Technical & Industrial Sponsors





Proceedings of The First International Conference on ICT for National Development and Its Sustainability

Theme: The Role of Information and Communication Technology for National Development and Its Sustainability (ICT4NDS 2018)

Organised by the Faculty of Communication and Information Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria

Tuesday 17th - Friday 20th April, 2018

Print ISSN: 2141-3959 Online ISSN: 2141-3959

Copyright © 2018

Editors

Prof. R. A. Lawal Dr. R.G. Jimoh Dr. A. Tella **COPYRIGHT INFORMATION**

The First International Conference on ICT for National Development and Its Sustainability

(ICT4NDS 2018).

The author(s) warrant that the manuscript submitted is his/her/their own original research. All

participated authors in this work take public responsibility and have approved that the

manuscript has not been sent any other publication media. All matter included in the manuscript

does not violate any existing copyright rules and any intellectual property rights of any person or

entity. The manuscript meets ethical standards applicable to the research discipline. I/We

indemnify ICT4NDS 2018 and the editors of the Conference and hold them harmless from any

loss, expense or damage occasioned by a claim or suit by a third party for copyright

infringement, or any suit arising out of any breach of the foregoing warranties as a result of

publication of my/our article.

The undersigned with the consent of all the authors, hereby transfer, to the extent that there is

copyright to be transferred, the exclusive copyright interest in the above-cited manuscript, in this

and all subsequent editions of this manuscript, and in derivatives, translations or ancillaries, in

English and in foreign translations, in all formats and media of expression now known or later

developed, including electronic, to International conference on Information and Communication

Technology for National Development and Its Sustainability (ICT4NDS).

Print ISSN: 2141-3959

Online ISSN: 2141-3959

ii

Proceedings of the 1st International Conference on ICT for National Development and Its Sustainability, Faculty of Communication and Information Sciences, University of Ilorin, Ilorin, Nigeria- 2018

PREFACE

This book contains the Proceeding of research papers presented at the First International Conference on ICT for National Development and Its Sustainability held between Tuesday 17th – Friday 20th April, 2018 at the University of Ilorin, Ilorin, Kwara State, Nigeria.

The conference was organized by the Faculty of Communication and Information Sciences, University of Ilorin.

In all, total of over (100) papers, including (3) lead papers were submitted. Apart from Nigeria, submissions were received from such countries as Malaysia, South Africa and China. The papers were subjected to a peer review process with respect to the actual content and the level of originality. The papers which appear in this proceeding were those that substantially met the set acceptance criteria.

I wish to appreciate all who contributed in one form or the other towards making this Proceeding a reality.

Thank you.

Dr. R.G. Jimoh, Ph.D., FICENT, MNCS, MCPN, MIEEE, MISCO, MITSSP, MAIT Dean FCIS, General Editor,

Proceedings of the 1st International Conference on ICT for National Development and Its Sustainability (ICT4NDS 2018).

Chair Central Planning Committee

Dr. R.G Jimoh

Local Organizing Committees/LOC

Technical Programme Committee (TPC)

- Dr. Nasir Faruk
- Dr. A. O. Bajeh

Hotel & Accommodation

Budget and Finance

Entertainment

- Dr. M.T. Bashorun
- Dr. (Mrs.) K. K. Kadiri
- Dr. (Mrs.) AbdulBaqi
- Dr. (Mrs.) M. A. Mabayoje
- Mrs Mustapha

Logistics

Registration

Publicity

Dr. La'aro

Dr. N. A. Balogun

- Dr. A. O. Bajeh
- Dr. Nasir Faruk
- Miss Ahmed Aminat (CISSA VP)

Publication

- Dr. A. Tella
- Dr. L. Mustapha

Website Creation and Maintenance Committee

- Dr A.O. Bajeh
- Dr. N. A. Naem,
- Dr. K. K. Kadiri
- Dr. A. A. Salman
- Dr. A.A Oloyede

