ideas from Jerome Bruner's theory, and Bloom's Taxonomy of cognitive goals, this application will help children learn and interact effectively with the world around them. Our project presents the design and development of a game-based learning application that improves the mathematical skills of young children. Specifically, our target users for this application are primary school students who are learning addition and subtraction. The game has three levels so if the child chooses one of these levels then will start the game is a maze of the child moving the ball by finger or there is another property that the child can move the ball by mobile without having to touch the ball that is inside the maze to answer questions at the top of the screen. Level 1 (Easy): if the user chooses the level 1 (Order numbers) section, the application will display another screen contain the maze and questions for order number, level 2 (Medium): if the user chooses the level 2 (Addition and subtract numbers) section, the application will display another screen contain the maze and questions for Addition and subtract numbers and level 3 (Hard): if the user chooses the level 3 (Addition and subtract with shapes), the application will display another screen contain the maze and questions for Addition and subtract with shapes.

Poster Session (W)

Arabic Alphabetic Puzzle Game Using Eye Tracking and Chatbot for Learning Disability (Dyslexia)

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Abstract:

Dyslexia, a lifelong language processing disorder that leads to poor reading, writing and spelling, is not the result of impaired vision or limited intelligence. It is rather a neurological disorder that negatively influences information processing and interpretation. The current project aims to develop a puzzle game application using eye tracking and Chatbot to help dyslexic children between the ages of 4 and 7 who are unable to read properly, and thus support the efforts of their parents and caregivers (e.g., teachers, reading specialists, etc.). More specifically, the project aims to help dyslexic children to read letters and simple words and attach the latter with relevant images. To this end, a survey of a number of relevant applications to dyslexics is conducted, which further highlights the scarcity of much-needed applications in this domain. Additionally, the proposed Arabic alphabetic puzzle game is described. In the game, eye-tracking is used to help attract attention while Chatbot motivates dyslexics with the conversation it generates through auditory and/or textual methods.

Poster Session (W)

تصور البيانات المفتوحة في المملكة العربية السعودية

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جامعة الملك عبدالعزيز

الملخص:

البيانات المفتوحة هي البيانات التي يمكن لأي شخص استخدامها بحرية والوصول إليها وإعادة توزيعها دون قيود مالية أو قانونية.وفقا لذلك، يجوز لجميع المنظمات الحكومية وغير الحكومية نشر البيانات التي تملكها مفتوحة لأغراض مختلفة على شبكة الإنترنت دون أي قيود مثل (الإحصاءات المناخية، وإحصاءات التعليم، والنقل، واستخراج المياه، وما إلى ذلك). كما هو الموقع السعودي(http://www.data.gov.sa/en). في هذا المشروع، نركز اهتمامنا على البيانات الحكومية المفتوحة . إن العالم اليوم يشهد تطورا هائلا. ومن أجل تحقيق مفهوم الحكومة الرقمية. يجب أن نتبع العالم الرقمي وتطوراته. وتساعد في تحسين الخدمات وتطوير السياسات الحكومية وتمكين المواطنين من المشاركة في صنع القرار. وتعني "البيانات الحكومية المفتوحة" الانفتاح على المجتمع في جميع جوانب الأجهزة الحكومية والسياسات المالية. وهذا الانفتاح له دور كبير يعزز المساءلة والمصداقية ويدعم السياسات الاقتصادية السليمة. لقد رأينا وجود فجوة بين الحكومة في المملكة العربية السعودية والمواطنين. رأينا أنه من واجبنا أن يكون مشروع تخرجنا يخدم المواطن والدولة. لخلق علاقة شفافة تتميز بالسرعة والدقة التي تهدف إلى تحسين نوعية الأداء. قمنا بتسمية مشروعنا باسم«JeddahDashboard». وهو موقع يهدف إلى تصور البيانات الحكومية المنشورة في جدة. لقد ألهمنا فكرتنا من الموقع الأيرلندي «DublinDashboard». حيث يتم توفير البيانات والمعلومات في الوقت الحالي، وبيانات مؤشر سلسلة الوقت. والخرائط التفاعلية في جميع جوانب المدينة. البيانات المفتوحة ليست فكرة جديدة في المملكة العربية السعودية. وهناك بالفعل موقع على شبكة الإنترنت كما ذكر سابقا يسمى www.data.gov.sa. الذي يوفر البيانات الحكومية المفتوحة لخدمة المواطنين. ولكن طريقة تقديم البيانات قد لا تكون جذابة للمستخدمين ويصعب فهمها ولحل هذه المشاكل نأتي بفكرة تصور البيانات المتاحة وهو تمثيل البيانات بطريقة جذابة للمستخدمين يمكن الاستفادة منها

Poster Session (W)

Smart Tutoring System for Arabic Sign Language Using Leap Motion

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Abstract:

Sign language is a main way of communication for many people around the world. According to the most recent statistics of World Health Organization, there are 360 million people around the world are suffering from hearing loss i.e. (5.3% of the world's population), around 13 million in the Middle East. Many people are willing to learn sign language and support this segment of the society; however, learning this language requires some effort and assistive tools. Tools that are used to support sign language learners and specifically Arabic Sign Language (ArSL) are limited and insufficient. Hence, the development of a tool that is capable of training and assessing ArSL becomes a necessity. We proposed to develop a smart tutoring system that supports learners of ArSL using the leap motion's hand tracking technology. The aim of this system is to supports non-disabled learners who want to learn the sign language, such as undergraduates specializing in hearing disabilities, parents of disabled kids or any interested subject. The system allows learners to practice ArSL in different levels and self-assessing themselves. It utilizes the recent technology of leap motion controller, so it can detect and track hand and fingers movements and consequently assess the position and movement accuracy. Such systems have been found to be an effective way of memory reinforcement and provide better understanding to sign language learners. It is expected that the proposed system will contribute in enriching the learning process of ArSL and consequently supports an important segment of our community.

Women's Campus Day 1

Poster Session (W)

Detecting Abnormal Dense Crowd Behavior

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Abstract:

Religious and social dense human gatherings necessitates crowd control and management in order to ensure safety of crowds. Hajj is a religious gathering where millions of Muslims gather to perform the pilgrimage duty. Muslims gather in mass crowds at certain places and times during Hajj. This may raise hazardous situations resulting from abnormal crowd behaviors such as crushing, stampedes, or suffocation and which can eventually cause many hundreds of fatalities. In order to prevent human instigated disasters in dense crowds, surveillance systems must be supported by intelligent detection systems. These systems must alert crowd management personnel once an abnormal crowd behavior has been detected. We propose a computer vision and machine learning approach which detects abnormal crowd behavior from online Hajj footage. The proposed approach applies a semi-supervised learning by co-training technique. First, a learning set (L) is produced by extracting global features of the labeled abnormal/normal crowd behavior datasets. Second, a supervised learning classifier (decision tree) is trained to create an offline prediction model. Third, an online temporal framework is proposed to learn two SVM classifiers (SVM1 and SVM2) and use the produced prediction model. The iterative algorithm starts with a small random subset of L (L') and two sub-global features: F1 and F2 used respectively by SVM 1 and SVM2. Set L' is amended with high confidence classified data produced by merging decisions of the two SVMs and the prediction model. Hence, the proposed method is adaptive to change in the Hajj scenes. The performance and efficiency of the proposed method is evaluated on publicly available Hajj/other abnormal crowd behavior datasets. In this project, we will propose a new set of indicators for abnormal crowd behavior. The results and outcomes of this research is to be exploited by further research in the field.

Abstracts
Women's Campus
Day 2

Session W3.1 Law MCL (Large Auditorium)

Bitcoin's: Legal Issues, Challenges and Regulations

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Abstract:

Bitcoin has been the focus of the media's spotlight for the past few years by causing a whirlwind of arguments in a various number of fields all over the globe, such as finance, technology and most importantly the legal field. currency's evolution through time has been steady and sturdy, but after the creation of crypto currencies the whole ground structure of a traditional Currency has been shattered and transformed dramatically thus changing the core qualities of currencies with its intangibility, anonymity and decentralized nature which are considered as the main merits of Bitcoin as a cryptocurrency but on second thought, these benefits arose huge complications on both the legal and financial surface where illegal activities - from criminals and drug addicts - take place by using Bitcoin's as a currency , such as Fraud , Money Laundering and Terror Finance. On the other hand, Lack of Trust among individuals and merchants in Bitcoin users is the prime factor leading to Theft. Nations around the world started to work on defining the nature of Bitcoin in order to regulate crypto currencies in general with a sound legal framework because with great power comes great responsibility to protect citizens from the risks accompanying Bitcoin .The main focus of the paper is to cover origin and definition of Bitcoin, variety of methods to obtain Bitcoin, positive aspects of Bitcoin as a currency and mainly the controversy circling around Bitcoin's regulations. The main focus of the research paper is to examine legal aspects and current international framework regarding Bitcoin as a crypto currency and recent legal developments affecting Bitcoin, based upon their actual use.

Session W3.1 Law MCL (Large Auditorium)

Corporate Governance in Saudi Arabia

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Abstract:

These days, Corporate governance is a very hot, widely discussed and debated topic in all the boards meetings of the corporate sector across the globe. Corporate governance not only assists the top management in carrying out their managerial activities efficiently and enables them to implement their plans and policies effectively but also ensure to protect the companies from various scandals, frauds and other probable civil and criminal law suits responsibilities in the organization; it also greatly increases the smooth and effective monitoring of the organization in a professional manner. The corporate governance system provides excellent customer care and facilitate the suppliers and other stakeholders in conducting official business thus enhancing the company's credibility and reputation in the market. The corporate governance has a great importance since the financial and economic crises occurred in the international money market in various countries around the world such as the US, UK, East Asia and Latin America. The aim of this paper is to identify the history of corporate governance, summary of key corporate governance principles & objectives and the status of corporate governance in Saudi Arabia as well as its significant role in achieving the vision 2030.

Session W3.1 Law MCL (Large Auditorium)

Moral Luck and Moral Responsibility

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Abstract:

The present research paper highlight an issue of moral luck and aim to discover whether luck can make a moral difference or not by defining the difference between moral and casual responsibilities, and the basis we assign praise and blame. The issue of moral luck consists in the impression that luck sometimes makes a moral difference, but there is more than one way in which luck might make a moral difference. The issue of moral luck best perceived as a conflict of different opinions about moral responsibility and moral judgment. On the one hand, men generally think that a person cannot be simply praise or blame for his actions unless he tried to control them. On the other hand, usually moral perceptions of persons continuously change based on the good or evils actions create or done by the person, even when partly or wholly out of his control. For example, in an accident drunk driver kills two pedestrians is to be blame more than the other driver who merely collides with a lamppost, even if their driving was similarly rash. Advocates of moral luck without any criticism consider on a wider theory of luck known as the control theory. The aim of the researcher in the paper is to highlight various types of moral luck as explained by Thomas Nagel and analyze the various week situations in the various cases of moral luck can be resolved by a proper application of the theory of moral luck and responsibility.

Session W3.1 Law MCL (Large Auditorium)

Relevance of Plato's Teachings: A Dialogue between a Philosopher and a Student of Law

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Abstract:

One of the most important figure of the Ancient Greek world and the entire history of Western thought was Athenian philosopher Plato. He was a great intellectual philosopher who set the early foundations of Western Philosophy and the scientific school of thought. His works mainly emphasized the importance of rationality and abstract thought in understanding the universe and man's place in it. Plato made most of his teachings through dialogues that exemplified didactic reasoning. In his written dialogues he conveyed and expanded on the ideas and techniques of his teacher Socrates. The purpose of this research is to explore some of the teachings from the dialogues with the goal of establishing their relevance. The exploration will take the form of a letter to the philosopher as if he was alive today. It will conclude with a comment on the advantages and disadvantages of his teachings together with the school of thought he championed. The teachings that will be explored are justice, the allegory of the cave, the theory of forms, the nature of the soul, and the ideal state. The significance of the research is to show how ideas put forth by the philosopher are still relevant to the current civilization.

