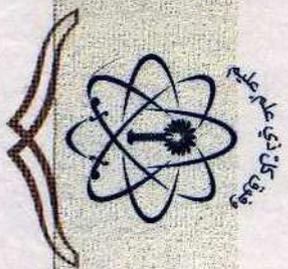


مؤتمر الطلبة السعوديين في المملكة المتحدة
Saudi Students Conference - UK

Presenter Certificate

وزارة التعليم العالي
MINISTRY OF HIGHER EDUCATION
المملكة العربية السعودية في لندن
ROYAL EMBAASSY OF SAUDI ARABIA - CULTURAL BUREAU - LONDON



*With sincere thanks and appreciation extended for
the valuable contribution of*

Emad Danish

In the seventh Saudi Students Conference (SSC2014)

that was held at Edinburgh International Conference Centre (EICC),

Edinburgh, the United Kingdom

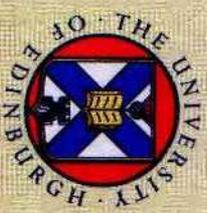
1st – 2nd of February 2014

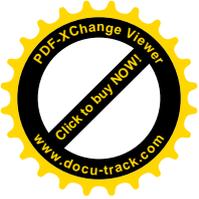
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Saudi Arabian Cultural Attaché in the UK





Abstract No. 677: QoE Based Performance Evaluation for 3D Video Transmission Over Mobile Broadband Networks

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In the recent decade, stereoscopic 3D video has attracted a larger portion of the consumer market, due to the added dimension of entertainment. However, since it contains additional information to be transmitted over the network, an extra burden is added to the already congested network's capacity. Moreover, transmitting the 3D signal over error-prone wireless networks extends the complications. In literature, models have been introduced to address resource allocation issues of multimedia content based on Quality of Service (QoS) and network parameters. Since previous work, based on Quality of Experience (QoE), has not comprehensively examined 3D video issues pertaining to network utilization, we take this step and as a main contribution in this paper we suggest that network resource allocation could be more efficient provided it is based on consumer's perception of 3D video. Ultimately, the substantial conclusions drawn from the conducted simulations demonstrate a bandwidth saving of up to 1.51Mbps and up to 6.02 dB conserve in signal power.

Keywords: Quality of Experience, Efficient Resource Allocation, 3D, WiMAX, Quality Perception.

Abstract No. 687: The Design of an E-learning Recommendation System based on Adaptive Educators and Teachers Profiles

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An essential operation in information retrieval is called document ranking where the retrieved documents are ranked based on an approximate level of importance to the query. Therefore, traditional document ranking methods rely on measurements of the similarity between the documents and the query. However, from an e-learning perspective, the importance of the documents to the query depends on the relevance of the documents to the researcher's interest. This paper illustrates a support tool for a search engine that will allow educators to look up material content based on their interests. The tool will also incorporate additional techniques that will aim to classify the materials based on the identified interests. The positive statistical results showed the impact of applying the feature of classifying materials (for teachers) as well as finding your query based on your interest (for students) when the survey was conducted on 11 students, and 4 teachers at the University of Essex. Additionally, the used technique can show the optimisation of the student search engine in terms of precise and recall evaluation.

Keywords: Information retrieval, document ranking, classification, precision and recall, TF-IDF, search engine, students interests.



Abstract No. 670: Building Resilience to Climate Change Risks

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Climate change risk impacts are one of the most challenging aspects that faces the built environment policy makers now and the near future. The scale of these risks impact is uncertain, to some extent, and unknown. The majority of built environment assets will be vulnerable to climate change predicted scenarios. For example, building assets in cities will be exposed to extreme hot summer days and nights due to the urban heat island effect and pollution. Buildings also could be vulnerable to other climate risks. More importantly the building users might experience extreme internal and external comfort conditions leading to lower productivity, wellbeing and health problems. Attaining robust climate resilient building assets requires the impacts of climate change risks to be a key consideration in the way that buildings are planned and commissioned, designed, built, maintained, operated and disposed off. Thus, create resilience to current and future risks. This research is set to answer the following two questions: What are the key determinants for designing and operating buildings that are resilient to future climate change risks? How to use the key determinants to assess the resilience of existing and newly designed buildings to climate change emerging risks? To pursue the answer for these questions a mixture of research methods are employed. These include semi-systematic literature review to extract the climate risk factors, i.e., physical, economic, social and management, and their associated resilient indicators. The association between the determinants, resilience strategies, and design and operation indicators will be explored using quantitative methods. It is expected that the outcome of this research will be a list of key indicators, probably in the form of an assessment tool, for assessing buildings' design and existing buildings to climate change resilience compliance.

Abstract No. 686: Power-Efficient and Content-Aware Resource Allocation: For OFDM Systems Based on a Utility Function

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In the wireless network arena, excessive demand on the already scarce resources has raised the awareness of power-efficiency along with bandwidth utilization. Out of this prospect, several research efforts have been focusing on the issue of subcarrier and bit allocation while considering network energy consumption. Consequently, we take those efforts a further step by conducting methodical research of the power allocation schemes, suggesting a rate-adaptive joint algorithmic allocation scheme based on the genetic and greedy algorithms, and proposing a content-aware approach for bit-rate assignment to users based on their perceptual quality assessment. For this purpose, a model of OFDM wireless channels is simulated assuming digital video transmission in a multiuser environment. The proposed rate-adaptive power allocation scheme is evaluated and shown to outweigh other schemes. Furthermore, the QoE-based approach for user required bit-rate assignment is demonstrated to be fruitful in terms of bandwidth use and hence power consumption. In order to balance the demands of required-power and increased-quality in the suggested technique, a utility function is derived on the basis of network operator's advantage. Accordingly, in a comparison of 4 methods used for bit-rate allocation, the genetic algorithm based (GA) is shown to overcome other methods for efficiency with low complexity.