

Curriculum Vita



Personal Information

Title: Professor

First Name: Abdurazzag **Middle Name:** Ali **Surname:** Aburas

Computer Engineering Dept.
School of Engineering
College of Agriculture, Engineering & Science
Howard College Campus, North Building
University of KwaZulu-Natal, Durban, 4041, South Africa
E-mail: abdurazzagaliaaburas@beykoz.edu.tr

Education:

- 1) PhD. in Image Processing, 1997, Faculty of Technology (Computing Sciences and Engineering), De Montfort University <http://www.dmu.ac.uk/>, Leicester, England, U.K, Ph.D. Research title “Data Compression schemes for Pattern Recognition in Digital Images using Fractals”, **Ph.D. Supervisor: Prof. Jonathan Blackledge**.
- 2) MSc. In Computer and Information Technology “C.I.T”, 1993, School of Science and Engineering, University of Dundee, Dundee, Scotland, U.K, MSc. The project title is “The Emulation of the Flight Single Board Computer System”.
- 3) BSc. In Computer Sciences, 1987, University of Tripoli, Faculty of Sciences, Dept. of Computer Science, Tripoli, Libya, BSc project Title” Developing the General Manager package for a company”.

International Teaching Experience:

1. 2017 - Present: School of Engineering, University of KwaZulu-Natal, Howard Campus, Durban, South Africa.
2. 2021 - 2021 (Online) one semester: Postgraduate Cybersecurity program at American University of Malta, Malta.
3. 2016 - 2017: Visiting Professor, School of Engineering and Science, Technology de Monterrey University, San Luis Potosi Campus, SLP, Mexico.
4. 2015 - 2016: Associate Prof., Computer Science Dept., The University of Trinidad and Tobago
5. 2012 - 2015: Assist. Prof., Faculty of Engineering & Computer Science, International University of Sarajevo, Sarajevo, Bosnia and Herzegovina
6. 2006 - 2009: Faculty of Engineering, Electrical and Computer Engineering Dept., International Islamic University Malaysia, Malaysia, P.O. Box 10, 50728 Kuala Lumpur
7. 2003 - 2005: Assist. Prof., Faculty of Engineering & Computer Science, Ittihad University, UAE.
8. 2000 - 2003: Assist. Prof., Computer Science, Zarka Private University, Jordan.

Research Works Publications:

Books and Book Chapters:

- 1) Hassan Adegbola Afolabi, and Abdurazzag A. Aburas, Book Title: RTL-DL: A HYBRID DEEP LEARNING FRAMEWORK FOR DDOS ATTACK DETECTION IN BIG DATA ENVIRONMENT, International Journal of Computer Networks & Communications (IJCNC), ISSN 0974 - 9322 (Online); 0975 - 2293 (Print), <https://airccse.org/journal/ijcnc.html>, 2023. Accepted
- 2) Abdulrahman Abu Raas, Abdurazzag Aburas, Book Title: Emerging Trends and Insights on Economic Inequality in the Wake of Global Crises: Chapter Title: The Covid-19 Pandemic In the 4th Industrial Revolution: A Critical Review, <https://www.igi-global.com/gateway/chapter/312198>, DOI: 0.4018/978-1-6684-5289-9.ch005, 2022.
- 3) Book Title: Horizons in Computer Science Research, chapter title: Automotive Accident Precognition System Using Random Forest Algorithm, Abdurazzag A. Aburas and Tahmid Quazi, Nova Science Publishers, Inc., USA, <https://novapublishers.com/shop/horizons-in-computer-science-research-volume-19/>, ISBN: 978-1-53618-311-5, 2020.
- 4) Abdurazzag Ali Aburas and Mohammad Hassan, Book Title: Smart and Sustainable Engineering for Next-Generation Applications, in Volume 561 of the Lecture Notes in Electrical Engineering series, Book Chapter Title: Accurate Footprint Satellite Positioning Space System, https://link.springer.com/chapter/10.1007/978-3-030-18240-3_31, Springer Publishing, Pages 334-348, https://doi.org/10.1007/978-3-030-18240-3_31, Print ISBN978-3-030-18239-7, Online ISBN978-3-030-18240-3, 2019.
- 5) Abdurazzag A Aburas, Book Title: Human Mobile Interaction-HMI: Non-Traditional Interfaces, 1st Edition, Publisher: Sarajevo Main Library, ISBN: 978-9958-27-218-9, 2015.
- 6) Book Title: Challenges in Engineering Curriculum, Abdurazzag A Aburas, and Andira M., <https://www.loot.co.za/product/aburas-abdurazzag-ali-challenges-in-engineering-curricula/wtkc-2752-g600>, Publisher: LAP LAMBERT Academic Publishing, August 2013, Last Accessed on 14 March 2013.
- 7) Abdurazzag Ali Aburas and Salem Ali Rehiel, Book Chapter Title: JPEG for Arabic Handwritten Character Recognition: Add a Dimension of Application, in Book Title: “Robotics, Automation and Control”, Editor: Jesus Aramburo and Antonio Ramirez Trevino, I-Tech Education and Publishing, ISBN 978-953-7619-16-9, October 2008. DOI: 10.5772/5537, http://www.intechopen.com/books/advances_in_robotics_automation_and_control. March 2014
- 8) Abdurazzag Ali Aburas, Bibliography for the Book Title: “Fractal Geometry in Digital Imaging”, *Martin J. Turner*, Academic Press, UK. 1998, ISBN 0-12-703970-8,

Journals Paper Publications (Scopus, Springer, Lecture Notes):