Session W3.1 Law MCL (Large Auditorium)

The Application of Artificial Intelligence in Legal Industries

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Abstract:

Technology has made a significant impact on the legal profession. There are various Prospective applications for the operation of Artificial Intelligence systems in the legal sectors. The real fact is that this Artificial Intelligence technology is still in its early stage but in future legal industries will also be shape by the technology of Artificial Intelligence like other industries. Artificial Intelligence (AI) refers to machine learning technology where computer programs have developed to identify patterns in data for selective evaluation. Since specially designed computer programmes used to understand and reproduce human intelligence, Artificial Intelligence is a crucial innovation in the fast emerging Fifth Industrial Revolution. Artificial Intelligence devices can be 'soft or 'hard''. In 'soft', the machines should be able to do the works that is usually done by human beings, and in 'hard Artificial Intelligence, the machines can theoretically think like humans. Due to the lots of important prospects, advanced technology expert around the world have been working and experimenting the applications of Artificial Intelligence in different areas including legal one. Artificial Intelligence systems will be able to aid attorney's lawyers by doing legal research on relevant case law, statutes, and policies in a smooth, faster, easier and in depth manner than what lawyers will be able to do. Such Artificial intelligence systems will also be powerful enough to use data to predict the outcome of litigation and enable lawyers to provide better advice that will be meaningful to their clients in connection with different legal aspects and issues. Nowadays artificial intelligence and its impact of legal profession has been one of the very hot debated topics in the entire legal community. There are only few researches and information available in this area. The aim of the research is to analyze the applications of artificial intelligence in the legal sectors, specifically in the fields of legal data collection and legal research. Another aspect of the research paper is to cover the impact of artificial intelligence (A.I.) on the practice of law, law firms, hearing of cases and to see the future implications and possible regulatory challenges that come with Artificial intelligence.

Session W3.2 Computer & Information Sciences and General Sciences (Small Auditorium)

Benefits of Artificial Intelligence in Medicine

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Abstract:

Artificial intelligence is one of the most discussed topics of the present time. The burning question of today about artificial intelligence is "will it be beneficial or dangerous for human being". This research paper analyzes the benefits of artificial intelligence in medicine. It examines how artificial intelligence assists the medical field as well as how patient's health is affected using this popular phenomenon in diagnosing diseases, patient's treatment, reducing errors, and virtually being present with the patients. Finally, the paper reveals how artificial intelligence may have an impact on medical science. A study was conducted with 68 participants who were doctors, medical and dental students, dentists and students through an online closed-ended questionnaire. The aim of the survey was to learn about people's perspective towards artificial intelligence in medicine. Data were analyzed and reviewed through survey monkey. This research found out the relationship between medicine and artificial intelligence. It is notable that most of the participants believe that artificial intelligence will assist medicine. Therefore, it discovered that there is a bright future for artificial intelligence. There were also some limitations to the survey which are only 68 participants and difficulty in data collection. This became an obstacle for the survey to be more accurate. However important decisions and appropriate measures were taken to make sure the limitations did not affect the data collection. This paper describes the usage of artificial intelligence in medicine at present and how it will contribute to the future of medical science. It focuses on how artificial intelligence has the potential to be applied almost every field of medical science by assisting doctors in complex medical procedures and by providing aid to the patients who has difficulty in taking care of themselves. It adds value to existing body of artificial intelligence by provoking the need of understanding the relationship between artificial intelligence and medicine. Keywords: artificial intelligence, medicine, clinical diagnosis, treatment, human errors, health.

Session W3.2 Computer & Information Sciences and General Sciences (Small Auditorium)

Advancements in Augmented Reality

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Abstract:

Technology has become the most essential part of our lives. It has made our lives easier in several aspects such as enabling people to connect regardless of the distance. There are a countless number of technology benefits and nobody can deny its great impact. One of the technologies that existed a long time ago, however, that nobody has shed the light on Augmented Reality (AR) until recently after its growth and progress. This research discusses how Augmented Reality started and how it engaged our everyday lives. Consequently, most of people may be surprised by how many fields include Augmented Reality function successfully such as using ultra sounds in hospitals which is used to see internal body structures such as tendons, muscles, joints, blood vessels and internal organs. The field of Augmented Reality has existed for just over one decade, but the growth and progress in the past few years has been remarkable. Nowadays, the AR is more popular than ever with enhancements and improvements that aided in creating universally popular applications such as SnapChat. This study also discusses the development of SnapChat application and some visualization problems that developers were challenged with. Moreover, it highlights the differences between AR and the very similar concepts that is Virtual Reality , where Virtual Reality mainly used for entertainment, and AR used in medical field and aircraft. Lastly, this investigation ends with suggestions how technology developers would like to pave the way for this amazing technology area of Augmented Reality making it a growth in the success of many more applications to be developed.

Session W3.2 Computer & Information Sciences and General Sciences (Small Auditorium)

Opportunities and Challenges of Augmented Reality in Education

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Abstract:

As technology is transforming each aspect of our lives, hence education is one of the major aspects that was transformed and restructured by technology. Since, technology was started with PC and the emerging of the internet, it played a very big role in education. The existence of online courses, interactive whiteboard affected the delivery of learning. However, the emergence of augmented reality (AR) [JZ1] surpassed all what was before in technology. AR became part of every aspect in our life. In military, tourism, gaming, medicine and navigation, AR plays a major role in simulation. Nowadays, AR is emerging to be a part of the education cycle. This research focuses on the role of augmented reality in education, from main three aspects; applications, challenges and opportunities. AR applications present education [JZ2] content to be more understandable and appealing to learners. Applications vary from being for Medical students and engineering disciplines to dealing with ADHD children and primary schools. The main challenges that face augmented reality in education, found to be; input privacy, output management, digital fatigue and legal concerns. As AR technology requires massive number of inputs, such as images, audios, and videos, this might invade users' privacy and protection. Also, the overloaded output needs to managed, since the output is an integration of different forms of data. Regardless of the challenges, this paper discusses many promising potentials and opportunities guaranteed by this technology. By using the AR different approaches and methods AR, such as design-based systems and 2D to 3D conversions and graphics. AR is able to bring up new learning outcomes for students and teachers. The AR maker-based and marker supports education and allows for more students' integration and interaction with the content. Eventually, the question keeps arising; will augmented reality replace our traditional classrooms?

Session W3.2 Computer & Information Sciences and General Sciences (Small Auditorium)

الهندسة الوراثية في الأجنة

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جامعة الملك فيصل

الملخص:

إن استطعت أن تكون عالماً. فكن عالماً. فأن لم تستطع فكن متعلماً. فأن لم تكن متعلماً فأحبهم .فأن لم تحبهم فلا تبغضهم يقدم هذا البحث دراسة عن إمكانية علاج النقص في الأجنة فقد يكون موضوع بحثي غريباً وعجيباً. وأدهَشك وتساءلت ما هذا؟ ولماذا هذا؟ وكيف؟ سأجيب عن جميع أسئلتك فقد صادفت من خلال دراستي الجامعية أشخاص يعانون من حالة نفسية وصحية واجتماعية بسبب الأمراض الوراثية التي توارثت من عائلة الأم أو الأب. فكان لدي من تلك اللحظة طموحاً أن أناقش هذه القضية الصحية معكم. فقد تطرقت في هذا البحث عن كيفية علاج الأجنة وهم في أحشاء أمهاتهم. وهذا يكون عن طريق الهندسة الوراثية التي تربط بين الأنسان ومحيط عمله. ويمثل هذا المحيط الظروف التي يعيشها هذا الفرد فما ذنبه أن يعيش في هذه الحياة ناقصاً .وينظر له المجتمع بنظرة شفقة لدرجة أنهم أطلقوا عليهم ذوي الاحتياجات الخاصة فكان هذا هو هدف الدراسة . فنحن من خلال هذا البحث سنتطرق إلى بعض من الأمراض الوراثية و إمكانية علاجها في الأجنة. وستوقفني سؤالاً محيراً هل الغباء مرض وراثي؟ و تعمقت في الدراسات حتى أجد جواب لهذا السؤال و سأجيب عنه عندما ألتقيكم أن شاء الله. والبعض يسألون الباحث ما الفائدة من ذلك؟ الفائدة: هي أن تعرف ما هو الخير. وما هو العدل وهذا هو واجب الباحث أن يفتح عين القارئ ويجيب على السامع ويضيء لهم الطريق صادقاً ومخلصاً بما يقوله . ومن الضوء والأنارة تكون الاستنارة أوضح. ونحن جميعاً نتعاون على نشر الوعي و الأمانة من أجل مستقبل الأجيال القادمة .وبهذا نتمنى أن نكون قد وفقنا الله في تقديم مادة علمية مفيدة إلى كل قارئ و طالب علم.وأن يمكننا من خدمة المسيرة العلمية ولو بجهد يسير.

Session W3.2 Computer & Information Sciences and General Sciences (Small Auditorium)

Emotional Intelligence (EI) On the Relationship between Protean Career Attitudes (PCA) and Its Individual Career Outcomes of Objective Career Success and Subjective Career Success

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Abstract:

Purpose: This research aims to find out the moderation of emotional intelligence (EI) on the relationship between protean career attitudes (PCA) and its individual career outcomes of objective career success and subjective career success. Design/Methodology/Approach: 200 faculty members from 4 Saudi universities were surveyed by the means of closed ended questionnaire. Data were analyzed by running moderated multiple regression through SPSS. Findings: Findings will determine the moderation of emotional intelligence (EI) on the relationship between protean career attitudes (PCA) and its individual career outcomes of objective career success and subjective career success. Theoretical Implications: This research extends PCA literature by testing EI as PCA's moderator. Empirical evidence regarding moderating effect of EI on PCA outcomes is scarce and hence undertaken in this study. Practical Implication: This research provides a useful insight to HR practioners regarding importance of PCA and EI in shaping one's career outcomes (i.e objective career success, subjective career success). Research findings can assist HR managers to devise training programs and career development activities which encourage and augment employees' PCA and EI. Originality/ Value: This research adds value to existing body of knowledge as EI, as a moderator of PCA is understudied. Second distinctive aspect of this inquiry is its Saudi context which is quite ignored in PCA literature. It can provide valuable information to Saudi policy makers to prepare their human resource to meet competitive challenges of Vision 2030.

Session W4.1 Law (Large Auditorium)

Limited Liability Company's (LLC) Incorporation in Saudi Arabia: In-depth Analysis of New Company Law

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Abstract:

Commercial law in Saudi Arabia took a huge step forward with the issuance of the new Companies Regulations issued pursuant to Royal Decree No. M/3 dated 28/1/1437H (corresponding to 9/11/2015G), which came into effect on 2nd May, 2016. New Company Law abolished some corporate forms such as partnership limited by shares, companies with variable capital and amended some others, mainly Limited Liability Company ("LLC") and Joint Stock Company ("JSC"). The New Law recognizes five forms of companies, which are: general partnership; limited partnership; joint venture; limited liability companies; and joint stock companies. The aim of the paper is to discuss these forms and tries to draw a clear image on the process of company's incorporation in the Kingdom with a focus on Limited Liability Companies. The main object of the researcher is to provide a clear steps and direction on the process of incorporation of companies. These steps will start with: (1) preparing the Articles of Association ("AOA"), which will be discussed in details relying on the forms/Performa published by the Ministry of Commerce and Investment ("MOCI"); (2) notarizing the AOA; (3) publishing the AOA; (4) obtaining the Commercial Register Certificate; and (5) registering with the Chamber of Commerce and Industry. After that the researcher will discuss the step that will be taken in case of foreign shareholders, who, is obtaining a foreign investment license form the Saudi Arabian General Investment Authority ("SAGIA"). In order to explain such process, researcher will rely on the New company law; relevant law, rules, regulations and circulars; market practice; and guidelines from, and discussions with MOCI and SAGIA.

