

International Journal on Islamic Applications in Computer Science and Technology

Volume 6 Issue 3
September 2018

# **International Journal on Islamic Applications in Computer Science And Technology**

Volume 6, Issue 3, September 2018

**EDITED BY** 

Prof. Dr. Mohammed Zeki Khedher

ISSN (Online): 2289-4012

International Journal on Islamic Applications in Computer Science and Technology is published both in traditional paper form and in Internet. This journal is published at the website <a href="http://sign-ific-ance.co.uk">http://sign-ific-ance.co.uk</a>, maintained by Design for Scientific Renaissance, Malaysia.

This work is subject to copyright. All rights are reserved, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. In its current version, and permission for use must always be obtained from Design for Scientific Renaissance.

Design for Scientific Renaissance

Malaysia

Typesetting: Camera-ready by author

#### **Editor-In-chief**

- Prof. Dr. Mohammed Zeki Khedher, Jordan University, Jordan

#### **Advisors**

- Prof. Dr. Zaghloul al-Najjar, The World Islamic Science and Education University, Jordan
- Prof. Dr. Hany Ammar, West Virginia University, USA
- Prof. Dr. Idris Al-Kharchaf, University of Mohammed V, Rabat, Morocco

### **Managing Editor**

- Dr. Akram M. Zeki, International Islamic University Malaysia, Malaysia

#### **Assistant Editor**

- Mustafa Ali Abuzaraida, Misurata University, Libya

### **Editors**

- Prof. Dr. Abdelhak Lakhouaja, Mohammed First University, Morocco
- Prof. Dr. Abdelkader Adla, University of Oran 1 Ahmed Benbella, Algeria
- Prof. Dr. Abdeslam JAKIMI, Moulay Ismail University, Meknes, Morocco
- Prof. Dr. Adnan Abdul-Aziz Gutub, Umm Al-Qura University, Makkah, Saudi Arabia
- Prof. Dr. Ahmed Ferchichi, University of Tunisia, Tunisia
- Prof. Dr. Teddy Montoro, Universitas Siswa Bangsa International, Indonesia.
- Dr. Abdellah Yousfi, University of Mohamed V, Morocco
- Dr. AbdulSattar M. khidhir, Mosul Technical Institute, Iraq
- Dr. Ali A. Alwan, International Islamic University Malaysia, Malaysia
- Dr. Hikmat Ullah Khan, COMSATS Institute of Information Technology, Pakistan
- Dr. Ibrahim Suliman Ahmed Ashmaiq, International Islamic University Malaysia, Malaysia
- Dr. Jamil Itmazi, Palestine Ahliya University, Palestine
- Dr. Marzanah A. Jabar, Universiti Putra Malaysia, Malaysia
- Dr. Mohamed Tahar Ben Othman, Qassim University, Saudi Arabia
- Dr. Mohammad Abdolshah, Islamic Azad University, Iran
- Dr. Mohammad Said Desouki, Higher Institute of Applied Science and Technology, Syria
- Dr. Nor Hasbiah Ubaidullah, Sultan Idris Education University, Malaysia
- Dr. Omar Tayan, Taibah University, Saudi Arabia
- Dr. Rashid A. Saeed, Sudan University of Science and Technology (SUST), Khartoum, Sudan
- Dr. Talaat Wahby, Sudan University of Science and Technology, Sudan
- Dr. Yousef Daradkeh, Salman Bin Abdulaziz University, Saudi Arabia
- Dr. Yousef Farhaoui, Moulay Ismail University, Morocco
- Dr. Youssef Iraqi, Khalifa University, UAE
- Dr. Youssef Zaz, Abdelmalek Essaadi University, Morocco

## **FORWARD**

By the grace of Allah, it is a great pleasure to introduce this issue of:

# The International Journal on Islamic Applications in Computer Science and Technology

The success and the welcome of this Journal by researchers from many countries, gave us great encouragement for continuing issuing in the due time.

This Journal is aimed at publishing original research papers in the field of Islamic Applications in computer science and technology. This field is catching a momentum in the recent years. As a Journal interested in this field, it is the first International Journal of its specific field. As research is growing in this field, we hope that this Journal will be a platform for researchers working in the field to publish their research.

This issue contains three papers. The first one is entitled: **Sunnah Arabic Corpus: Design and Methodology.** Sunnah Arabic Corpus is an annotated linguistic resource that consists of 144K words/170K tokens of the Hadith narratives (an utterance attributed to Prophet Mohammed) extracted from Riyāḍu Aṣṣāliḥīn book. As a first layer of annotation, the corpus has been fully diacritized. In addition, each orthographic word/token is segmented into its syntactic words. And each syntactic word is tagged with its part-of-speech in addition to multiple morphological features. Several hadith translations in different languages are provided and aligned at the narrative/paragraph level. Hadith Arabic Corpus follows the successful Quranic Arabic Corpus in its standards (corpus.quran.com). Sunnah Arabic Corpus is freely available under the Creative Commons Attribution-ShareAlike 4.0 International License.

The second paper is entitled: **Issues in the Development of Patent Discovery System for Islamic Finance and Banking.** This paper reports on the issues related to our work on developing patent discovery system for Islamic Finance and Banking. We aimed to identify the gaps at each stage of our system development. These gaps expanded the scope of work beyond getting the ideal performance of our patent discovery system. Patents were explored on Islamic Finance and Banking as indexed in major patent databases. Patent retrieval and analysis plays an important role in determining the phases of patents using TRIZ Trend. Findings showed that research in text analysis for Islamic Finance and Banking were rarely conducted; and that patents in Islamic Finance and Banking were facing critical issues. It was found that each of these issues calls for research-based solutions and for an appropriate organization of information and patent representations. It is suggested that concepts in Islamic Finance and Banking must grow in number, be appropriately organized, and experience semantic harmonization.

**Editor-In-Chief** 

# TABLE OF CONTENTS

Title / Authors	Page No.
Sunnah Arabic Corpus: Design and Methodology	1
Abdulrahman Alosaimy, Eric Atwell	
Issues in the Development of Patent Discovery System for Islamic Finance	7
and Banking	
Roslina Othman, Mohamad Fauzan Noordin, Ria Hari Gusmita	