- 1) Hassan Adegbola Afolabi, and Abdurazzag A. Aburas, Statistical Performance Assessment of Supervised ML Algorithms for Intrusion Detection System, IAES International Journal of Artificial Intelligence (IJ-AI), a Scopus indexed journal (<https://www.scopus.com/sourceid/21100901206>), Q2. 2023, **Accepted (no fund for publication)**
- 2) Hassan Adegbola Afolabi, and Abdurazzag A. Aburas, RTL-DL: A Hybrid Deep Learning Framework for DDoS Attack Detection in a Big Data Environment, International Journal of Computer Networks & Communications (IJCNC) Vol.14, No.6, November 2022 <https://aircconline.com/ijcnc/V14N6/14622cnc04.pdf>, DOI: 10.5121/ijcnc.2022.14604
- 3) Abdulrahman Abu Raas, Jules Tapamo, and Abdurazzag Aburas, Comprehensive and Technical Review of Deep Learning-Based Grapevine Leaves using CNN Classification, The World Academy of Research in Science and Engineering, International Journal of Emerging Trends in Engineering Research (IJETER), <http://www.warse.org/IJETER> , 2022, **Accepted (no fund for publication)**
- 4) Hassan Adegbola Afolabi, and Abdurazzag A. Aburas, Comprehensive Review on the Blockchain Technology Security and Privacy Solution in Cloud Computing for the Green IoT, 2nd INTERNATIONAL CONFERENCE ON SECURITY & PRIVACY, <https://icsp.co.in>, Springer LNNS, 2021. **Accepted.**
- 5) Hassan A. Afolabi and Abdurazzag Ali Aburas, A Comparison of Single and Ensemble Classification Techniques for Intrusion Detection using Network and IoT Datasets. <http://www.warse.org/IJETER/>. IJATCSE Journal. 2021. **Accepted.**
- 6) Hassan A. Afolabi, and Abdurazzag Ali Aburas, An Evaluation of Machine Learning Classifiers for Prediction of Attacks to Secure Green IoT Infrastructure, Journal of Emerging Trends in Engineering Research. ISSN: 2347-3983 (IJETER), <http://www.warse.org/IJETER/> , <http://www.warse.org/IJETER/static/pdf/file/ijeter03952021.pdf>. 2021
- 7) Hassan A. Afolabi and Abdurazzag Ali Aburas, Proposed Back Propagation Deep Neural Network for Intrusion Detection in Internet of Things Fog Computing, International Journal of Emerging Trends in Engineering Research. ISSN: 2347-3983 (IJETER), <http://www.warse.org/IJETER/> , <http://www.warse.org/IJETER/static/pdf/file/ijeter23942021.pdf>. 2021
- 8) Abdurazzag Ali Aburas, and Rishay Ramcharan, Human Voice Signal Classification Using KNN Machine Learning Approach, the 2020 International Conference on Computational Science and Its Applications (ICCSA 2020), Springs LNCS, <http://www.iccsa.org/>. 2020. **Accepted (no fund for publication).**
- 9) Hassan Adegbola Afolabi and Abdurazzag Ali Aburas, Hyper-Heuristic Approach to Multi-Objective Multi-Dimensional Knapsack Problem: A Reflection, 6th International Conference on Green Computing and Engineering Technologies (ICGCET-2020) 16 – 18th Sep 2020 Herzen State Pedagogical University of Russia, St Petersburg, Russia, <https://www.icgcet.org/>, The paper will be published in the Scopus Index Journal, 2020. **Accepted (no fund for publication).**
- 10) Abdurazzag Ali Aburas and, Brandon Perumal Govender, Alternative Graphical Password Authentication Based on Mouse Clicks, the 2020 International Conference on Computational Science, and Its Applications (ICCSA 2020), accepted as LNCS PAPER, <http://www.iccsa.org/>. 2020. **Accepted (no fund for publication).**
- 11) Abdurazzag Ali Aburas and Brandon Perumal Govender, Password Construction and Validation Using Mouse Clicks, accepted as LNCS PAPER, 2020 International Conference on Internet of Things, August 12-14, 2020, Honolulu, Hawaii, USA, <http://iciot.org/2020/index.html>, <https://www.springer.com/gp/computer-science/lncs>, 2020. **Accepted (no fund for publication).**
- 12) Abdurazzag Ali Aburas, Mohammad Hassan, Child Abuse Levels Projection using Bigdata Apriori and C4.5 Techniques, Special Issue on Advancement in Engineering and Computer Science (ASTESJ), Scopus indexed, Special Issue, <https://astesj.com/special-issue-7/>. 2019. **Accepted (no fund for publication).**
- 13) Abdurazzag Ali Aburas and Thabani Khuzway, Robust Digital Image Watermarking Scheme Guided by Fractal Dimension Values, Special Issue on Advancement in Engineering and Computer Science (ASTESJ), Scopus indexed, Special Issue, <https://astesj.com/special-issue-7/>. 2019. **Accepted (no fund for publication).**
- 14) Abdurazzag Aburas, Mijgan Ayran, and Haris Memic, Human Mobile Interaction based OTC Medicine (HMI for mHealth), Journal of International Organization of Scientific Research (IOSR), e-ISSN: 2250-3021, DOI: 10.9790/3021-03610105, [http://iosrjen.org/Papers/vol3_issue6%20\(part-1\)/A03610105.pdf](http://iosrjen.org/Papers/vol3_issue6%20(part-1)/A03610105.pdf). June 2013.
- 15) Abdurazzag Aburas and Mijgan Ayran, Free Prescription Medicine for Mobile Devices (*mHealth*), Journal of Computer Science, Technology and Application, USA. 2013
- 16) Abdurazzag A Aburas and Burak Salar, Digital Clock for Islamic Prayer Times, International Journal of Computer and Information Technology (IJCIT), ISSN: 2279-0764. Accepted 7 April 2013
- 17) Abdurazzag A Aburas and Burak Salar, Islamic Prayer Times based Mobile, Journal of Engineering and Applied Sciences, ISSN: 1816-949x (Print), ISSN: 1818-7803 (Online). Feb 2013
- 18) Abdurazzag A Aburas and Burak Salar, Islamic Digital Clock - IDC, International Journal of Computer, and Information Technology (ISSN: 2279 – 0764), March 2013.
- 19) Abdurazzag Aburas, Mijgan Ayran, MHEALTH FOR HIGHER EDUCATION, The Turkish Online Journal of Distance Education (TOJDE), http://tojde.anadolu.edu.tr/makale_goster.php?id=883, (Scopus), Vol: 14 Number: 2, April 2013.

- 20) Abdurazzag Aburas, Andira M., Andira S and Bushra, Communication Engineering Curriculum (past, present, and the future), <http://waset.org/Publication/communication-engineering-curriculum-past-present-and-the-future-/8862>, World Academy of Science, Engineering and Technology, P10-15. July 2012. **2012**
- 21) R.F. Olanrewaju, O. O. Khalifa, Aisha- Abdulla, Abdurazzag A. Aburas, and A. M. Zeki, Distortion- Free Embedding in the Optic Disk of Retina Fundus Images using Complex-Valued Neural Network, *World Applied Sciences Journal WASJ*; Vol. 13 no. 6, pp 1295-12301, <http://www.idosi.org/wasj/wasj13%286%29/2.pdf>. **2011**
- 22) R.F. Olanrewaju, Othman. O. Khalifa, Aisha- Abdulla, Abdurazzag A. Aburas and Akram M. Zeki, Forgery Detection In Medical Images Using Complex-Valued Neural Network (CVNN), *Australian Journal of Basic and Applied Sciences. (AJBAS)*, **2011**.
https://www.researchgate.net/publication/232708501_Forgery_detection_in_medical_images_using_Complex_Valued_Neural_Network_CVNN
- 23) R.F. Olanrewaju, O.O. Khalifa A. Abdalla and Abdurazzag A Aburas, Determining Watermark Embedding Strength using Complex-Valued Neural Network, *Journal of Applied Sciences* Volume 11, Number 16, | Page No.: 2907-2915, <https://scialert.net/abstract/?doi=jas.2011.2907.2915>. **2011**
- 24) R.F. Olanrewaju, O.O. Khalifa A. Abdalla and Abdurazzag A Aburas, Damageless Digital Watermarking Using Complex-Valued Artificial Neural Network, *Journal of Information & Communication Technology*, Vol 9, pp.111-137, 2010, ISSN 1675-414X. **2010**
- 25) Abdurazzag Ali Aburas, Salem Ali Rehial, 'Fingerprint Patterns Recognition System Using Huffman Coding', Volume: 2172, Issue: 1, *Lecture Notes in Engineering and Computer Science*, ISSN: 2078-0958, Publisher: International Association of Engineers. **2009**
- 26) Abdurazzag Ali Aburas and Salem A Rehial, "Off-line Omni-style Handwriting Arabic Character Recognition System Based on Wavelet Compression", *ARISE is an online Internet-based Journal*. www.arabrise.org; ISSN 1994-3253, Vol. 3 No. 4, Dec **2007**. PP123-135
- 27) Abdurazzag Ali Aburas and Nurul Fariza Zulkurnain, "Investigation of the Time-Series Medical Data based on Wavelets and K-means Clustering", *ARISE is an online Internet-based Journal*. www.arabrise.org; ISSN 1994-3253, Vol. 3. No. 3 July **2007**. PP 112-122
- 28) Abdurazzag Ali Aburas and Zainab Senan Mahmod, "IPv4-over-IPv6 Tunneling", *ARISE is an online Internet-based Journal*. www.arabrise.org; ISSN 1994-3253, Vol. 4. No. 1 January -March **2008**. PP 7-18
- 29) Abdurazzag Ali Aburas and Nurul Fariza Zulkurnain, "Investigation of the Time-Series Medical Data based on Wavelets and K-means Clustering", *ARISE is an online Internet-based Journal*. www.arabrise.org; ISSN 1994-3253, Vol. 3. No. 3 July **2007**. PP 112-122, **2007**
- 30) Abdurazzag Ali Aburas and Zainab Senan Mahmod, "IPv4-over-IPv6 Tunneling", *ARISE is an online Internet-based Journal*. www.arabrise.org; ISSN 1994-3253, Vol. 4. No. 1 January -March **2008**. PP 7-18, **2008**
- 31) Abdurazzag Ali Aburas and Othman O Khalifa, "PDA Mobile Learning Using Indoor Intelligent Wireless Whiteboard", Notes for Editor, Notes for Editors of The Turkish Online Journal of Distance Education (TOJDE), http://tojde.anadolu.edu.tr/makale_goster.php?id=328 (Scopus), ISSN: 1302-6488; Vol. 8, No. 2, April **2007**

Int. Conferences Research Paper Publications:

- 1) Hassan Adegbola Afolabi, and Abdurazzag A Aburas, ROS-BPDNN: AN IMPROVED DEEP LEARNING FRAMEWORK FOR DDOS ATTACK DETECTION USING DATA BALANCING AND FEATURE EXTRACTION TECHNIQUES, Postgraduate Research and Innovation Symposium 2021, 09 and 10 DECEMBER 2021, PP118, UKZN, South Africa, <https://z5h3i8e5.stackpathcdn.com/wp-content/uploads/2021/12/PRIS-2021-Proceedings-V6.pdf>, 2021.
- 2) Hassan Adegbola Afolabi, and Abdurazzag A Aburas, Comprehensive Review on the Blockchain Technology Security and Privacy Solution in Cloud Computing for the Green IoT, 2nd INTERNATIONAL CONFERENCE ON SECURITY & PRIVACY (ICSP 2021), <https://icsp.co.in>, Springer LNNS, November 16-17, 2021, India, **2021**.
Accepted (no fund for publication).
- 3) Abdurazzag Aburas and Sumanth Aduri, A comparison of the Encryption Techniques based on Time and Size evaluations, The International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME'21), 7-8 Oct 2021, Mauritius, <http://www.iceccme.com>, **2021**. **Accepted (no fund for publication).**
- 4) Hassan A. Afolabi, and Abdurazzag Ali Aburas, Securing Green IoT Infrastructure Using Blockchain-Based Machine Learning Intrusion detection system, International Conference on Innovative Research in Engineering and Technology (ICIRET-21), will be held on 25th - 26th February 2021 at Jakarta, Indonesia, <http://iciret.net/index.php>, **2021**.
Accepted (no fund for publication).
- 5) Abdurazzag Ali Aburas, Brandon Perumal Govender, Password Construction and Validation Using Mouse Clicks, 2020 International Conference on Internet of Things, August 12-14, 2020, Honolulu, Hawaii, USA, <http://iciot.org/2020/index.html>, **2020**. **Accepted (no fund for publication)..**
- 6) Abdurazzag Ali Aburas, Best Teammate Matching Recommender System for Online Games Using KNN Machine learning Technique. The Intelligent Systems Conference (IntelliSys) 2020 is to be held from 3-4 September 2020 - Amsterdam, The Netherlands. <https://saiconference.com/IntelliSys>. **2020**. **Accepted (no fund for publication).**
- 7) Abdurazzag Ali Aburas and Brandon Perumal Govender, Alternative Graphical Password Authentication Based on Mouse Clicks. The Intelligent Systems Conference (IntelliSys) 2020 is to be held from 3-4 September 2020 - Amsterdam, The Netherlands. <https://saiconference.com/IntelliSys>. **2020**. **Accepted (no fund for publication).**

- 8) Abdurazzag Aburas and Phiwayinkosi Victor Ngema, Encryption technique using modified RSA algorithm and Huffman Code. The Intelligent Systems Conference (IntelliSys) 2020 is to be held from 3-4 September 2020 - Amsterdam, The Netherlands. <https://saiconference.com/IntelliSys>. **2020. Accepted (no fund for publication).**
- 9) Abdurazzag Ali Aburas, Human Voice Health or Emotional Signal Classifications Using KNN Machine Learning
- 10) Abdurazzag A Aburas & Mohammad Hassan, "Supervised Digital Image Watermarking Scheme Using Fractal Dimension Approach", 17th - World Conference on Applied Science Engineering and Technology (WCASET - 19), Jakarta, Indonesia on March 15th and 16th, **2019**
- 11) Abdurazzag Ali Aburas, Jamie A. Reade, Sanam Daya, and Antoine B. Mame, Smart Dispense Non-Prescription Medication Machine, 10th International Symposium on Intelligent Manufacturing and Service Systems (IMSS'19), Sakarya University - Sakarya/Turkey, 9-11 September **2019**, PP-1-8, <https://www.imss.sakarya.edu.tr/#sponsors>. **2019**
- 12) Abdurazzag Ali Aburas, Hilary Lin, Shreshtha Batshu, Child Abuse datasets reduced for better efficient handling through big data methods, International Conference on Cloud Computing, Big Data, and Blockchain (ICCB 2018), 15th-17th, Nov **2018**, Fuzhou, China. <http://fzuconf.com/ICCB-2018/index.htm>. **2018. Accepted (no fund for publication).**
- 13) Abdurazzag Ali Aburas, Mohammad Hassan, Hilary Lin, Shreshtha Batshu, Child Maltreatment Forecast using Bigdata Intelligent Approaches, The 6th International workshop on Big Data and Social Networking Management and Security (BDSN 2018), Valencia, Spain, October 15-18, **2018**. PP 302-308, <http://emergingtechnet.org/BDSN2018/#>
- 14) Abdurazzag Ali Aburas, Scott Eyono, Omesan Naidoo, Vehicle Accident Foresight System using Bigdata Intelligent Random Forest, The 10th International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, Zhengzhou, China, October 18 - 20, **2018**, PP 273 – 280, www.Cyberc.org. **2018**
- 15) Abdurazzag A Aburas, Muhammed Mehtab, and Yusuf Mehtab, ICC World Cup Prediction Based Data analytics and Business Intelligent (BI) Techniques, The 10th International Conference on Cyber-Enabled Distributed Computing and Knowledge Discovery, Zhengzhou, China, October 18 - 20, **2018**, PP 281 – 287, www.Cyberc.org, <https://dl.acm.org/citation.cfm?id=3277117>. **2018**
- 16) Abdurazzag Ali Aburas, Scott Eyono, Omesan Naidoo, Bigdata Random Forest Algorithm based Vehicle Accident Precognition, IEEE 2nd International Conference on Green Computing and Internet of Things (ICGCIoT 2018), Bangalore, Karnataka, India, 16-18 August **2018**, <http://gciot-conference.org/2018/index.html>. **2018. Accepted (no fund for publication).**
- 17) Abdurazzag Ali Aburas, Brenton Chetty, Regan Chetty, Devashnee Bhagawandin, Social media Platforms for Marketing and Advertising using Bigdata Intelligent Approach, 3rd International Conference on Engineering Technology and Applied Sciences (ICETAS), July 17-21 **2018**, PP 406 – 411, Skopje Macedonia, <https://www.icetas.com/>. **2018**
- 18) Abdurazzag A Aburas, Muhammed Mehtab, and Yusuf Mehtab, Cricket World Cup Predictions using KNN intelligent Bigdata approach, 2018 International Conference on Computing and Big Data (ICCBD 2018), College of Charleston, Charleston, South Carolina, USA, September 08-10, **2018**, <http://www.iccbd.org/>. DOI = {10.1145/3277104.3277117}, PP 18-22
<https://dl.acm.org/citation.cfm?id=3277117&dl=ACM&coll=DL#URLTOKEN#> (prediction was true), **2018**.
- 19) Abdurazzag Ali Aburas, Mohammad Hassan, Kashish Seetal, Accurate Footprint Satellite Positioning Space System, The 2nd International Conference on Emerging Trends in Electrical, Electronic and Communications Engineering, Mauritius, on 28-30 November **2018**, PP 362-378, <https://www.elecom2018.com/>. **2018**
- 20) Abdurazzag. Aburas, Mijgan Ayrar, New Smart Mhealth for Higher Education, IEICEICTF2013, 6-7 July **2013**-Sarajevo, B&H. **2013. Accepted (no fund for publication).**
- 21) Abdurazzag A Aburas and Huseyin Lutin, Extended Review for Wireless Network Standards, EuroTecS-2013. **2013**
- 22) Abdurazzag A Aburas and Burak Salar, Digital Clock for Islamic Prayer Times, AIMM2013/IEEE, Malaysia. **2013**
- 23) Abdurazzag. Aburas, Mijgan Ayrar, Human Mobile Interaction based OTC Medicine (HMI for *mHealth*), EuroTecS-2013. **2013**
- 24) Abdurazzag. Aburas, New Dimension for Arabic Handwriting Isolated Characters Recognition, 1st Conference on the Technical Education in Libya, 16-17, Zawia-Libya. **2013**
- 25) Abdurazzag. Aburas, Mijgan Ayrar, Free Prescription Medicine for Mobile Devices(*mHealth*), ICEECS 2013, March 15-17, Tokyo-Japan. **2013**
- 26) Abdurazzag. Aburas, Mijgan Ayrar, and Haris Memic, On Table Counter Medicine, based Mobile Devices (*mHealth*), ICIT 2013, February 6-7, Dubai, UAE. **2013**
- 27) Abdurazzag. Aburas, Andira M., Andira S a, and Bushra, New proposed structure for Communication Engineering Curriculum, BiHTel-May 2012, B&H, Sarajevo. **2012**
- 28) Abdurazzag. Aburas, Comprehensive review for Offline Digital Signature Recognition Techniques, CGVCVIP 2012, 21 - 23 July 2012 in Lisbon, Portugal. **2012**
- 29) Abdurazzag. Aburas, Andira M., Andira S and Bushra, Communication Engineering Curriculum (past, present and the future), ICECECE 2012, Zurich 4-5 July. **2012**.
- 30) Abdurazzag. A. Aburas, A. Ahmed Aburas, Comprehensive review for popular end-user errors in Spreadsheet software, International Conference on Emerging Trends in Computer and Image Processing (ICETCIP'2011), Dec. 23-24, 2011, Bangkok, Thailand. **2011**
- 31) R.F. Olanrewaju, Othman Khalifa, Abdurazzag A Aburas, Aisha Abdulla, Akram M. Z. Khedher, Detection of Alterations in Watermarked Medical Images using Fast Fourier Transform and Complex-Valued Neural Network,