Session W4.1 Law (Large Auditorium)

Vision 2030: A New Dawn of Women Empowerment in Saudi Arabia

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Abstract:

The Status of women in Saudi Arabia has changed in recent decades. Previously due to legal and social barriers, the women have denied various intellectual, legal, social, political, and other rights. Many obstacles were there in the way of Saudi women's empowerment e.g. education, political participation, employment, leadership, driving etc. In the last eight years, there are number of areas where women have been empowered in the Kingdom. First time in December 2015, Women have allowed to vote and contest elections as a candidate in municipal council elections. Another example of the empowerment of Saudi women is appointments of women in leadership positions, the participation of women in Shura council, female lawyers in Saudi Courts, reflects the government support for women. Another milestone for women in Saudi Arabia's was to allow women to drive is a golden moment in the kingdom's history as it presses on with its reform agenda. It reflects a clear will and political determination to undertake reforms for women. The liberalization of women is one of the objectives set out in the Saudi Arabia ambitious Vision 2030 and National Transformation Programme 2020, which explicitly intended to "Empower women and materialize their potential". The recent new initiatives taken by the Saudi Government and vision 2030 assures the "dawn of a new era" for women empowerment.

Session W4.1 Law (Large Auditorium)

Role of Higher Education in Achieving Sustainability in the Kingdom of Saudi Arabia

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Abstract:

Universities can play a vital role in establishing ecological sound society, by greening the campus, by green curriculum and by facilitating direct research on the socio-environmental problems. Universities can take initiative to add more in internal policies and mission statement related to environment and involve all stakeholders' into foster sustainable development. Universities can also contribute environmental sustainability by motivating and empowering community to live more sustainable lifestyles. Research in the Kingdom of Saudi Arabia in this field is very limited; moreover, there are no existing methods available to evaluate the university contributions and role to environmental sustainability. Thus, the aim of this study is to evaluate the sustainability opportunities in Saudi universities in the Kingdom of Saudi Arabia. Regarding the university's curriculum and official policies, analysis shows that the universities in Saudi Arabia is still in the beginning phases of constructing policies for sustainability. In 2016 Saudi Government has released vision 2030 for the kingdom and directed to achieve environmental Sustainability by preserving environment and natural resources. The aim of this study is start a green campaign to encourage all universities to have green curriculum and policies promoting environmental sustainability and introduced environmental courses for all students in all disciplines to make them aware related to sustainability.

Session W4.2 Business Administration (Small Auditorium)

Google Keyword Advertising

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Abstract:

This study examined the best way to promote a company using Google Keyword Advertising (Google AdWords). Boon Water company provides natural mineral water that comes straight from the source of the mountains from Turkey. Our group decided to promote Boon Water by creating an online marketing campaign using Google AdWords. This campaign was created through a global competition where, Google sponsored each student team with $250 to run a campaign for a business and not-profit organization for 21 days. In promoting Boon Water, our group studied and identified target customers, used different targeting methods in order to gain more customers, and reached prospects. We targeted and studied customers from specific locations such as, Saudi Arabia, United Arab Emirates, Kuwait, and Egypt because we wanted to reach the right people who will actually be able to buy the products. We found out that some keywords are more popular than others. When people are searching online such as, water, diet, pregnancy, and health. The advertisement that received the most clicks were related to pregnancy and diet. The campaign generated great results, as overall it obtained 439,458 impressions (number of times the advertisement was shown), and 7,205 people actually clicked and visited the website. The AdWords campaign performance exceeded established goals, especially in terms of increasing brand awareness and sales. The Google AdWords campaign that we ran has helped Boon water to generate more awareness, as more people started to notice Boon water's existence, and each day approximately three extra calls were received by the company. The campaign also helped the company to increase its sales since Boon water acknowledged more demand for their products during the campaign duration. Such as, the company had four customers signed up for at least three months water delivery package. This campaign gave us the opportunity to implement what we have learned. Experimenting with the AdWords platform and tools provided us with an opportunity to gain real world experience in skill such as keyword selection, account structure, and ad development.

Session W4.2 Business Administration (Small Auditorium)

Study on the Impact of How Saudi Aramco's Decision to Go Public In 2018 will Affect the Economy of KSA and Vision 2030

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Abstract:

This research paper will explore the question what will happen when Saudi Aramco, the world's largest oil and Gas Company will go public in 2018. The plan to float around 5 percent of Aramco in an initial public offering (IPO) is a centerpiece of Vision 2030, a wide-ranging reform plan to diversify the Saudi economy beyond oil which is being championed by Saudi Crown Prince Mohammad bin Salman. The purpose of this research is to estimate the benefits and risks associated with IPO of Saudi Aramco. Prince Mohammad has said the IPO, which could be the world's biggest, will value Aramco at a minimum of $2 trillion and could raise as much as $100 billion. Money raised from the sale will be used to develop other sectors and industries in the country. Although some analysts express worry that dividends are unstable, and that the kingdom would have to unwind the tax cuts on Aramco if the state needed the money. The introduction of more realistic pricing could also have political and social ramifications. This research carries a lot of significance in itself mainly because of the huge assets of Saudi Aramco and sharing of information with International clients which is now considered confidential to the company. Another reason is that Saudi Aramco's effect cannot be seen apart from the country it operates from and it's wellbeing is crucial to KSA. The information is collected by conducting several interviews and credible secondary sources. The findings may show that Saudi Aramco's decision of going public is beneficial to it's functioning as well as to the economy of KSA and it's effort to reach the objectives of Vision2030. Key Words : Vision 2030, Economy of Saudi Arabia, Saudi Aramco

**Women's Campus
Day 2**

Session W4.2 Business Administration (Small Auditorium)

Future of Foreign Direct Investment (FDI) in Saudi Arabia

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Abstract:

Foreign direct investment (FDI) is an investment made by another foreign individual or corporate in another country either by operating in that host country or acquiring other local business. This research talks about FDIs in Saudi Arabia. It demonstrates some of the successful FDIs histories, current opportunities, and barriers. The purpose of this research is to study the impact of FDIs on the Saudi economy, and on other some specific sectors. It studies the impact on education, healthcare, transport, housing and oil sectors. It also brings attention to how local stakeholders and investors are affected by FDIs. It explores the rationale behind why foreign investors make their decisions to invest in Saudi Arabia using PESTEL analysis tool, that specifies the political, economic, social, technological and legal encouraging factors. The method used in this study is "hard data" collection using the grounded theory. Th grounded theory is used when the data are qualitative and extracted from various references. Then, these data are restructured with other collected data using an online survey. This research proposes that there is a growing positive impact of FDIs on the Saudi economy, especially with the Saudi Vision 2030 that encourages foreign investors by decreasing the barriers and supporting the local businesses at the same time. Keywords : Foreign Direct Investment, PESTEL analysis, Saudi Vision 2030

Poster Session (W)

Broadband Rectenna for Energy Harvesting Application

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Abstract:

Owing to the increase of worldwide energy demands over the last two decades, the deleterious effects of electric power generated by oil and gas have become increasingly apparent. In order to limit these effects, appropriate actions aiming at reducing the dependence on hydrocarbon power should be taken. The most important action is finding clean and renewable energy resources to develop human civilization without harming the global environment. The rectenna is a new technology in harvesting energy that was developed in 2014. Although the lifetime of the rectenna is almost unlimited, it also has a few problems with its efficiency. The objective of this project is to develop a prototype broadband rectenna for energy harvesting with a low cost and high efficiency. The rectenna will be able to convert radio frequency (RF) signals into DC power. Several designs and solutions are proposed in the report. By using several techniques, the optimum solution was chosen. The baseline design of the chosen solution is a rectenna circuit consisting of three parts. The first part is a receiving broadband antenna implemented using the partial ground technique. The second part is a low pass filter using transmission lines. The third part is a RF-DC conversion rectifier. Broad Band rectenna is designed and fabricated by using a lossy dielectric substrate material with $\varepsilon r = 4.5$, so the challenge was to come up with a suitable design that contains a Microstrip patch receiving antenna that receives and collects RF waves and operates at 5.2 GHz by using FR-4 material followed by a low pass filter that minimizes the power transferred to the rectifier that converts the AC power to DC power. The design has been simulated by using CST Suite software package and fabricated by using thin film and the photolithographic technique.

Poster Session (W)

Effect of Nano-Holes Arrays Patterned on a Solar Cell

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Abstract:

The deficiency of fossil fuel resources throughout the world seeks an imperative consideration for substitutional energy sources to meet up nowadays demands. Among all renewable energy choices, solar energy is the best choice as a clean, lasting and environment-friendly potential resource. Solar cell, or photovoltaic cell PV, is an electrical device that converts the energy of light directly into electricity. The only drawback of solar energy is the low absorption rate by the PV panel. Solar cell, or photovoltaic cell PV, is an electrical device that converts the energy of light directly into electricity. The only drawback of solar energy is the low absorption rate by the PV panel. In the present story, only a part of the incident light from the sun is absorbed by the solar cells therefore most solar cells have a 35% absorption rate which means 65% of the sunlight gets misdirected and is not employed. This leads to a high cost photovoltaic modules. Unfortunately, the reported new techniques in the literature partially have boosted the absorption rate of solar cells from 35 to 75%. As a result, we propose to use the finite difference time domain technique by using the OptiFDTD simulation tool from Optiwave Inc. to examine the characteristics of a new solar cell having a gold plasmonic nano-array as a top layer. We plan to monitor the influence of both propagating surface plasmons (PSP) and localized plasmons (LSP) in addition to the coupling in between. Therefore, the average absorption efficiency in the visible regime could be enhanced via tuning of these interactions.

Poster Session (W)

Wireless Power Transmission for Pacemaker Implementation

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Abstract:

Wireless power transmission refers to a transfer of electrical energy from a power source to an electrical load without a physical connection. The importance of wireless power transmission is most evident in cases where interconnected wires are not feasible or are too inconvenient/ hazardous. A case in point is the pacemaker that works in place of a defective heart valve. Implanted under the skin of the chest and attached to the patient's heart, the pacemaker monitors the patient's heartbeat and provides electrical stimulation for too slow and too fast beating. Despite its great benefit, the patient has to undergo an operation every year to replace the pacemaker to charge its battery. The current project aims to put an end to this suffering and similar difficult cases where batteries need to be periodically replaced. The focus of the current project is to propose a device that can recharge batteries wirelessly without their replacement. This project uses an electronic circuit which converts AC 220V 50Hz to AC 12V, high frequency. The output is fed into a tuned coil, forming a primary air core transformer. The secondary transformer develops a voltage of HF 12volt. Thus the power transfer is done by the primary transformer (transmitter) to the secondary transformer (receiver), which is separated with a small distance, to run load. Moreover, this technique can be used in a number of applications, like charging a mobile phone, iPod, or a laptop battery wirelessly.

