Computer Applications:
Theories and Applications

Edited By:

Imad Fakhri Taha Al Shaikhli
Akram M. Zeki
Asadullah Shah

IIUM Press
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedication</td>
<td>i</td>
</tr>
<tr>
<td>Preface</td>
<td>vii</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>ix</td>
</tr>
<tr>
<td>Introduction</td>
<td>xi - xvi</td>
</tr>
<tr>
<td>List of Abbreviations</td>
<td>xvii - xviii</td>
</tr>
<tr>
<td><strong>Part I: Genetic Algorithm &amp; Its State-of-the-art Applications</strong></td>
<td></td>
</tr>
<tr>
<td>1. The Use of Genetic Algorithm in Autonomous Robot Navigation</td>
<td>3 - 13</td>
</tr>
<tr>
<td>- Raini Hassan</td>
<td></td>
</tr>
<tr>
<td>- Imad Fakhri Taha Al-Shaikhli</td>
<td></td>
</tr>
<tr>
<td>- Asadullah Shah</td>
<td></td>
</tr>
<tr>
<td>2. In-Silico Drug Target Design &amp; Its Approaches</td>
<td>15 - 26</td>
</tr>
<tr>
<td>- Hassen Mohammed Abduallah Alsaifi</td>
<td></td>
</tr>
<tr>
<td>- Imad Fakhri Taha Al-Shaikhli</td>
<td></td>
</tr>
<tr>
<td>- Asadullah Shah</td>
<td></td>
</tr>
<tr>
<td>3. Implementing DNA Sequence Using Genetic Algorithm</td>
<td>27 - 36</td>
</tr>
<tr>
<td>- Ahmad Faridi Abdul Fatin</td>
<td></td>
</tr>
<tr>
<td>- Aqqiela Zuhra</td>
<td></td>
</tr>
<tr>
<td>- Imad Fakhri Taha Al-Shaikhli</td>
<td></td>
</tr>
<tr>
<td>- Asadullah Shah</td>
<td></td>
</tr>
</tbody>
</table>
4. Molecular Docking 37 - 44
   - Hassen Mohammed Abduallah Alsaifi
   - Imad Fakhri Taha Al-Shaikhli
   - Asadullah Shah

5. The Use of Genetic Algorithm in Improving 45 - 55
   Medical Image Segmentation Techniques
   - Raini Hassan
   - Imad Fakhri Taha Al-Shaikhli
   - Asadullah Shah

Part II: The Use of Computer Security in
Improving the Qur'an Data Security

6. Protection Mechanisms Using MD5 and Base64 59 - 69
   - Mohammad A. Ahmad
   - Imad Fakhri Taha Al-Shaikhli
   - Hanady Mohammad Ahmed
   - Asadullah Shah

7. Developed System for Quran Protection Using 71 - 84
   MD5 and Base64
   - Mohammad A. Ahmad
   - Imad Fakhri Taha Al-Shaikhli
   - Hanady Mohammad Ahmed
   - Imad Fakhri Taha Al-Shaikhli
   - Mohammad A. Ahmad
   - Sondos Alhussainan
   - Asadullah Shah

   LSB Replacement and MD5
   - Mohammad A. Ahmad
   - Sondos Alhussainan
   - Imad Fakhri Taha Al-Shaikhli

Part III: ATM Systems

10. An Overview of ATM Systems Security 113 - 128
    - Omarah O. Alharaki
    - Mohammed Hweidi
    - Akram M. Zeki

    - Omarah O. Alharaki
    - Mohammed Hweidi
    - Akram M. Zeki
    - Asadullah Shah

12. Threats and Solutions for ATM Security Systems 139 - 152
    - Omarah O. Alharaki
    - Mohammed Hweidi
    - Akram M. Zeki
Part IV: General Use of ICT

13. Investigating the Student’s awareness on Computer Security and Ethics
   - Mansur Aliyu
   - Nahel A. O. Abdallah
   - Nojeem A. Lasisi
   - Dahir Diyar
   - Ahmed M. Zeki
   - Akram M. Zeki

14. Difficulties and Challenges of Recognizing Arabic Text
   - Mustafa Ali Abuzaraida
   - Akram M. Zeki
   - Ahmed M. Zeki
13. Investigating the Student’s Awareness on Computer Security and Ethics

Mansur Aliyu, Nahel A. O. Abdallah, Nojeem A. Lasisi, Dahir Diyar, Ahmed M. Zeki, Akram M. Zeki

ABSTRACT
People’s perception and attitude towards computer ethics and information security significantly affect the way they use information technology. This is especially the case among university students who are generally regarded as major violators of computer ethics and computer security. This paper follows previous work on computer security and ethics. The paper intend to examine the level of ethical and security awareness among IT and education students of IIUM. The findings of this study reveals that there are satisfactory levels of awareness among the students surveyed with slightly higher level of awareness among IT students, most likely due to security and ethics courses they offered. Also, the findings indicate that gender-wise male students reported higher level of computer security and ethics violations than their female counterparts. The paper concludes that