- International Conference on Mechatronic*, Kuala Lumpur, Malaysia, 17th -19th May 2011. (IEEE Xplore® digital library). **2011**
- 32) R.F. Olanrewaju, O.O. Khalifa A. Abdalla and Abdurazzag A Aburas, Watermarking in Safe Region of Frequency Domain Using Complex-Valued Neural Network, *International Conference on Computer and Communication Engineering, ICCCE*, pp 12-17, Kuala Lumpur Malaysia, 11-12 May 2010. (SCOPUS). **2010**
 - 33) R.F. Olanrewaju, O.O. Khalifa A. Abdalla and Abdurazzag A. Aburas, "An Attack Proof Intelligent Digital Watermarking Based on Safe Region of Fast Fourier Transform", *International Conference On Engineering and ICT (ICei2010)*, 18-20 February. **2010**.
 - 34) Rashidah Funke Olanrewaju, Othman Khalifa, Aisha Hassan Abdulla, Abdurazzag Ali Aburas, "Watermarking In Safe Region of Frequency Domain Using Complex-Valued Neural Network", *ICCCE2010*, PP17-23, International Islamic University Malaysia, Malaysia. **2010**.
 - 35) Abdurazzag Ali Aburas and Salem Ali Reheil," Non-Neural Network-Based Arabic Handwritten Character Recognition System", *ACIT2010*, 14-16-Dec2010, Benghazi-Libya. **2010**
 - 36) Abdurazzag Ali Aburas and Rehab Shreef, "Comprehensive review for Online Intelligent Home Schooling,"*World International Conference on Education 2010*, May 19th – 20th, Jordan-Amman. **2010**
 - 37) Abdurazzag Ali Aburas and Rehab Shreef, "On-Line Homeschooling Learning Management System using Intelligent Tutoring System", 5th International Forum on Engineering Education (IFEE2010) Engineering Education in the 21st Century - Quality, Globalization, and Local Relevance, Sharjah, United Arab Emirates. **2010. Accepted Abstract.**
 - 38) Mohamed Gumah, E. Schneider and Abdurazzag Aburas, "Handwriting Recognition Method Using Fast Wavelets Transform", 4th International Symposium on Information Technology-ITSIM'10, Kuala Lumpur, Malaysia, Volume: 1, Digital Object Identifier: 10.1109/ITSIM.2010.5561302, Publication Year: 2010, Page(s): 1 – 6. **2010**
 - 39) Abdurazzag Ali Aburas and Rehab Shreef, "On-Line Homeschooling Learning Management System using Intelligent Tutoring System", 4th International Symposium on Information Technology-ITSIM'10, Kuala Lumpur, Malaysia, Volume: 2 Digital Object Identifier: 10.1109/ITSIM.2010.5561579, Publication Year: 2010, Page(s): 967 – 971. **2010**
 - 40) Abdurazzag Ali Aburas and Rehab Shreef, "Comparison of Student Module Adopted techniques in ITS", The Third International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2010), 12-14 July 2010, Fathi University, Istanbul, Turkey. **2010**
 - 41) Abdurazzag A Aburas and Mohamad Sofian Abu Talip, "Comprehensive Review for Movable-Head Disk Scheduling Optimization using Fuzzy Logic", *International Conference on Information management and engineering (ICIME 2009)*, April 3-5, 2009, Kuala Lumpur, Malaysia. **2009**
 - 42) Rashidah F. Olanrewaju, Aburas Ali Abdurazzag, Othman O. Khalifa, Aishah Abdalla, "State-of-the-Art Application of Artificial Neural Network in Digital Watermarking and the way Forward", *International Conference on Computing and Informatics*, 24 - 25 June 2009 in Kuala Lumpur, Malaysia, PP233–237. **2009**
 - 43) R.F. Olanrewaju, Abdurazzag Aburas, O.O. Khalifa and A. Abdalla, "Image Quality Assessment of Fast Fourier Transform Domain Watermarked Images". In *International Conference on Rural Information and Communication Technology 2009, (r-ICT 09)*, 17-18 June 2009, Bandung, Indonesia. **2009**
 - 44) R.F. Olanrewaju, Abdurazzag A Aburas, O.O. Khalifa and A. Abdalla, "State-of-the-Art Application of Artificial Neural Network in Digital Watermarking and the Way Forward", In *International Conference on Computing & Informatics 2009 (ICOCI 09)*, 24-25 June 2009, Kuala Lumpur Malaysia. **2009**
 - 45) Mohamad Sofian Abu Talip, Aisha Hassan Abdalla, Ahmed Asif, and Abdurazzag Ali Aburas, "Fuzzy Logic Based Algorithm for Disk Scheduling Policy", *International Conference of Soft Computing and Pattern Recognition*, pp.746-749, 4-7Dec 2009, Malacca, Malaysia. **2009**
 - 46) Abdurazzag A Aburas and Rashidah F. Olanrewaju, "Intensive Review On Digital Watermarking", *Proceedings of the 2nd International Conference on Science and Technology (ICSTIE'08)*, 12 -13 December 2008 Penang, Malaysia. **2008**.
 - 47) Abdurazzag Ali Aburas and Rashidah F. Olanrewaju," Intensive Review on Digital Watermarking", *ICSTIE2008-2nd International Conference on Science Technology, University Technology Mara, Penang-Malaysia*, 12-13 December **2008**.
 - 48) Abdurazzag Ali Aburas, Nural H and Nural A., "An Analysis of Accessibility and Usability of IIUM Web site using Fuzzy Logic: Case Study", *ITSim'08*, 26-28, August 2008, Kuala Lumpur, Malaysia. **2008**
 - 49) Abdurazzag Ali Aburas and Mohammed Alrijmali, "Arabic Handwriting Recognition: Challenges and Solutions", *ITSim'08*, 26-28, August 2008, Kuala Lumpur, Malaysia. **2008**
 - 50) Abdurazzag Ali Aburas and Sofia Abdulgafaar, "BETTER HIDING MECHANISM FOR DIGITAL WATERMARKING BASED ON THE IMPACT OF COMMON ATTACKS", 5th International Conference Computer Graphics, Imaging and Visualization25, 26-28 August 2008 · USM, Penang, Malaysia. **2008**
 - 51) Abdurazzag Ali Aburas and Mohammed Alrijmali, " Challenges of the Arabic Handwriting Recognition: A Review", 5th International Conference Computer Graphics, Imaging and Visualization25, 26-28 August 2008 · USM, Penang, Malaysia. **2008**
 - 52) Abdurazzag Ali Aburas and Salem Ali Reheil, "Fingerprint Patterns Recognition System Using Huffman Coding", *WCE2008, World Congress on Engineering, The 2008 International Conference of Information Engineering*, London, U.K., 2-4 July **2008**.
 - 53) Abdurazzag Ali Aburas and Mukhlis Ramli," e-Learning Interactive Tools for Primary School Pupil", *ICIE 2008, International Conference on Excellence in Education 2008: Future Minds and Creativity. Paris – France July 2-4*, **2008**.