Women's Campus Day 2

Poster Session (W)

Smart Airport Solution for King Khalid International Airport

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Abstract:

Facing problems in an airport is commonly experienced by most travelers nowadays whether it's arriving late, being stuck in a long line of a crowded boarding, trouble finding a parking space, locating a gate or losing luggage. The purpose of this project is to create a safe, robust and smart environment for travelers and employees at the airport to perform their regular tasks in a more efficient way and improve their experience. In this research project we incorporate Internet of Things (IoT) and Artificial Intelligence (AI) technologies in Riyadh's main airport, King Khalid International Airport (KKIA), to solve the aforementioned issues. Utilizing the IoT technology in KKIA will enable us to control and monitor many systems from a remote area unlike in the conventional airports. This helps in providing a safer environment for the travelers as well as the workers, since in case any fault occurs it can be handled immediately. In addition to that, the lighting and air conditioning systems can be set to provide based on demand at a certain timing in order to reduce the energy consumption which will in turn reduce cost. Our solution will also provide better service for travelers. Travelers won't have to wait for long periods of time in lines as in conventional airports. Multiple sensors that are implemented in different areas of the airport, each with a different purpose, retrieve data which is collected using IoT network. This data is then efficiently analyzed using AI methods in order to enable travelers to know which lines are shortest, immediately find a parking space, and self-check luggage and many more services. A testbed will be built to show the strength of our proposed solution by evaluating its performance in terms of energy consumption, response time, and end-to-end traveler delay.

Poster Session (W)

Survival Window

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Abstract:

Sudden house fires cause many families to lose their lives. When a house fire occurs, the air expands due to high temperature and doors become locked by air pressure as the fire increases. People would die due to suffocation especially when they are locked inside rooms. As socially responsible engineering students, the team decided to design an artifact that is going to save many people from fires. The main goal of the artifact is to allow the fire smoke to exit the room safely at early stages of fires as well as to provide oxygen for victims and prevent suffocation. The artifact should also allow fire victims to escape the room. Many brainstorming and decision analysis methods were conducted and the team finally decided to design an escape exit for fire victims. It was also suggested that the exit produces an alarm to ensure the safety of the unaware house-owners and neighbors. Survival Window is a smart system that detects fires at preliminary stages and warns the people inside the building of the fire. The system produces an alarm sound and a light as a signal of a fire occurrence. The system is also capable of sending an automatic text message to the home owners' phones informing them about the fire inside their houses. Furthermore, a motor automatically opens a window right when fire is detected, which provides an escape exit in case someone was locked inside the room. The small model of the project works as it should be. It is expected that the real-life model is going to save many lives.

Poster Session (W)

Smart Shoes

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Abstract:

We came up with an innovation that concerns helping special segments of the society. Our innovation was designed especially for blind people, Alzheimer patients and finally children. The Smart Shoes consists of two main features. The first one that it notifies the users by vibrating the shoe when they come near a block or any object by a distance of half a meter. This feature will allow the patients to avoid any obstacle that may hurt them during their walk. A vibration motor, powered by batteries, is attached to the shoes and connected to an ultrasonic sensor in order to control the distance which we have programmed to be 0.5 meters in our prototype but of course it's changeable. Secondly, we tied a Tile pies in order to predict the exact location of the shoes. This piece is already programmed and controlled by a phone application. The phone application must be downloaded and controlled by one of the user's family members as it shows the exact location of the shoes in a detailed map. In addition, the shoes have the ability of creating a sound, controlled by the application, in order to grab the attention of the surrounding people in case of any emergency. Finally, we will mention the parts that we want to improve in the future. We wish to add some features in the system of predicting the location. Moreover, we hope to find a better way to power the motor in order to have a sustainable product.

Poster Session (W)

The Traffic Light Programming System

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Abstract:

The preservation and safekeeping of human life is the main concern of modern day societies and for that purpose, while within emergency situations the Nations have developed medical emergency attendance and support infrastructures that besides medical facilities also comprehend first response teams and their transportation means. we decided to create a device that has a benefit for them in the emergency situations. Phase 1 an RFID beam-steering directional antenna installed at the traffic light. The emergency vehicles will be equipped with active RFID tags which are activated when the emergency signal is triggered assuring reading only in case of emergency. Phase 2 A system shall be developed and implemented allowing data gathering from traffic information sources as well as the geographical location of the vehicles themselves and their current operational status. The Green Light System will collect the traffic information along the shortest and fastest pathway from the EMS team position. If any incident is detected that may impact the traffic flow over such route, the GLS will automatically advise the EMS team of the best alternative route, on the go. Onboard the active tag hardware will communicate with a Smartphone/ Tablet device on the vehicle's dashboard where a map is displayed showing him the remain road. Phase3 A prompt response to a medical emergency also includes having Medical Facility informed in advance about the type of inbound medical emergency. Once the EMS team who has addressed the medical emergency assesses the type of injuries suffered and patient status, a user interface will allow them to enter the base information which characterizes the Medical Emergency at hand. Our Purpose and aim is to help out the community by creating this artifact that will assist the ambulance to reach the scene faster and have a quick diagnosis of the patient status. In the near future we want to improve our idea and use it for emergency situations in other fields like the fire department. we look forward to its implementation around the world.

Poster Session (W)

Energy Producer Sand Clock

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Abstract:

We made our project to fix or maintains a problem that face the whole population, for the Non-renewable energy. Part of the Saudi Arabia 2030 vision, is to save energy and to find other sources that provides energy without wasting it and harming the environment. We worked on creating a way to generate energy without using a non-renewable energy. We figured out a way to produce energy from the motion of the sand. The idea of our project is to transfer the energy that comes out from the motion of the sand to an electrical energy inside a sand clock. We will generate the electrical energy by making a sand clock that contains a gear in the middle that moves when the sand fall on it and that gear attached to a generator by a stick. So, the sand affected a circulation that the generator transfers to electrical energy. In our project we are trying to flip the sand clock automatically when the sand reaches to the maximum point, so the motion will never stop by that we can generate energy continuously we figured out four ways to flip it,but they are under testing the ways are: adding a motor, use magnate to flip it, using the equilibrium of the sand and changing the structure and design of the sand clock. The flip of the sand clock will happen without using energy. As a conclusion, in this project we will help our country to develop in producing a renewable energy, we'll use the sand which is a widely available source in Saudi Arabia. It will produce sustainable energy If developed in the right way. So, implementing this idea will help to maintain the environment. Till the time of the abstract's submission out invention is still under development.

Poster Session (W)

اثر عمارة المعابد الهندوسية على عمارة المساجد في شبة القارة الهندية

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سارة يونس

المشرف: د.صقر صقور

جامعة اليمامة

الملخص:

يهدف البحث الى دراسة الأثر العقائدي والثقافي الهندوسي على عمارة المساجد في الهند. وتنبع أهمية هذه الدراسة من أهمية القيم الحضارية والإنسانية التي جاء بها الإسلام والتي ترتكز على قبول الاخر، والبناء على الإنجازات الحضارية للأمم الأخرى. وحيث انه يصعب وصف الهند في كلمات او سطور، فهي غنيّة عن التعريف وعصيّة على المقارنة. وعليه، فقد لا يكون كافياً تسميتها بـبلد الألوان ، ولا تسميتها بـوطن الحضارات المتجذرة في التاريخ. فقد اشتهرت الهند بجمال عمارة معابدها الهندوسية. اضافة الى مساجدها الاسلامية التي تاثرت بدورها بالعمارة الهندوسية التي جاءت قبلها، و يعود ذلك لعدة أسباب سيتم ذكرها في متن البحث . وتعتبر اماكن العبادة اعظم ما انجزت البشرية في مجال العمارة. فهي فن معماري روحي، تكمن روحانية وتكتمل في التصميم المدروس، و لذلك تعتبر دراسة العمارة الدينية بشكل عام. و دراسة العمارة الاسلامية على وجة الخصوص مفتاحا لفتح الآفاق الجديدة في توسيع المدارك لفهم مدى التأثر والتأثير في تاريخ العمارة القديم والحديث. ويستعرض البحث العناصر المعمارية الرئيسة للمعابد الهندوسية ومنبعها الحضاري والثقافي، ثم يدرس بدايات عمارة المساجد في شبة القارة الهندية. مستعرضا كيف استفاد المسلمون من فكرهم الإنساني الشمولي من جهة، ومن تقنيات وأفكار السكان الأصليين من جهة اخرى، وكيف تم تشكيل عمارتهم التي حملت هوية خاصة بهم بعد ان تأثرة بعمارة من سبقهم . ولتحقيق الغايات المنشودة يقوم البحث بتحليل حالة دراسية لاحد المساجد التي تأثرت بشكل واضح بعمارة الهندوس. كل ذلك مترافقا ومتزامنا مع مجموعة من الاشكال والصور التوضيحية التي يحتاجها البحث في دراسته وتحليله. جامعة اليمامة – الرياض – ١٤/ ديسمبر / ٢٠١٧.

Poster Session (W)

الاستغلال الاقتصادي للأطفال عبر برامج التواصل الأجتماعي

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جامعة الأمير سلطان

الملخص:

تعد شبكة الإنترنت مصدرا غنيا للحصول على البيانات و المعلومات . كما تعد أداة محفزة و مسلية لأطفال . حيث يستمتع الأطفال بمشاهدة و تعلم المعارف الجديدة من خلال الألعاب و البرامج و خاصتا برامج التواصل الإجتماعى . كما تخلق الشبكة جوا من التفاعل و المشاركة بفضل ما توفره من وسائل للتواصل الإجتماعى .بيد أن الإستخدام العشوائى لهذه الشبكة قد يؤدي إلى نتائج غير متوقعة خاصتا إنحراف الأطفال عبر شبكة الأنترنت إلى متاهات غريبة عن أجوائهم العائلية .و تتمثل غاية الدراسة الأساسية فى إعتبار سلامة الأطفال على شبكة الإنترنت قيمة جوهرية لا يجب التهاون فى تأمينها . و سنتناول من خلال هذا البحث الاستغلال الاقتصادي للأطفال عبر برامج التواصل الأجتماعي، وذلك بغرض تحقيق العائد الربحي التجاري. وهو ما قد يؤثر سلبيًا على التكوين النفسي للطفل و أحترامه لذاته الضار بنموه، وتعرضه للإيذاء إما عن طريق الألفاظ القاسية الموجهة له أو الانتقادات.والذى ينافي ما جاء في نظام حماية الطفل الصادر بمرسوم ملكي برقم (م/١٤) بتاريخ ١٤٣٦/٢/٣هـ ، والذي يهدف إلى حماية الطفل وفقًا للشريعة الإسلامية والإتفاقيات الدولية، وحمايته من كل أشكال الإيذاء والإهمال الذي قد يتعرض له الطفل، سواء من أصحاب الولاية على الطفل أو من غيرهم. وقد أثيرت هذه المشكلة سابقًا في استغلال الأطفال في الإعلانات التليفزيونية، ولقلة الوعي لذوي الطفل، أو أصحاب الولاية بمخاطر إنخراطهم في هذا المجتمع الذى لا يتناسب مع سنهم.هذا بالإضافة إلى غياب الأنظمة الرادعة لمن تسول له نفسه ارتكاب مثل هذه الأفعال لتحقيق العائد المالي، والتي كانت أفعالهم منحصرة في السابق على إعلانات تلفزيونية أو عمالة الأطفال. أما الآن أصبحنا نرى كامل حياتهم اليومية وتشجيعهم للقيام بأفعال كوميدية وتعليمهم الكذب للحصول على مكاسب مختلفة، كما نرجو فى نهاية البحث التوصل إلى خلق بيئة أكثر أمانا لسلامة استخدام الأطفال للإنترنت عبر التعرف على المخاطر التي يتعرض لها الطفل خلال عمله على الشبكة من أجل معالجة المشكلة .و نشر الوعي بحقوق الطفل وضمان تلك الحقوق التي قد تتغير بتطور فكر المجتمع.