- 54) Abdurazzag Ali Aburas and Salem Ali Reheil, "New Promising Tool for Off-Line Arabic Handwritten Character Recognition Based On JPEG2000 Image Compression", IEEE-3rd International Conference on Information & Communication Technologies: From Theory to Applications (ICTTA'08), Damascus-Syria, April 47-11, **2008**
- 55) A.A. Aburas and S.A. Reheil, "Accurate Tool based on JPEG Image Compression for Arabic Handwritten Character Shape Recognition", Artificial Intelligence and Applications (AIA 2008), February 11 – 13, 2008 Innsbruck, Austria, <http://www.actapress.com/Abstract.aspx?paperId=32309>, **2008**
- 56) Abdurazzag Ali Aburas and Zainab Senan Mahmod, "IPv4-over-IPv6 tunneling", ICCCE08, 13-15th May 2008, KL-Malaysia, **2008**
- 57) Abdurazzag A Aburas and Nurul Fariza Zulkurnain, "Wavelets and K-means Clustering to Analyze Time-Series Medical Data", ICCCE08, 13-15th May 2008, KL-Malaysia, **2008**
- 58) Abdurazzag Ali Aburas and Vladimir Miho, "Fuzzy Logic Based Algorithm for Uniprocess Scheduling", ICCCE08, 13-15th May 2008, KL-Malaysia, **2008**
- 59) Abdurazzag Ali Aburas and Salem Ali Reheil, "Fast Technique for Handwriting Arabic Character Recognition using Haar Wavelet Compression", ACIT'2007, 26-28th 2007, AAST- Lattkia, Syria, **2007**
- 60) Abdurazzag Ali Aburas and Sofia G., "Comprehensive Study for Five Digital watermark Systems", ICEi2007, 27-28th November 2007, Melaka-Malaysia, **2007**
- 61) Abdurazzag Ali Aburas and Salem Ali Reheil, "off-line Handwriting Arabic Character Recognition Based Wavelet Compression", iCEi2007, 27-28th November 2007, Melaka-Malaysia, **2007**
- 62) Abdurazzag Ali Aburas and Manal I. Al Fallah, "WORK BASED PLANNING FOR BETTER ENGINEERING EDUCATION", 2nd Regional Conference on Engineering Education 2007, RCEE 3-5th December 2007, Johor, Malaysia, **2007**
- 63) Abdurazzag Ali Aburas, "Water Impact Analysis over Distribution Pipelines Network", 1st Engineering Conference 'Energy & Environment', ENCON2007, December 27-28th, 2007, Kuching, Sarawak, Malaysia, **2007**
- 64) Abdurazzag Ali Aburas and Salem Ali Reheil, "Handwriting Arabic Character Recognition using Haar Wavelet Compression", ICIAS2007 Malaysia-KL, 25-28th November **2007**
- 65) Abdurazzag A Aburas, "Coding technique for data hiding in digital media based on pixel levels", VIIP2007 IASTED, Aug 29th -31st, Palma De Mallorca, Spain, **2007**
- 66) Abdurazzag A Aburas and Huda Adibah Mohd Ramli "DSSA APPROACH FOR A ROUTING PROTOCOL IN MOBILE AD-HOC NETWORK", International Conference on Wireless and Optical Communications (WOC 2007), May 30 to 1st June 2007, Montreal, Canada, **2007**
- 67) Abdurazzag A Aburas and Sofia Abdul Ghafur, "ATTACKS BEHAVIOURS ON DIGITAL WAT and Imaging - GMAI07, Zurich – Switzerland, 4-6- July **2007**.
- 68) Abdurazzag Ali Aburas and Salem Ali Reheil, "Comprehensive review for Arabic Handwriting and Printed Characters Recognition", ICIAS2007 International Conference, Malay ERMARK SYSTEMS: A SURVEY", 2nd International Conference on Geometric Modelling sia-KL, 25-28 November **2007**.
- 69) Abdurazzag Ali Aburas and Sofia G., "Evaluation for Five Different Digital watermark Systems based on Attacks", International Conference on Rural Information and Communication Technology – r-ICT2007, 6-7 August 2007, Bandung, Indonesia, **2007**
- 70) Abdurazzag A Aburas, "Coding technique for data hiding in digital media based on pixel levels", Fourth IEEE International Conference on Systems, Signals & Devices SSD'07, March 21-24, 2007, Hammamet – Tunisia, **2007**
- 71) Abdurazzag A Aburas, "Engineering Education Strategy: Planning for Development", Association for Engineering Education in South East Asia (AEESEA07) International Conference, Kuala Lumpur, Malaysia 14/2/**2007**.
- 72) Abdurazzag A Aburas, "PDA Mobile Learning using Wireless Whiteboard in Classroom", The 2nd International Conference on Interactive Mobile and Computer-aided Learning – ICML2007, Amman, Jordan, 18–20 April **2007**.
- 73) Abdurazzag A Aburas, "Linear and Non-Linear Digital Book Functions Controls for E-Learning Distribution Environment", the 3rd International Conference on Open and Online Learning (ICOOL2007), Penang, Malaysia, June 11–14th **2007**.
- 74) Abdurazzag A Aburas, "On-Line Teaching Enhancement Based on Mouse Clicks", The 2nd International Conference on Interactive Mobile and Computer-aided Learning – ICML2007, Amman, Jordan, 18–20 April **2007**.
- 75) Abdurazzag A Aburas, "Text Search Algorithm Based on Stacks", 1st International Conference on Digital Communications & Computer Applications, DCCA2007, Irbid – Jordan, 19-22nd March **2007**.
- 76) Abdurazzag A Aburas, "New Search Algorithm Based Stacks", the 2nd International Computer Engineering Conference: Engineering the Information Society (ICENCO'2006), Cairo – Egypt, Dec 26-28 **2006**.
- 77) Abdurazzag A Aburas, "Text Search Algorithm Based on Stack Abstract Data Type", 4th Conference on Scientific Research Outlook & Technology Development in the Arab World, SR04 Conference, Damascus – Syrian Arab Republic, Dec 11- 14, **2006**.
- 78) Abdurazzag A Aburas, "Coding Method for Key Distribution Watermark using Eight Bits Levels Binary Tree", 4th Conference on Scientific Research Outlook & Technology Development in the Arab World, SR04 Conference, Damascus – Syrian Arab Republic, Dec 11-14th, **2006**.
- 79) Abdurazzag A Aburas, "The Electrical Medical Doctor System", IUM, CBE-Conference, 26-27th June **2006**.
- 80) Abdurazzag A Aburas, "The E-Medical Doctor System", IUM, CBE-Conference, 26-27th June 2006-Technical Paper, **2006**

- 81) Abdurazzag A Aburas, "Optimizing the General-Purpose Controller Network Architecture (GPCNA)", VOCAL-2004, Veszprem, Hungary, **2004**
- 82) Abdurazzag A Aburas, "Testing Packages Based Mouse Clicks", The 5th International Workshop on Gesture and Sign Language based Human-Computer Interaction, Genova, Italy, **2003**.
- 83) Abdurazzag A Aburas, "Testing Software Packages Using Mouse Clicks Controls"- HCI2003 conference, Greece, **2003**.
- 84) Abdurazzag A Aburas, "New approach for Distinct Learning", 7th IASTED, ASC2003 Conference, Banff, Alberta, Canada, **2003**
- 85) Abdurazzag A Aburas, "New Solution for Scaling Pattern Recognition Problem", ACIT2003, Egypt, **2003**
- 86) Abdurazzag A Aburas, "Blind Digital Watermarking based on the Upper and the Lower bit Sequences", MESM2003, UAE, **2003**
- 87) Abdurazzag A Aburas, "Invisible Interface for Monitoring users", ACIT2002, Qatar, pp 928, **2002**
- 88) Abdurazzag A Aburas, "Data Image Compression schemes for Pattern Recognition in Digital Images Using Fractals", ACIT2000, Jordan, **2000**

Keynote Speaker Presentation:

- 1) Keynote Speaker: IMCES2020 Indonesia 27-29 May. 2020, <http://imces.tech/keynote.html>
- 2) Keynote Speaker: Bigdata: Top-Down Approach, 2nd World Conference on Robotics, and Artificial Intelligence (WCRAI-2019), <https://scientificfederation.com/wcrai-2019/speakers.php>, 10-12, June **2019**, Osaka, Japan.
- 3) Keynote Speaker: Case Study Scenarios using Bigdata Approach, ICMRN-2019 10-12 June Conference, Roma-Italy. <https://phronesisonline.com/materials-research-conference/>, **2019**
- 4) Presenter: Smart Machine to Sell Free Prescription Medicine, (SFSA2018), 14/12/2018, Pretoria, South Africa, <https://www.sfsa.co.za/smart-machine-to-sell-free-prescription-medicine/>, **2018**
- 5) Keynote Speaker: CSSBDA: Case Study Scenarios using Bigdata Approach, 2nd IEEE International Conference, Data Stream Mining & Processing, 21–25 AUGUST 2018, LVIV-Ukraine. <http://dsmp.in.ua/index.html#lgx-speakers>
- 6) Principle workshop Trainer: Big data in Physics: Machine Learning Techniques, UKZN Research Flagship: Big Data and Informatics - Computing Solutions, UKZN, July 4, **2018**
- 7) Invited Speaker: <https://www.icetas.com/> 3rd International Conference on Engineering Technology and Applied Sciences Congress, Skopje-Macedonia, July 17-21, **2018**
- 8) Keynote Speaker: Global Conference on Magnetism and Magnetic Materials", July 23-25, 2018, Osaka, Japan. <http://scientificfederation.com/magnetism-2018/>, **2018**
- 9) Keynote Speaker: Big data: Top-Down Approach, 5th International Conference on Big Data Analysis and Data Mining, which is going to be held during 20-21 June 2018, Rome Italy. <https://datamining.conferenceseries.com/>
- 10) Invited Speaker: Workshop UKZN Research Flagship: Big Data and Informatics - Computing Solutions, UKZN, Westville, 15 Dec **2017**
- 11) Keynote Speaker: Big Data: R for Reduction. International Symposium on Engineering and Applied Science (ISEAS), August 14-16, 2017, Osaka, Japan. <http://iseas.org/site/page.aspx?pid=901&sid=6029&lang=en>, **2017**
- 12) Keynote Speaker: Big Data: Reduction Not Compression. International Conference on Science in Information Technology, October 25-26, 2017, Bandung, Indonesia. <http://icsitech.org/2017/Committee/keynote>, **2017**
- 13) Keynote Speaker: XXIX National Congress and XIV International Congress of Informatics and Computing 2016, 19-21 Oct 2016, Toluca, Estado de México, México, <http://www.aniei.org.mx/ANIEI/eventos-aniei/congreso-nacional-e-internacional/>, **2016**
- 14) Keynote Speaker: Environmental Health 2016 <http://environmentalhealth.conferenceseries.com/> October 24-25, 2016 Valencia, Spain, **2016**
- 15) Keynote Speaker: Healthcare Conferences, <http://healthinformatics.conferenceseries.com/>, June 29-30, 2016 New Orleans, Louisiana, USA, **2016**
- 16) Keynote Speaker: World Congress on Public Health and Nutrition March 10-12, 2016 Madrid- Spain, <http://publichealth.global-summit.com/events-list/public-health>, Accessed on Jan **2016**
- 17) Keynote Speaker: 3RD WORLD SYMPOSIUM ON WEB APPLICATIONS AND NETWORKING (WSWAN'2016), March 12-14 Dubai, United Arab Emirates. <http://wswan.org/ImpDates.php>, Accessed on Feb **2015**
- 18) Keynote Speaker: International Conference in Software Engineering Research and Innovation (CONISOFT'16), Puebla, México on April 27-29, 2016. <http://redmis2016.com.mx/conisofit2016/>, Accessed on Jan **2015**
- 19) Invited Talk: Human Mobile Interaction, Universidad San Francisco De Quito, Ecuador, 28 Sept. **2015**, www.usfq.edu.ec
- 20) Keynote Speaker: Conference "Pattern Recognition in Digital Images", 10 April 2015, Monterrey University-San Luis Potosi Campus, Mexico. <http://www.itesm.mx/wps/wcm/connect/Campus/SLP/San+Luis+Potosi/>, **2015**
- 21) Distinguish Speaker: Global Engineering Education Sessions, 3-5 March 2015-UAE-Dubai, <http://ieom.org/ieom/global-engineering-education/>, **2015**
- 22) Invited Distinguish Speaker: Global Engineering Education Sessions – 2014 IEOM Conference, Grand Hyatt, Bali, Indonesia, January 7-9, 2014, <http://ieom.org/ieom/global-engineering-education/>, **2014**
- 23) Invited Speaker: Technology Days Conference-Technodays2013, University of Tripoli-Tripoli, Libya, 9-10 October **2013**.

- 24) Invited Speaker: The 7th APAMI 2012, Conference, to be held in Beijing on 22-25 October **2012**.
- 25) Invited Speaker: Health 2.0 Europe 2012, 6-7 November 2012 - Langenbeck-Virchow Building, Berlin, Germany, **2012**.
- 26) Keynote Speaker, ICACTE2012-SouthAfrica-18-19-August **2012**.
- 27) Invited Speaker: "Free Prescription Medicine Machine", The First Regional Conference on Soft Computing IUSSCRG 2012, B&H, Sarajevo, 22-23 June **2012**.
- 28) Invited Speaker: International Conference on Computational & Experimental Engineering and Sciences, 8-13 April 2009, Phuket, Thailand, **2009**.
- 29) Invited Speaker: Special Seminar "Recognition of Handwritten Characters", organized by Computer and Information Sciences, Universiti Teknologi PETRONAS, Perak, Malaysia, 6th November **2008**.
- 30) Invited Speaker: "Accurate Tool for Handwritten Isolated Characters Recognition Based on Image Compression Techniques", 2nd International Conference on Signals, Circuits & Systems November 7-9, 2008, Hammamet, Tunisia, **2008**.
- 31) Invited Speaker: "Pattern Recognition based on Image Compression", WCE2008, World Congress on Engineering, The 2008 International Conference of Information Engineering, London, U.K., 2-4 July **2008**.
- 32) Invited Talk (Seminar): "Current Research Projects on Pattern Recognitions", National School of Engineering' Tunis, Tunisia, 18 June **2008**.
- 33)

Academic Awards:

- (1) JW Nelson Fund UKZN Research Productivity Award **2022**
- (2) Certificate of recognition for contribution to the success of the **2020** academic year during the COVID-19 Pandemic.
- (3) Award winner: Primary Research award for the CSES research award programme, AES-UKZN, **2019**.
- (4) Bronze Medal: O.O. Khalifa, R.F. Olanrewaju, A. Abdalla and A. A. Aburas, Novel Forgery Watermark Detector IIUM Research, Invention, and Innovation Exhibition IRIIE, 9th -11th February **2011**.
- (5) Silver medal: O.O. Khalifa, R.F. Olanrewaju, A. Abdalla, and A.A. Aburas, "Damageless Digital watermarking Using CVNN" IIUM Research, Invention, and Innovation Exhibition IRIIE, 26-27th January **2010**.
- (6) Bronze Medal: O.O. Khalifa, R.F. Olanrewaju, A. Abdalla and A.A. Aburas, Novel Damageless Digital Watermarking Using CVNN" Malaysia Technology Expo MTE, 4th – 6th February **2010**
- (7) Award winner: Promising Researcher –KOE-IIUM **2008**.
- (8) Award winner: Dean of Kuliyah of Engineering's Contest. August **2007**
- (9) Award winner: Bright Idea Contest 2006- IIUM – Faculty of Engineering, **2006**.
- (10) Two Bronze Medal: KERIE2006 and KERIE2007, IIUM, **2006**
- (11) Winner of the First Position of Computer Science dept. the contest, Zarka Private University, **2002**