Poster Session (W)

دور التصميم الداخلي في تفعيل مركز اجتماعي ثقافي تفاعلي بالمملكة العربية السعودية

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الملخص:

تهدف الدراسة إلى التأكيد على دور التصميم الداخلي في تحقيق احتياجات المجتمع من فكر وثقافة وترفيه وربط المجتمع بالمراكز الاجتماعية ووصلهم بها . وتحديد بعض الأسس والمعايير التي يتم بها تحقيق التواصل بين افراد المجتمع في الفراغات الداخلية عن طريق الإجابة عن التساؤل التالي: كيف يمكن ان يؤثر التصميم الداخلي في تفعيل دور المراكز الاجتماعية لتعزيز التواصل والعلاقات الإيجابية بين افراد المجتمع . وتكمن أهمية البحث في توفير بيئة مناسبة لأفراد المجتمع السعودي , تلبي احتياجات ورغبات فئات المجتمع وتوفر لهم ما يشغل جزءاً من وقت فراغهم لتحقيق بعض اهداف التنمية الشاملة التي تهدف لها رؤية المملكة العربية السعودية ٢٠٣٠. واستخدمت الدراسة المنهج التاريخي لدراسة نشأة وتطور المراكز الاجتماعية الثقافية عبر العصور. كما استخدمت الدراسة المنهج التحليلي لتحليل المراكز الاجتماعية والثقافية والتفاعلية حول العالم في الولايات المتحدة الأمريكية والصين وكندا. ومحلية في مدينة الظهران . كما تمت دراسة احد مراكز الاحياء النموذجية بجدة وتم تحليل عناصر الفراغات الداخلية . ومدى تطبيق المعايير العالمية في فراغات تلك المراكز. وقامت الباحثات بدراسة احتياجات المجتمع من أنشطة ترفيهية وخدمات يمكن أن تقدمها المراكز للمجتمع . توصلت الباحثات الى عدة توصيات ومقترحات من أهمها : دعوة الجهات المختصة والمعنية للاهتمام بتطبيق المعايير التصميمية اللازمة في المراكز الاجتماعية ومراعاة احتياجات الجمهور ومتطلباتهم على أكمل وجه , الاستفادة من التطبيقات التكنولوجية الذكية عند تصميم المراكز الاجتماعية الثقافية التفاعلية لتساهم في جذب الجمهور ورفع نسبة الابداع لديهم , التأكيد على أهمية العمل المشترك بين الجهات المختصة والمصممين لرفع جودة هذه المراكز والمباني , زيادة الوعي وتسليط الضوء على انشطة المراكز الاجتماعية وطرق ايصالها لجميع فئات المجتمع. وتم الخروج بعدة مقترحات للتصميم الداخلي لفراغات المراكز الاجتماعية الثقافية التفاعلية متوافقة مع الأسس والمعايير التصميمية واظهارها باستخدام البرامج المتخصصة .

Poster Session (W)

The Loss of Meaning through the Maze of Translation in Nizar Kabbani's Poetry

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Abstract:

As it has always been interesting to translate literary texts, there has been a greater interest in translating Arabic literature. This research paper looks into one of these works; analyzing some of Nizar Kabbani's poetry in order to prove that there is an impossibility of establishing an equivalent target text in English. The case study was done on the book "Arabian Love Poems" which contains Nizar Kabbani's Arabic poems translated into English by translators Bassam K. Frangieh & Clementina R. Brown. Granted that, in the process of translating literary works the translator must always consider the closest meaning to the source text (ST) to achieve full equivalence. Culture, linguistic features and sense loss were the three main supporting factors of this hypothesis. Each language is never identical to another. So while translating literary texts the translator could definitely cause the text to lose parts of it's meaning unless translated perfectly. Also when translating a text from one language to another, the translator must bear in mind that every language has its own culture and beliefs that are uniquely wondrous in their own way. The study was guided by a specific question, which tried to answer the question of whether the meaning is lost through the maze of translation and margin explanation. Dr. Hadeer Abouelnegah, an Associated Professor at Prince Sultan University in Riyadh, was interviewed by the researchers, both the analysis of the translation of the book and the interview resulted in showing that meaning and sense could be lost when translating literary works from English to Arabic.

Poster Session (W)

Safe Chat: Children Chats Classification

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Abstract:

Social meadia grows every day and takes a big part of our lives and even of our children lives. "Texting" or "chatting" is an aspect of social media where people can enjoy instant messaging. Children usage of social media and specially texting makes parents afraid of what do they receive and send. Parents want to know if their children are having safe chatting or not. A chat is considered unsafe if it contains bad messages. Where a message is classified bad if it contains inappropriate text for children, otherwise it is classfied good. This study aims to build a two classifier models that classify children chat messages into good or bad. Then, it compares their performance and accuracy to use the most applicable classifier model in Safe Chat application. Safe Chat application classfies children textual chats into safe or unsafe. It prompts the user to insert children textual chat. Then, It outputs the percentage of bad messages over the whole messages. Safe chat also provides the messages that were classified bad and who has sent these bad messages. The study started by collecting dataset of messages. Then, it annotated this dataset messages to bad or good. After that, it builds two classifier models and compares between them. The result of dataset collection is a dataset of 6,000 messages that contains about 55,000 words. Where the result of dataset annotation is 5,582 annotanted message. The result of building the two classfier models is going to be shown in the next smester. Finally, Safe Chat application development takes place.

Abstracts
Men's Campus
Day 1

Session M1 Engineering

The Analysis of a Structure's Response to Blast-Resistance Techniques

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Abstract:

Studying the effects of blast loading on structural elements has become a growing topic of concern due to recent activities that have challenged a structure's ability to withstand such loading. Recent studies have been made in an attempt to improve either an existing structures' performance or the performance of future structures against blast loading. Many researchers have studied different techniques to mitigate the risk of blast loading such as ductile concrete plates which, due to their effect of increasing a structure's ductility, increases a structure's resistance to dynamic loading situations, or fiber-reinforced concrete which enhances blast-resistance by keeping damaged concrete more intact upon impact. By examining a building's structural response to blast loading while considering the factors of stand-off distance, blast magnitude, building design, building materials, and blast-resistant techniques, preparing countermeasures for blast scenarios could become more practical. The analysis being carried out in this paper involves three identical 4-storey reinforced concrete structures in 3D modeled space, two of which implement blast-resistant techniques where as one is a conventionally constructed building acting as a reference. The blast loadings considered have equal magnitude with three distinct stand-off distances positioned at the center of one side of each building. The effects of the blast loadings on all three structures are modeled using Siesmo Struct modeling software where the impact of different stand-off distances on individual blast-resistant techniques are examined. The blast-resistant techniques considered in this paper are braces of different configurations as well as viscous dampers. The structural performance of the three cases are compared in order to show the effectiveness of the proposed techniques.

Session M1 Engineering

Nanotechnology in Construction Field

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Abstract:

Nanotechnology is one of the most significant recent technologies in most of the sciences. In fact, it will make an industrial revolution in all aspects of our lives. It is the technology of editing molecules or atoms in order to produce new products. In other words, it is the technology, which is interested in editing the atomic structure for substances. In this technology, the fields of physics, chemistry, biology, electricity, electrons, materials and mechanics will intertwined strongly with each other. Moreover, by using this technology, people could be able to see, treat, and produce things by measurement of one over one hundred nanometer. This technology may lead to produce tiny robots, construct tiny laboratories, and make accurate operations. What is more, nanotechnology is one of the most important technologies in the major, which I would like to talk about, of construction engineering. In addition, this technology will be the future of construction engineering. The purpose of this study is to focus on the importance of this technology and to help getting benefits of it in the best ways and methods. Also, I am looking in this study for presenting the risks, which are caused by this technology for the workers with it and for the environment, in order to prevent and avoid them in the future. In this research, I am considering the topic of nanotechnology in construction, what this technology is, the importance of it, how this technology relate to construction major, and present some applications of this technology in the construction field. For sure, it is significant technology in all fields, but what is important is the construction exists in most fields, which gives more importance to figure out about this technology in this field. Finally, Scientists used nanotechnology in many applications. Some of these applications are in construction field, which I considered in this research.

Session M1 Engineering

Design of Quadcopters: Basics and Beyond

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Abstract:

Unmanned Aerial Vehicles (UAVs) are aircrafts that do not have human pilots on board. UAVs are more commonly known as; drones. It's long been known that drones are the future, but now it' becomes a reality thanks to the extensive research on drones. The increased demand for drones in research has led many amateurs on the quest to build custom drones. The purpose of this paper is to shed some light on the fundamentals of drone building with respect to the ideal selection of hardware and software. This paper manages to briefly cover the pieces and the steps to make a fully functional unmanned aerial vehicle with commercially available components. This paper is highly significant because it's essentially a layman's introduction to the complex process of drone building. This paper follows a top-down approach in the explanation of different hardware components of a quadcopter, starting from rudimentary drone components like motors, electronic speed controllers and batteries to advanced components like autopilots and flight controllers. A concise guide to the selection of the above components for the assembly of an ideal quadcopter is also given. Besides hardware components, the paper discusses software setup for the drone. The working principle behind commercially available autopilots like PixHawk and Erle Brain is briefly discussed. Finally, configuration and calibration of the drone sensors are also reviewed. All of this technical know-how comes from the comprehensive experience of the RIOTU - Robotics & Internet of Things Unit at PSU with drones. This paper also advises against common pitfalls and errors made by amateur drone makers based on previous first hand experience. In conclusion, building and designing a quadcopter is a complex task and it includes everything from the selection of the frame material to mounting of motors and propellers. This paper scientifically breaks this intricate process of drone building to straightforward steps.

Session M1 Engineering

RF Energy Harvest

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Abstract:

A battery is one of the most necessary devices been created. It stores energy in some other form then converts it to electrical energy when used. Many people have investigated about other types of collecting energy to be used as batteries. One of the most recent studies considers the electromagnetic frequencies, in particular, Radio frequency. It is also one of the most popular radiations. In fact, people are exposed to RF radiation from natural and human-made sources such as the environment and sun, the earth itself, Wi-Fi and Bluetooth, and food as well [1]. However, energy harvesting goes through the process by which energy is derived from external sources. Further, RF energy harvesting provides a very small amount of power for low energy microchip technology. Additionally, current advances in ultra-low power wireless correspondences and energy harvesting technologies push self-supportable devices. Although, the manner of switching to another aspect, RF energy harvesting, is to make efficient use of already existence environmental frequencies. According to Aguilar, A., (2011): "These energy harvesters are built with the idea of creating a Wireless Sensor Network of truly autonomous devices." Therefore, this paper will discuss the importance of RF energy harvesting, the methods applied to develop RF harvesting energy and the RF ambient harvesting energy

Session M1 Engineering

Improving the Quality of Service in PSU Central Library

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Abstract:

Libraries are created in schools, colleges and universities to foster learning by students and learning by academicians by providing flexible space that houses a wide range of print and non-print resources, such as textbooks, journals and digital media, computers, and printers, and maintaining a quiet environment. Thus, a library must be a conducive place for both learners and educators so that it could exhibit a vibrant role in the advancement of a culture that promotes extensive reading and motivational learning. The Prince Sultan University (PSU) Central Library is the university's main source of text information, research and independent learning. The library service encourages the access of both campus and non-campus learners to facilitate their academic and individual learning goals at large. It is therefore imperative and with just conviction that the library service must be delivered at optimum quality at on-campus function time. Unfortunately, a building ocular to the PSU library recently conducted by our team has revealed quality issues that dispute its mission and vision objectives. Such issues range from the technical side such as functionality of the library computers and printers, to the presence of noise that affects the concentration of the users. This paper is aimed at identifying the key quality improvement areas in the PSU Library and respond to these using the DMAIC Six-Sigma model with the several charts and diagrams used as SPC tools.