Personal Organizations:

Journal's Editorial/Reviewer Board:

- 1) The American Journal of Agricultural Science, Engineering, and Technology (AJASET), <https://journals.e-palli.com/home/index.php/ajaset>
- 2) AI Scholar Expert Reviewer team: manuscripts aimed at SCI/SSCI/El-indexed journals. <https://www.ais.cn/>
- 3) Editorial member: The Research Bulletin of JORDAN ACM – ISWSA, ISSN:2078-7952 (print), EISSN: 2078-7960 (online) <http://ijj.acm.org/editorial.html>

Int. Conference Committee:

- (1) Member of the Technical Proceeding Committee (TPC), <http://www.wsse.org/committee.html>, **2020**.
- (2) Member of the Organizing Committee of WCASET2019 conference. <http://wcaset.co/committee.php>, **2019**.
- (3) Conference Scientific Committee: <https://www.icetas.com/scientific-committee>, **2018**.
- (4) Conference Scientific Committee: International Conference on Computer Science and Artificial Intelligence (CSAI 2017). <http://www.csai.org/committee.html>, **2017**.
- (5) Conference Scientific Committee: <http://www.icins.org/>, **2016**.
- (6) Conference Scientific Committee: EKOTEK'14 -International Conference and Exhibition on Electronic Computer and Automation Technologies- ICEECAT 2014, <http://ekotek.selcuk.edu.tr/en/index.php?pt=0>, **2014**
- (7) 2001 – 2002: Head of the Sciences Committee in Faculty of Sciences, Zarka Private University, **2002**

Module and Curriculum/Programme design, review, and development:

- (1) Bigdata Fundamental: New big data course curriculums developed designed and introduced, Howard College Campus, Durban, UKZN, **2017**.
- (2) Aware of curriculum recommendations CS2013. <https://www.acm.org/education/CS2013-final-report.pdf>. Accessed on 2016
- (3) Big data-Analysis and Implementation: New course curriculum development and design introduced in 2016, TEC SLP, ITESM, **2016**
- (4) Human Mobile Interaction: New course curriculum development and design introduced in IUS, **2015**
- (5) A computer for Engineering: New course curriculum development and design introduced in IIUM, **2008**

- (6) Member: Self Evaluation program committee, IUS, 2013 to **2015**.
- (7) Member: Board of Studies of Engineering Curriculum development (Review and Improvement). Dept. of Electrical and Computer Engineering, Faculty of Engineering, International Islamic University Malaysia, **2008**.
- (8) Head of the Sciences Committee in Faculty of Sciences, Zarka Private University 2001/**2002**

Research Group:

- 1) Coordinator UKZN-Bigdata research group. Howard College Campus, Scholl of Engineering, UKZN, **2017** – present time.
- 2) Coordinator Cloud Computing and Mobile Research Group – CCM RG, 2012 – 2015, IUS, **2012**.
- 3) Coordinator Software Engineering Research Group – SERG, 2006-2009, IIUM, **2009**.

Research Fund and Industry Collaboration:

- 1- Start-up research fund: R30.000 from School of Engineering, **2018**. Completed.
- 2- Team Leader of 3 researchers: Inventory Management System, Webappi, www.telepyte.mx. From 25 August to 22 November 2015, Completed.
- 3- Team Leader of 3 researchers: 3D Graphic Modelling Tutorial for High school, Briko Company, <http://briko.cc/>. From 1 February to 22 April 2016. Completed.
- 4- Team leader of 6 software developers and Project Investigator: building complete software packages for United Insurance Company -Tripoli-Libya. <http://www.muttahida.ly>. From 10 February to 25 Oct1999. Completed.

Faculty Development Experiences:

List of Patents:

- 1) Method for Embedding and Extracting Digital Watermark without Distorting Watermarked Image Using A Complex-Valued Neural Network, Inventors: A. A Aburas, O.O. Khalifa, R.F. Olanrewaju, and A. Abdalla, (Ref No, UI 2010004097), Faculty of Engineering, Electrical and Computer Engineering Dept., International Islamic University Malaysia, Malaysia, 01st September 2010. Granted (MY-154518-A). <http://www.iium.edu.my/research-management-centre/innovation-commercialization-unit-services>
- 2) Methods and apparatus for recognizing Arabic handwritten characters (Arabic characters), Inventors: A. Aburas and Salem Ali Rehiel, registered (Ref. No. PI 20091071), Faculty of Engineering, Electrical and Computer Engineering Dept., International Islamic University Malaysia, Malaysia, 17 Mar 2009. <http://www.iium.edu.my/research-management-centre/innovation-commercialization-unit-services>

Citation:

- a) **Google Scholar page:** <https://scholar.google.com/citations?user=s0VLivgAAAAJ&hl=en>
- b) **Scopus:** <https://www.scopus.com/authid/detail.uri?authorId=16174147500>

Publication citation/Downloaded References:

- (1) http://www.intechopen.com/books/advances_in_robotics_automation_and_control. [Accessed on May2018]
- (2) <http://waset.org/publication/Printed-Arabic-Sub-Word-Recognition-Using-Moments/6817>. [Accessed on March2015]
- (3) <http://www.hindawi.com/journals/afs/2014/841976/>. [Accessed on March2015]
- (4) <http://www.ijcaonline.org/archives/volume33/number9/4048-5810>. [Accessed on March2015]
- (5) <http://waset.org/Publication/communication-engineering-curriculum-past-present-and-the-future-/8862>. [Accessed on 14 Oct2016]
- (6) <http://ieeexplore.ieee.org/xpl/abstractCitations.jsp?tp=&arnumber=4631744&isnumber=4631638&url=http%3A%2F%2Fieeexplore.ieee.org%2Fstamp%2Fstamp.jsp%3Ftp%3D%26arnumber%3D4631744%26isnumber%3D4631638#ieeCitations>. [Accessed on March2015]

Publication Profile and Impact Scores

- 1) Google Scholar: <https://scholar.google.com/citations?user=s0VLivgAAAAJ&hl=en>
- 2) SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=16174147500>
- 3) Research Gate: <https://www.researchgate.net/scientific-contributions/Abdurazzag-A-Aburas-2150123091>
- 4) ARID: <http://arid.my/0001-2659>
- 5) LinkedIn: https://www.linkedin.com/in/abdul-aburas-55336b120/?locale=zh_CN

Postgraduate Research Project Supervisor:

Ph.D. Degree thesis supervisor:

- (1) Student: Afolabi Hassan Adegbola (Computer Engineering), UKZN, 2019, **Ph.D.** research proposal title:” Multi-Objective Multi-Dimensional Knapsack Problem: A Hyper-Heuristic Approach”, (international student), in progress.
- (2) Student: Razan Saadaldeen Mohammed (Computer Engineering), UKZN, 2019, **Ph.D.** research proposal title:” Energy Efficient Clustering Hierarchy by Reducing Redundancy Data in Wireless Sensors Network”, (international student), in progress.

- (3) Student: Odusami Modupe Olufunke (Computer Engineering), UKZN, 2019, **Ph.D.** research proposal title: "A Scalable and Optimized Technique for Alleviating Layer Seven Distributed Denial of Service Attack on Web Server", (international student), in progress.
- (4) Student: R.F. Olanrewaju, **Ph.D.** in (Computer & Information Engineering) Started February 2008, Project research title: "Intelligent Digital watermarking based on Safe Region". Completed 2011
- (5) **Ph.D.** Student (Computer & Information Engineering) Started December 2008, Project research title: "Novel Approach for secure Digital Watermark based on the knowledge of the host image and intelligent embedder". Completed 2010
- (6) **Ph.D.** student (Computer and Information System- Universiti Teknologi PETRONAS, started February 2008, project title: "Off-Line Arabic Handwritten Recognition Using Gabor Filter". Project Completed December 2010.
- (7) **Ph.D.** Student (Department of Aerospace Engineering, University of Bristol, UK), " Intelligent Robust Fuzzy-Flatness Tracking Control of a Parallel Robot Manipulator", August 2012
- (8) External supervisor for a **Ph.D.** research student in Dept. of Electronics & Electrical Engineering. Loughborough University-UK. Project completed July 2004.