Session M2 Engineering

Prince Sultan University GYM

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Abstract:

The beginning of the 21st century became a transformational era when it brought forth the role of technology not only as a disruptive element in business objectives, but also in changing the culture of people. As matter of fact, technology has changed the society's standards so much so that it might be impossible to live without it. One of those standards is people's perception of physical well- being. Technology has introduced people's acceptance of being passive on the benefits of physical exercise and socialization when laptops and mobile phones have attracted and fixed their attention to the online world. Perhaps, one of the practical goals of this project is to bring the fitness center closer to the workplace, in this case, the Prince Sultan University campus. A gym which is accessible to students, faculty and alumni from the inside of the campus and at the same time, accessible to non-campus students and individuals from the outside makes the project a holistic venue for achieving physical and social fitness. The gym will sit along Abu Bakr Siddiq Road at one of the corners of the PSU Campus. The main goal of the project is to promote campus revenue, as it will charge both on-campus and off-campus users with a higher rate for the off- campus users.

Session M2 Engineering

Properties of Concrete Using Grass as a Fine Aggregate Replacer

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Abstract:

Concrete is the most widely used construction material in the world. Concrete is a mixture of Portland cement, water, aggregates, and in some cases admixtures (to produce concrete with special properties). For sustainable approach, new methods should be designed to save natural resources and this paper is an attempt to this serious problem in construction industry. The objective of the research is to create a concrete by using a campus waste material as a fine aggregate. The advantages of this process are to get benefits from the wastes of campus and to reduce the material used in the concrete. This study came up with an alternative for sand with dry grass. This study used this waste as a part of fine aggregate replacer in concrete to save the environment and reduce the cost. A series of experiences were made to analyze the behavior of grass in concrete. Slump test, Concrete Temperature test, Physical appearance, Odor and crushing strength of concrete were analyzed in this study. Fine aggregate was reduced for a percentage of 13.3% and replaced with the grass campus for this study. The results show that slump achieved as 5.5 cm, the average temperature was 23.7 Celsius, the final shape was darker and rough surfaced, odor was relative unacceptable and crushing strength was low as compared to normal cement concrete. It is also observed that higher amount of water is required to achieve the workability for this concrete and higher shrinkage has been observed after hardening. In conclusion, it is essential to make necessary steps today to save natural resources and design alternatives to protect natural mineral and environment. This paper provides an opportunity to take advantage of this waste for future projects to reduce costs and save the environment. This research is a step towards sustainability and green movement.

Men's Campus Day 1

Session M2 Engineering

Road Accidents and their Causes in Saudi Arabia

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Abstract:

Road accidents are an occurrence that is continuing in both the developing and the developed nations leading to loss of life. In Saudi Arabia, the road accidents are increasing significantly over the years regardless of the advancements in technology. Within the structure of the review, it is based on an analysis of traffic accidents occurring in Riyadh. The study is an attempt to explore the types of road accidents and their causes occurring in the region of Riyadh. A qualitative study has been carried out for this study and Relative importance weight method has been used for data analysis. In the initial results, it has been observed that there are almost thousands of accidents occur in Riyadh including fatal and non-fatal accidents. These accidents result in loss of medical compensation and overall moral of the drivers. The study is undergoing and further results will be added to the final paper. This study will highlight this major problem in Saudi Arabia because it has been recently reported by Arab News that car accidents causes an average of 9000 deaths in 2016 in Saudi Arabia. Hence, this is a serious issue to be addressed today as it would not be late tomorrow.

Poster Session (M)

Engines Regarding Friction and Heat

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Abstract:

There are many problems face engines. One of these problems produced from the heat, which is generated by friction, which occurs between the parts of the engine. This problem affects the performance of the engine. In other words, the efficiency of the engines decreases due to the friction and the heat generated. In this research, I am considering the problem, which is the bad deformation and expansion for the parts of the engine, that occurs because of the heat generated from the friction between engine's parts. Therefore, the engine works badly, because the parts of the engine could not move as well as they are made. In addition, in this study, I considered that there are many solutions for this problem. What is more, if we applied those solutions the engines will work better, because the friction reduces and therefore the heat reduces. That is, because the surfaces of the engine's parts will be smooth in one case, or will be isolated from each other in the other case. The purpose of this study is to improve new ways and to produce new products that could help increasing the efficiency of the engines. Also, this study attracts the attention to produce engines using stronger materials in order to avoid engines' deformation. In conclusion, engines is one of important things currently. In other words, there are many advanced devices depend on them. Scientists should pay more attention to improve new ways that could increase their efficiency. In addition, they should prevent mentioned problems occur to engines using those solutions and figure out more new solutions.

Men's Campus Day 1

Poster Session (M)

The Design of an Eye Directive Controller in a Motorized Wheelchair for Disabled People

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Abstract:

The number of disabled people in the kingdom of Saudi Arabia has reached 700,000*. This means in other words, it is around roughly 4% of the Saudi population. Also, it is worth mentioning that this number keeps on increasing each year. The goal of our project is to propose a design in order to help these people who are suffering from kinetic problems. This is going to make their lives simpler without the need of others. The proposed idea will include designing an embedded system connected to a motorized wheelchair which utilizes the power and physical movements of the disabled person effectively. The designed embedded system will be basically a controller that uses eye directions in order to specify the motion direction for the motorized wheelchair. User's eye movement will be translated by the embedded system into data in which the wheelchair will move accordingly. When a disabled user looks at a specific angle which is defined in the developed software, the system will read it and send commands to the developed software in order to specify the direction and take an action. Hence, based on the angle of the rotation on the eye, the motorized vehicle will change direction. For instance, if the user looks to the right, left, or straight, wheelchair will move according to these directions, otherwise, no movement will occur. In case of moving backward, a button is designed to switch the direction between forward and backward. In addition, obstacle detection sensors are connected to the embedded system to get a feedback to ensure the safety of the user. Emergencies situations will be handled with a control button to help the user to stop the system easily. In addition, a joystick controller is provided to move the wheelchair in case of tired vision. Arab news. (2015, December, 27). KSA has 720,000 disabled. * Retrieved from http://arabnews.com/ksa-has-720000-disabled/

Poster Session (M)

Smart Parking Lots

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Abstract:

Don't you sometimes avoid going to certain places because of how bad their parking lots are? They could be too narrow, or too dense. That could cause people to park improperly. If that happens, they are going to utilize some spaces from the neighboring car stall. Therefore, new arriving cars are going to take more space from the other car stall to make up for lost space. This sometimes causes people who bump or scratch other cars in the parking lot. And this is where our project comes in. The purpose of our project is to eliminate the chances of that happening, implementing this idea will regulate parking lots and ensure safe and convenient parking. It could play a key role in reducing traffic and car scratches too. Our project consists of three LDRs (Light Dependent Resistors), and two colored LEDs. One in the middle of the car stall, and two on borders of the parking space (usually two yellow lines, let us call them border sensors). If the one in the middle is triggered, the switch on the circuit will turn on, and the green LED will illuminate. If one of the border sensors is triggered along with the middle sensor, the red LED will illuminate. A security guard will be assigned to monitor the parking lot. Then the lights will help them regulate the place. In conclusion, this project will help to regulate parking lots, reduced accidents and scratches. It also helped people knowing whether they parked correctly or not, which made parking easier. This project is going to make parking lots a better place for everyone, using three sensors and two led lights. This could be a potentially cheap solution.

Poster Session (M)

Guide System for Blind Students

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Abstract:

Students with special needs face many difficulties in their life, especially, blind students. One of their challenges is mobility inside the campus. Therefore, this project will try to help them and give them a natural life. Blind students get confused or forget the locations of the library, restaurant, or even classroom's buildings. Relying on this situation, this project will helps and guides them without letting them needing any help or escorts. They will also remember the directions of their daily activities. Using a new concept called decision point where it will be located in an intersection way inside the university corridors. The blind students will have a cane where at the end of it an electromagnetic chip attached. When the student crosses above the decision point, it will respond automatically to guide and tell him/her about nearby places. Furthermore, this study can be applied in public places to benefit the society and ensure rights to the blind people so they can achieve a civilized life. We used several methods such as project management, work break structure and complex matrix, which organizes it as teamwork. We are hoping by accomplishing this product to reduce the suffering of the in need people and hopefully make their life easier.

Poster Session (M)

Improving the Cognitive Abilities of the Secondary School Students in the Kingdom of Saudi Arabia through Reading Specific Text Colors

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Prince Sultan University

Abstract:

A common problem for students is to memorize and comprehend which results how test scores and low self-steam. This research examines whether the color of the text affects the memorization and comprehension on secondary students. The problem to be solved via typing texts in colors other than the ordinary black such as green, red and blue? These colors were chosen because of the visual receptors in the human eye. The experiments were conducted on 600 boys and 600 girls aged 18 to measure their memorization and comprehension abilities. The subjects read the text in different colors. The results of the control group were compared with the results of the three experimental groups. For the short-term memory, the results were as follows: males were significant level 0.013 and females were significant 0.000. For the long-term memory, the results were as follows: males were significant 0.017 and females were significant 0.004. The red color is significant in all the memorizing tests so it is the best color for memorizing. For comprehension, the results were as follows: males were significant 0.000 and females were significant 0.003. The green color is significant in comprehension in males and the blue color is significant in females. This study helps students to memorize and comprehend texts better. It also helps those with learning disabilities.

**Men's Campus
Day 1**

Poster Session (M)

Sound Cup

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Abstract:

People have a lot of needs in this life to keep on living their daily lives. Due to that, these needs must be met with solutions to fulfill their happiness. This gave us the idea to create a special electrical cup, to help the blind people who have difficulties to pour drinks in their cups. The product is called Sound Cup, which is basically a device that has a sensor that will make two speakers alert the user at what level is the cup filled, it also has a cover that can be removed then attached to the bottom of the cup and still act as a base for the cup. The cup has the ability to be charged by a USP portal, or by a rechargeable battery. In addition to that, the user can even change the volume of the speakers as he wants. This product will make the blind people aware of the level of the drink, without the need to touch the surface of the liquid, or without spilling the drink. On the other hand, the feature of changing the volume will make the user more satisfied with the cup performance. The cup will be made from a strong material that is called Tritan, which is a material with high hardness, resistance to impacts and high temperatures. In conclusion, the need of blind people was the driving force for this innovation. The device will be made from high durability materials. Furthermore, it will help a lot of people to complete their daily tasks with ease, comfortability, and simplicity.

Poster Session (M)

Sahara Sleeping Bag

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Abstract:

In our life many people faced problems daily, these problems lead the people to look for the problem closely and find the solution for it. Many product exist now because of the need for people, even if the product is large size or small size. To start planning for a new product you need to look for a problem and break it down into sub problems then you find a solution for it. Sleeping bag is one the product that I have problems with it specially in the summer, many people need to get sleep in many places that there is A/C, so people get hydrated and get wet easily, so people need a product to get people cool in same of these places. My product is a sleeping bag that have three fan on it that can get people cool inside the bag and to feel comfort also while sleeping. The sleeping bag has a standard size and it have grateful colors to have, there are three fan distributed through the sleeping bag that it ensure that the air flow can distributed trough all of the body. The bag is available for all ages of people with different height and width, we ensure that the air inside the bag go through the body earthier if he is small or big, there are many uses of the bag in our life, specially in these day while the Saudi military having a war in yamen, so that the soldiers get hot in top of the mountains with the hot sun every day, so the sleeping bag with fan is one of the best solution for them to get cool while they are resting in at noon, the product is available in the travel tool shop and also large super markets .

Poster Session (M)

Pen with Embedded LED

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Abstract:

Pens were invented in 1888 and has been in use since then and the mechanism have been refined throughout the years and an endless number of designs, colors, and models have been introduced. Also multi-functional tools have been introduced lately so you have all in one tool, in this paper we are going to introduce "Lightme" a light powered pen that you can use to read or write without an external source of light. We have conducted the design process which includes the needs assessment of the customers used decision matrix and the house of quality with other tools to eventually reach to the look and specifications of this product. Muti-functional tools have been popular in the recent years and have been getting jump steps with the introduction of 3D printing and accurate cutting machines it got easier to fit a lot in a compact space which is durable and long lasting this created an opportunity for us to be able to design such thing as a pen with a light imbedded in it. The product can be used for multiple purposes where it can used for writing with no external source of light as well as reading, and it can also be used as a tiny torch light for lighting dark spaces

Poster Session (M)

Screwdriver with Hammer

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Abstract:

The most important tools that are being used around the world for fixing and repairing work are Screwdriver and Hammer. What if, we can use one tool that can handle the needs and the purposes of using these two tools. That's where this new product is being innovated for "Scrmer". This tool will help us to minimize the time between looking for the two tools and increase the productivity in the factories due to, what features that it has. The vision for this product is, to make a useful tool that it can help anyone who wants to use the both tools, the hammer and the screwdriver in sufficient way, and to save more time for the workers in the factories. The product has some specifications to make it unique and more efficient between the other products. Moreover, the concept generation for Scrmer is where the input of the product such as, energy and material will have an output of the propose of having this product. In addition, the concept selection for the product it has been chosen after having multiple thoughts and designs for the product, the chosen product type is A based on the Philips product. After doing the house of quality the important engineering metrix is the expected life of the product, and the important customer need is ease of use based on the ranking important for the customers and adding them up then dividing the each important on the ranking important. The estimated cost for the product is going to be between 45 SR to 80 SR.

Poster Session (M)

Ethical Issues in Usage of Social Media

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Abstract:

Social media has become a necessity of our life. Increase usage of social media from 90 minutes in 2012 to 135 minutes in 2017 and it is predicted to increase over 200 minutes by 2020[1]. Increased usage of social media and the profits associated to it has resulted in enormous content creation i.e. about (2,657,700) gigabytes every minute in the US[2]. Due to this unmonitored and uncontrolled growth, numerous ethical issues like bad behavior among kids and adults, usage of foul language and violations of privacy. This research focuses on finding (a) what are the key issues faced by social media users and (b) addiction of social media among teenagers. This research found out that most people face bullying, spamming, rude behavior and spreading fake news. On the other hand, 58.6% of people are spending from 2-5 hours daily, but for the people addicted to social media are 17.2% and spending more than 12 hours daily, which means more than half a day! Also a volunteers has been asked, can they stay more than 12 hours without using social media? 58.6% said yes, and 41.4 said No, which means they are addicted to it. The ethical issues of social media are being growth up these days due to people knowledge are not enough to deal with the social media. Therefore, there must be an ethical guidelines to guide people toward the perfect ways to use social media. This research also provide a usage guidelines for social media users, content creators must provide users with block button which provide more comfortable and safety for users. Also software engineers must provide their best practices in technology, these days it's hard to monitor that crowded social media therefore, software engineers must use artificial intelligence in every social media they are making which detect the bad words and delete it or block that unethical user! [1] daily social media usage worldwide [accessed on 3-Dec-2017] [2] How Much Data Does The World Generate Every Minute? [accessed on 21-Dec-2017]

Poster Session (M)

Design and Fabrication of a Vehicle Desert Cooler

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Abstract:

The global energy problem is well-known and is a cause of concern around the world. Part of the problem in relation to vehicles, including cars, buses, etc., is the use of air-conditioners to cool the atmosphere particularly in hot weather. Air-conditioners consume increasing amounts of energy in the form of fuel, which consequently leads to extremely increasing costs. Despite the high cost of air-conditioners, it is still widely used as people now see it as a necessity to survive the heat. Although temperatures somehow increased the last century, it is believed that people can still survive without the use of air-conditioners as people used to do in the past. For example, people in Saudi Arabia, especially those living in hot and dry countries, used to use desert air-coolers to fight the heat. The coolers not only reduced the temperature, but also led to reasonable costs. The current poster proposes the use of desert coolers to save energy. The poster examines the use of an evaporative cooler (also swap cooler, desert cooler and wet air cooler) to cool air through the evaporation of water. To this end, the poster describes the design, fabrication and operation of the evaporative cooler and highlights its benefits, especially in comparison with air-conditioners.

Poster Session (M)

Bacterial Contamination of Hand for Hospital Staff in Saudi Arabia

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Abstract:

Hands have become one of the basic means of communicating in everyday life and are used almost everywhere. Medical students and health care workers use this handshake to communicate in hospitals. Evidence suggests that many. Handshaking is usually used in health care facilities for rapid communication within hospitals. Concerns about handshaking have increased in hospitals, where they can be used everywhere, even in the bathroom. Therefore, it can be a means of transmitting pathogens to patients and employees. The aim of this study was to study the presence of pathogenic bacteria on the surface of the hands that can be acquired from the surfaces or from elevators or from patients or workers. This cross-sectional study identified both pathogenic and non-pathogenic bacteria on hands. Collecting 50 swab samples from the King Saud Medical City Laboratory and 25 swab samples from the Prince Sultan Military City Laboratory in Saudi Arabia. The samples were collected by taking a swab of the hand before sterilization and a swab after sterilization of the hand using sterilizers and then planted on blood agar, Mackoncey agar . And then incubated for 24 hours and then read by Specialist Physician .We concluded that employees should keep their hands clean by using disinfectants of alcohol and Detol and sterilize them after detection from one patient to another. When using lifts, surfaces and handshakes in hospitals to avoid the transmission of infection from one person to another and work with precautionary precautions to wear and change medical jumps when diagnosing each patient to avoid transmission of infection.

Poster Session (M)

Design and Implementation of Energy Efficient Buildings

Abdullah Hamad A Almani

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Abstract:

Buildings are the leading user of electrical energy. In order to reduce their part on global warming, modern building need to produce complete or a part of the energy they require and have an efficient way of cooling and heating to reduce the electrical consumption. The Kingdom of Saudi Arabia has high availability of solar power. This also means that buildings in KSA require large energy to keep them cool. The design of efficient Heating, Ventilation and Air Conditioning (HVAC) system equipped with sensors will help to reduce the electrical power requirements. In this work sensors will be used to detect the presence of human in the room. The temperature, humidity and light will be controlled automatically to reduce the energy wastage without compromising the comfort of the people using the room. Infrared sensors will be used to detect the presence of humans as they can work in day and night and can give better results than motion sensor or normal cameras. Temperature, humidity and light sensor will be place to get the date for climate control. A microcontroller will control the air conditioner, humidifier and lighting of the room depending on the presence of human and sensors data. This system saves energy that is wasted when a room is empty or someone misuse the appliances. Hence electrical power will be saved which can reduce the burden on the economy of the country.

Poster Session (M)

The Current Update on DRO (Multidrug Resistant Organisms) in Saudi Hospitals

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Abstract:

The incidence of microbial infections has increased dramatically over the last few decades. A main cause is the rise in the number of multidrug resistant organisms (DRO or MDR), organisms that developed insensitivity or resistance to microbial medicines. Such organisms are rapidly increasing, endangering the lives of millions of people, particularly those related to the health system. The US hospitals, for example, report nearly 2 million patients with DRO every 2 years, out of which almost 90,000 lose their lives. Additionally, almost 70% of the bacteria that cause such infections are resistant to at least one drug designed to treat it. This results in longer stays in hospitals for a great deal of patients and in the use of less effective, more toxic and more expensive medicines to treat the infections. The present study focuses on the current status of multidrug resistant organisms in Saudi hospitals. Using methods of bacterial isolates and statistical data analysis, the most common DROs in Saudi hospitals are identified and discussed.

Poster Session (M)

Isolation, Identification, and Antimicrobial Susceptibility of Bacteria Associated With Mobile Phone Contaminants among Health Professionals at Hospitals in Saudi Arabia

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Abstract:

Public telephones as well as mobile can act as a career of a wide variety of bacterial species, many of which have the possible to be pathogenic. Mobile phone used by lab staff are of specific interest, as they have been included in the spread of nosocomial infections. Microbial contamination is most commonly found on the mouthpiece, although the earpiece. While indirect contamination from person to person has decreased with the reduce in the use of cell phones general has been found to be even more led to bacterial contamination.50 samples were obtained from the surface of the cell phones of 50 volunteer lab staff at the hospitals. Cell phones are commonly used almost everywhere in the community and in hospitals. Our findings indicate that these phones used by lab staff can act as transmission for both pathogenic and nonpathogenic organisms. Therefore, we suggest offering training programs at an early stage in hospital on guidelines about restricting the use of cell phones in clinical environments, and increasing awareness of hand hygiene and frequent decontamination of mobile devices, to decrease the risk of cross-contamination by these devices in clinical settings. Additionally, more staff are required to assess the efficacy of the above strategies in decreasing bacterial contamination and limiting infection transmission caused by the use of cell phones

Poster Session (M)

Infectious Diseases and Healthy Marriage Program in Saudi Arabia

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Abstract:

The infectious disease can be transmitted directly by exchanging blood or during intercourse, which was the urge to include the investigation of these diseases in the premarital program. The major infectious disease is HIV, which has a great impact on person psychological, social and health integrity., HBV and HCV can also, cause major problems to people which might eventually lead to liver cirrhosis and hepatic damage. This study will cover many aspects relating to infectious diseases of premarital program. It will include, nature of infection, mode of transmission, contributing factors, complications, management and prevention. In addition, it will measure the benefits of premarital program in preventing and managing these infectious diseases We collected 13,044 cases for one year (1438h) of marriage examinations from different hospitals in Saudi. The results were obtained from Tabuk, Hail, Baish and Sabya. After data collection, data analyses conducted using Microsoft excel. Total Positive and negative results were calculated and percentages of both results obtained. The gender was considered for each disease and the percentage for each gender were calculated to obtain percentage of infection among each gender. The collected data were large and analyzed to compare between the occurrence of each disease among the total positive and negative results. Also, the analysis compare between genders and the percentage of each category for each disease and between diseases. The total of positive results for all diseases is 146 positive results .The percentage of HBV is consider the highest among all of the diseases with 110 positive results and count for 75% of total positive results. HCV comes in the next rank among positives with 33 positive results and 23% of total positives. Then, the HIV which is consider the most considerable disease count as he least positive with 3 cases from total of 146 positive results with percentage of 2% among positive results. The prevalence of Hepatitis B in the south of the Kingdom is high and is associated with a hepatitis C outbreak in the north, For many reasons that require attention and careful study. Low HIV infection is evident through the attached statistics.

Poster Session (M)

Investigation of Genetic Diseases in the Eastern Region of Saudi Arabia in the Compulsory Premarital Screening Program

Mohammad Alshahrani

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Mohammad Alshahrani, Shayea Alqahtani, Mohammad Halawi & Mohammad Alsaweed1

Supervisor: Dr. Mohammed Alsaweed.