Master's degree Thesis supervisor:

- 1) Three Students in **MSc** research degree (Computer & Information Technology), Completed, IIUM. 2007
- 2) Student: Sofia Abdulgafaar, **MSc** Research project title: "Better Hiding Mechanism for Digital Watermarking Based on the Impact of Common Attacks". Project Completed December 2007, IIUM.
- 3) Student: Vladimir Miho, **MSc** Research project title: "Fuzzy Logic Based Algorithm for Uniprocessor Scheduling". Project Completed December 2007, IIUM.
- 4) Student: Nural H and Nural A., **MSc** Research Project in Artificial Intelligent and Fuzzy Logic. The project started July 2008- Project Completed March 2010, IIUM.
- 5) Student: Rehab Shreef, **MSc** research Project title: "On-Line Homeschooling Learning Management System using Intelligent Tutoring System". Started in January 2010. Completed June 2010, University of Tripoli.

Ph.D. & MSc. External Examiner:

- 1- Student: Mr E Mbunge, **Ph.D.** Thesis Title: An Investigation of ICT-Based Malaria Intervention Framework for Rural Communities, Durban University of Technology, **2022**.
- 2- Student: André van der Walt (216007017), **MSc.** Thesis title: Investigating Machine- and Deep-Learning Model Combinations for a Two-Stage IDS for IoT Networks, UKZN, **2021**.
- 3- Student Ms. VICTORIA MUKAMI NJOROGI, **Ph.D.** thesis title " A framework to lower maternal mortality and morbidity rates in Kenya using mobile technology", Durban University of Technology, **2020**.
- 4- Student Mr. ABRAHAM MATHEKA MUTUA, **Ph.D.** thesis title " Using ICT For Diarrhea Intervention In Resource-Constrained Environments: A Case Study of Narok County In Kenya", Durban University of Technology, **2020**.
- 5- Student Mr. Mkhushi Ngxande, **Ph.D.** thesis title "Correcting inter-sectional accuracy differences in drowsiness detection systems using generative adversarial networks.", School of Engineering, Howard College Campus, University of KwaZulu-Natal, **2019**.
- 6- Candidate: Mr. K Srinivas Rao (USN: 10X15PEJ09), **Ph.D.** thesis title "Oncological Cell Detection using Lab-on-Chip based Optical Sensor", VISVESVARAYA TECHNOLOGICAL University, 2020.
- 7- Student Andile Mlaba, **MSc.** Thesis title: "Online signature Verification using Hybrid Transform Features", Computer SCIENCE Department, Pietermaritzburg Campus, UKZN, **2018**.
- 8- Student: Festus Osayamwen, **MSc.** thesis title: "Feature Regularization and Learning for Human Activity Recognition", School of Engineering, Howard College Campus, University of KwaZulu-Natal, **2018**.
- 9- Student, Mr. Abuobayda Shabat, **Ph.D.** thesis title: "Improvement of Local Directional Pattern for Texture Classification", School of Engineering, Howard College Campus, University of KwaZulu-Natal, **2016**.
- 10- Students, Mr. Jules Raymond Kala, **Ph.D.** thesis title: "Leaf Recognition for Accurate Plant Classification", School of Engineering, Howard College Campus, University of KwaZulu-Natal, **2017**.

Computer Knowledge:

1. Computer languages such as C/C++, JAVA, Oracle/SQL, and Python Spyder versions.
2. IT application packages, Microsoft Office
3. CASE tools such as Oracle CASE, Turbo CASE, and Rational Rose.
4. UNIX on the SUN platform.
5. LINUX OS
6. X Designer Graphic User Interface "GUI"
7. MS Windows Desktop Operating System

Technical Skills:

- 1) Experience in e-learning environments (e.g.: Moodle, ZOOM, Teams, and OBS)
- 2) Machine Learning Techniques
- 3) Computer Security Techniques
- 4) Fundamental of Mathematics

- 5) C/C++ (OOP), Java, Oracle8i&9, SQL, Python, R language.
- 6) UNIX, All Microsoft Desktop Windows versions.
- 7) Extensive HCI/HMI “GUI”.
- 8) Image processing techniques and applications tools.

Worldwide teaching:

Undergraduate Courses:

- 1) UKZN, Howard College Campus, the Academic year 2017 – 2021.
Bigdata Fundamentals, Applied Computer Methods for Chemical Engineering using Python, Computer Methods 2 (Java), Computer Methods 3 (C++ OOP), Final Year Project, Computer Design 2, Software Engineering (Part I).
- 2) Tec de Monterrey University, the Academic year 2015 – 2016.
Big-Data/Data Science, Introduction to Web applications, Use, and management of Operating Systems, ITILv3 Course, Software Engineering, Computer information security, Capstone project,
- 3) The International University of Sarajevo, Academic years 2012 – 2015.
Comparative Programming Language, Computer Networks, Compiler Construction, Desktop Operating Systems, Theory of Computation, Advanced Desktop Operating System, Human-Computer Interaction, Advanced GUI (Human-Computer Interaction and Human Mobile Interaction), Distributed Systems
- 4) The International Islamic University of Malaysia, the academic year 2005-2006, 2006/2007, 2007/2008, 2008/2009
Computer Graphics using OpenGL, Data Structure analysis and Algorithms Design, Advanced Desktop Operating System, Software Engineering, C++ Programming, Compiler Construction, Image Processing
- 5) Ittihad University, academic year, 2003 – 2005.
Comparative Programming Language, C++ Programming II, Software Lab I (Oracle/SQL), Artificial Intelligence, Computer Ethics, Oracle8, 9, 10 (DataBase), Desktop Operating Systems, Software Specifications & Design, File and storage structures
- 6) Zarka University, the academic year 2000 – 2003.
C/C++ Programming, Comparative Programming Language, Computer Organization & Architecture, Human Computer Interaction, Data Structure analysis, and Algorithms Design, Discrete, Compiler Construction.

Online (Remote) Teaching:

1) American University of Malta

Cybersecurity Graduate Online Courses 2021:

- 1) CYB 501 Scientific Computation course
- 2) CYB 502- Fundamentals of Computer systems and network Course
- 3) CYB 510 Computer Security course
- 4) CYB 520 Network Security Course

International University of Sarajevo

Graduate Courses:

- 1) Advanced Desktop Operating System
- 2) Advanced GUI: Human-Computer Interaction (HCI)
- 3) Human Mobile Interaction (HMI)
- 4) Distributed Systems

Research Interest:

- 1) Machine Learning
- 2) Data Science/Bigdata (Reduction not Compression)
- 3) Cybersecurity
- 4) Digital Signal/Image Processing
- 5) Human Mobile Interaction (HMI)
- 6) Source Code Energy

International Academic Organization and Professional Memberships:

1. Professional and critical skills: IITPSA Membership Number: 2022032842.
2. IEEE ID:85031658
3. ORCID code: 0000000261447821
4. IMA (Institute of Mathematical and its Applications), UK.
5. ARISE (Arabic Research Institute in Science & Engineering)
6. ARID, <http://arid.my/0001-2659>

Additional Information:

- 1) Full clean driving licenses B category from Libya, UAE, Malaysia, and Mexico
- 2) None-smoker,
- 3) Chess player
- 4) Enjoy playing volleyball, badminton, and swimming.

References:**Associate Prof. Dr. Tom Walingo**

Academic Leader
Howard College Campus
School of Engineering
University of KwaZulu Natal, Durban, 4001, South Africa
Email: walingo@ukzn.ac.za
Phone: 0027312602107

Prof. Dr. Akshay Kumar Saha

EECE Research Office Leader
Howard College Campus
School of Engineering
University of KwaZulu Natal, Durban, 4001, South Africa
Email: saha@ukzn.ac.za
Phone: 0027312602725/ 2305

Associate Prof. Dr. Narushan Pillay

Howard College Campus
School of Engineering
University of KwaZulu Natal, Durban, 4001, South Africa
Email: pillayn@ukzn.ac.za
Phone: 0027312602721