Majmaah University

Abstract:

A premarital screening program (PMS) is a large-scale program that examines those who wish to marry for various inherited or acquired disorders, to reducing the spread of certain genetic and infectious diseases. But, there are some obstacles encountered in the initial application because of social customs and lack of health awareness in the community. Therefore, the Ministry of Health has applied it compulsory since 2004 for who wish to marriage and to advise them and to expand the problems that may face them psychologically and economically, not to compel them to stop the marriage or completion. The most common diseases and disorders found is sickle cell anemia (SCA) and thalassemia. This article was based on the results of hematological diseases in 1437 , of eight hospitals in the Eastern Region, Although the number of pre-marital screening at Qatif General Hospital is lower than 47% in Dammam General Hospital, the number of positive cases of hereditary blood diseases was higher in Qatif, The need for the city to provide greater care for these patients by providing means of resistance to these diseases such as providing blood banks, the provision of sufficient number of hospitals and qualified medical staff and to provide sufficient awareness of the marriage of those who carry these diseases. Through this study we emphasize the importance of psychological support for the families of patients and help them to bear the costs of treatment, because we cannot eliminate these diseases altogether, but we need to increase health care.

Poster Session (M)

Design and Fabrication of Stirling Cycle Engine

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Abdul Rahman Abdullah & Khaled Abdullah

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Abstract:

The Stirling cycle engine is gaining increasing attention in the current energy market as a clean, quiet, and versatile prime mover to produce electricity. A theoretical Stirling cycle engine model will be designed and fabricated developed. Using a theoretical coupled engine configuration in which working space swept volume, volume variation, phase angle and dead space ratio are controlled, a model will be developed that is to be used to produce electricity and the limits on its real-world realization. The stirling cycle consists of two totally reversible isotherms and two totally reversible constant volume processes. The quantity of heat in these two processes is essentially equal but opposite in direction and the exchange process takes place by means of a regenerator. The function of the regenerator is to act as a temporary reservoir, being able to absorb heat rejection at constant volume process and ideally delivering the same quantity of heat during heat addition at the constant volume process. During these two processes, the regenerator absorbs and rejects equal amounts of heat to the working fluid, and during these two processes, the temperature is maintained constant. In that respect, the stirling cycle and carnot cycle are similar and thermal efficiency of both cycles is the same. The cycle can operate as an external combustion device and has been investigated as a means to reduce exhaust emissions in comparison with the I.C engine. There are problems with the cycle. To achieve acceptable power to weight ratios, very high pressures must be developed, and the regenerator involves stringent heat transfer design requirements. Some devices have been developed using air, helium and hydrogen as working fluids. Stirling engines are distinguished according to the motion of air between the hot and cold sides of the cylinder. Two types of configurations are used: -Alpha-type Stirling engines Displacer-type Stirling engines (Beta and Gamma). In this project, we will design and fabricate Gamma type Stirling engine.

Poster Session (M)

The First Skyscraper in The World with Green Energy

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Abstract:

Bahrain world trade center is the first world skyscraper depends partially on the green energy. It is twin towers with 240m height and 50 floors each. The green Energy is produced by three turbines located in between the two towers. These turbines provide the towers by 15% of the building power needed. The building has been designed as ship sails to make the highest possible energy from the wind coming from the sea. The lower part of the building is wider to provide the lower turbine with more airflow to make the flow balanced on the three turbines. The three turbines between the two towers has introduce a unique design for the building. They have merged the ART of architecture and the revolution of conserving energy. Due to the small distance between the building and the fans of the turbine, the glass was created with a high thermal insulation to prevent the heat from entering the building which reduce the cost needed to keep the climate on the buildings appropriate. The diameter of each turbine is 29m and weight 11 tons. The power produced from the three turbines is 675 KW. Which is enough to provide 300 houses by energy. The turbines conserve 11%-15% from the energy needed. The twin towers style is unique and unprecedented. From our point of view as engineers, and depending on some researches, we found that if the twin tower were the other way with 180 degrees flip, the turbines will conserve 30% of energy rather than only 15%.

**Men's Campus
Day 1**

Poster Session (M)

Hazards and Precautions in Oil Fieldsz

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Abstract:

Working in an Oil Field is considered one of the most dangerous jobs. There are hundreds of ways that workers can be hurt on the job (Explosions and fire accidents, Machines accidents, and Falls accidents). Working in Oil fields exposes workers to a wide range of hazards. Oil and Gas well drilling and servicing activities involve many different of equipment and materials. Recognizing and controlling hazards is critical to preventing injuries and death. This work shows that there are several ways for workers to help protect themselves and keep themselves and their other crew-members safe. Using Industrial Safety is primarily a management activity which concerned with reducing, controlling, eliminating hazards from the industries or industrial units. The objectives of industrial safety are preventing accidents by reducing hazards to minimum and to prevent life loss and permanent disability. In conclusion, given the perilous nature of the Oil and Gas industry, the need for implementation of an efficient occupational safety and health management system is important for improving safety and health performance. Working in oil field is a dangers place. Therefore, oil fields must need to consider all the possibilities of minor and major accidents and try to prevent them from happing.

Abstracts
Men's Campus
Day 2

Session M3 Engineering

Assessment of Fly Ash Properties in Concrete as a Fine Aggregate Replacement

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Abstract:

Concrete is one of the major materials used for constructing assorted types of buildings in world. It usually consumes natural aggregates and binding material that vary in sizes, texture and properties. For sustainable approach, new methods should be designed to save natural resources and this paper is an attempt to this serious problem in construction industry. Fine aggregates such as sand has been used for countless years, the agriculture side is affected and the amount of usable soil has dramatically decreased. This study came up with an alternative for sand with fly coal ash which is a waste. This study used this waste as a part of fine aggregate replacer in concrete to save the environment and reduce the cost. A series of experiences were made to analyze the behavior of fly ash in concrete. Slump test, Concrete Temperature test, Physical appearance, Odor and crushing strength of concrete were analyzed in this study. The results show that slump achieved as 6.5 cm, the average temperature was 26.65 Celsius, the final shape has fine and smooth surface, odor was relative acceptable and crushing strength was comparatively less as compared with normal cement concrete. It is also observed that higher amount of water is required to achieve the workability for this concrete. In conclusion, sand is enormously consumed in concrete throughout the years and consuming natural resources. As discussed earlier, it is vital to make necessary steps today to save natural resources and design alternatives to protect natural mineral and environment. This paper provides an opportunity to take advantage of this waste for future projects to reduce costs and save the environment.

Session M3 Engineering

Experimental Study of Thermal Properties of Nanofluids

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Abstract:

Various engineering applications require fluids to assist heating processes or to remove excess heat such as in automotive radiators, electronics cooling systems, chemical reactors, buildings heating and cooling systems, and manufacturing techniques. A new class of fluids called nanofluids has been introduced to the research field decades ago as a more efficient heat transfer fluid compared to conventional fluids. Nanofluids are defined as fluids with suspensions of nano-sized solid particles which can be metallic or non-metallic. In this research project, the thermal properties that define the heat transfer characteristics of water-based multi-wall carbon nanotubes (MWCNTs) nanofluids are to be investigated experimentally. Carbon nanotubes have a great thermal conductivity and some existing studies showed that the heat transfer performance of fluids can be enhanced remarkably by suspending single- or multi-walled carbon nanotubes. The water-based multi-walled carbon nanotubes nanofluids will be prepared using the two-step method and their thermal properties will be measured at different volume concentrations of carbon nanotubes. The effect of the preparation method on the stability of the multi-walled carbon nanotubes suspensions in the base fluid will be studied as well as the effect of multi-walled carbon nanotubes suspensions on the base fluid i.e. water as the thermal properties of water will be measured before the suspension process. Furthermore, the thermal properties of water-based multi-walled carbon nanotubes nanofluids will be calculated using existing theoretical models, which has been developed to predict the properties of fluids containing solid particles, and then the calculations results will be compared to the experimental results.

Session M3 Engineering

A Comparative Study of Normal Concrete with Wood Ash Concrete

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Abstract:

Introduction: This paper is intended to examine, compare, and contrast the behavior of two types of concrete: 1) cement concrete and 2) cement concrete mixed with wood ash, in terms of temperature, slump, color, and odor. As, Concrete is one of the major materials used in construction industry. Wood ash is added as a partial fine aggregate to the cement concrete. Wood ash is basically the waste of wood industry after it is collected, cut into smaller pieces, and finally burned. Research Design: The mixing ratio of cement concrete is 1:1.3:1.5. The water - cement ratio is determined to be 0.5. The amount of cement added is 5 Kg, while for fine aggregates (sand) and coarse aggregates, the amountsare 6.5 Kg and 7.5 Kg, respectively. Regarding the wood ash cement concrete, the mixing ratio and amounts of ingredients are the same. However, this time for the fine aggregates, 30% of the weight is wood ash while 70% of the weight is sand. The amounts in Kg are 1.95 and 4.55, respectively. Results & Discussion: For the cement concrete, the amount of water used is 2.7 liters, which is slightly different from what is planned. The slump test showed a slump of 6 cm. The temperature of the fresh concrete is 28 C, which is approximately equal to the room temperature. The concrete is to a great extent odorless and has developed the well-known color of cement concrete which is dark grey. Conclusion: The wood ash cement concrete used tremendous amount of water. The slump test was about double of that of cement concrete, measuring 11 cm slump. Its temperature was 27.5, which is near the cement concrete's. However, the fresh concrete developed an extremely strong odor similar to that of a wet wood, and shrinkage of fresh concrete was observed instantly and in high levels. This paper provides an opportunity to take advantage of this waste for future projects to reduce concrete costs and save the environment.

Session M3 Engineering

Digital Document Notarization Using Cryptographic Key Systems and Blockchain Timestamping

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Abstract:

Notarization plays a critical role in both verifying the authenticity of paper documents and the authorization of the issuer's signature. In Saudi Arabia, Chamber of Commerce branches notarize thousands of documents per day by manually checking commercially issued letters and the hand signed signature of an authorized individual from the issuing entity, then stamping it physically to attest its legitimacy. Costs associated with this task incurred by all stakeholders from man hours pre attestation to costs incurred post attestation errors are significant. The research explores a methodology for digitizing the process of both notarizing documents and verifying their authenticity using a cryptographic key infrastructure and blockchain timestamping serviced with a web client tool. The Chamber of Commerce, as well as other government organizations tasked with verifying and authenticating paperwork, can vastly improve business and public sector processes with a digital cryptographic alternative. The issuing entity can digitally sign documents they generate, and store a hash of the signed document in a blockchain record keeping system using a web utility. While the verifying entity can verify the document's authenticity simply using the web utility to verify the document is digitally signed by the authorized issuer, and the hash of the file exists on the blockchain record verifying its integrity. The proposed method allows agencies in the private and public sector to issue digital versions of official documents that can be time stamped and notarized digitally, this allows all stakeholders who need to verify their authenticity to be able to trust digital document delivery as official, untampered, and as authentic as physically delivered stamped paperwork, with significantly fewer costs while maintaining cryptographic integrity.

Session M3 Engineering

Privacy and Security Issues Regarding Dr. nes

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Abstract:

Dr. nes are an unmanned aerial vehicle abbreviated as (UAV) that was first seen a 100 years ago. You can imagine them as flying robots. They are becoming more and more popular nowadays and attaining them is not that hard either, in addition; they are not that expensive at all. Dr. nes are involved in a huge number of application and industries due to how useful and ubiquitous they are. Smart cities are built to support them by default, and this indicates how countries are serious in using them. In this paper we discuss what are some of the privacy and security issues regarding drones and why people should be aware of these problems. We also offer some solution to these issues. We used survey as our research methodology technique through Google forms, our sample included mostly people from Saudi Arabia with a diverse demographics. We attain 206 replies which guided us in some ways and made us notice some interesting facts and need colorations. We also discussed our data gathering techniques and how did we process our data and what are the facts discovered from processing our data in details. Lastly, we draw a conclusion to what we observed at the end.

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