Editors and Reviewers

- 1. Dr. M.B. Lawal
- 2. Dr. M.T. Bashorun
- 3. Dr. S. Faki
- 4. Dr. Kayode Adewole
- 5. Dr. Mrs. A.G. Akintola
- 6. Dr. Shefiu Ganiu
- 7. Dr Lere Jide
- 8. Dr. Mrs. T. O. Oladele
- 9. Dr. Mrs K. K. Kadiri
- 10. Mrs. S. A Salihu
- 11. Dr. Obiseye Obiyemi
- 12. Mr. Abdulrahman Abdullahi Tosho
- 13. Dr. Abdulmumin Isah
- 14. Dr Aliyu Alhaji,
- 15. Prof. Dahiru Sani Shu'aib
- 16. Dr. Olarangbe
- 17. Dr. A. Salman
- 18. Mr. H. A. Mojeed
- 19. Dr. A. O. Ameen
- 20. Dr. D. R. Aremu
- 21. Mr. Sowande S. O
- 22. Dr. A. O. Ameen

- 23. Prof. R. A. Lawal
- 24. Dr. R.G. Jimoh
- 25. Dr. A. Tella
- 26. Dr. Amos O. Bajeh
- 27. Dr. Nasir Faruk
- 28. Dr. A..A. Oloyede
- 29. Dr. L.A. Olawoyin
- 30. Dr. N.T. Surajudeen Bakinde
- 31. Dr. Y.A Abdulrahman
- 32. Engr. Segun Popoola
- 33. Dr. N. A. Balogun
- 34. Mr. A. O. Balogun
- 35. Dr Rafiat Oyekunle
- 36. Dr. Tella Adeyinka
- 37. Dr. Mrs. F. E. Usman-Hamza
- 38. Dr. K. L. Mustapha
- 39. Dr. Haruna Chiroma
- 40. Dr Mrs. O.C. Abikoye
- 41. Dr R. O. Oladele
- 42. Dr Omopupa
- 43. Dr. Modinat A. Mabayoje
- 44. Dr. D. R. Aremu

Secretariat Registration Committees & Others

Adeniyi Shamsudeen Femi Ajayi Oluwaseun Musliudeen Toyeeb Abiodun Balogun Victor Segun Ganiyu Afeez Ishola Subair Jemima Henrybless Esther Kelechi Dhikrulllah Hizkeel Bolade

TABLE OF CONTENT

Authentication mechanisms in public payment systems: challenges and solutions Yusuf Olayinka Abduljelil, Jimoh Rasheed Gbenga	1
Adoption of spi in nigeria software houses: a literature review <i>Bajeh, A. O., Adeleke, H.O., Mojeed, H.A.</i>	12
Leveraging on the relevance of social media for the development of Nigeria political economy <i>Ajobiewe, Damilola. N., Segun Omotosho and Florence Babalola</i>	23
Ensemble-based streaming approach for spam detection on twitter network K. S. Adewole, R. G. Jimoh, A. G. Akintola, O. C. Abikoye	35
A non-cooperative spatial management game for high efficiency wlan (ieee 802.11ax) Yusufu Ramat, Suleiman Zubair, Adeiza Onumanyi, Kehinde Oyegbola	52
Steganography: Increasing the Size of Hidden Messages Bajeh A. O., Abdulkadir, A.B. and Yusuf A. O.	61
Influence of online gambling on academic performance of students: a case of university of ilorin, ilorin, Nigeria. Alimi Adebayo Emmanuel and Falade Ayotunde Atanda	76
Analysis of huffman and run-length encoding compression algorithms on different image files Aliyu Ishola Nasiru and Afolayan Tolulope Ambibola	88
Comparative analysis of discrete cosine transform and discrete wavelet transform on different image files Ishola N. Aliyu, Ositadinma K. Nwana, Ismaeel A. Sikiru, Yusuf O. Imam-Fulani	100
Development of a system for extraction of patient drug prescription from clinical notes Abikoye, Oluwakemi Christiana, Salihu, Shakirat Aderonke and Shodolu, Wasiu Olabode	112
Digital revolution and national security: dynamics of information communication technology in sustainable development in Nigeria <i>Haruna I.Abdullahi</i>	122
Institutional policy implementation and adoption of learning management system in osun state universities <i>Jimoh, T. B. & Fasasi, Y. A.</i>	135

Study of downlink scheduling algorithms for real-time multimedia services in lte networks. Maniru Malami Umar, Sadiq Aliyu Ahmad, Asma'u Shehu & Ziya'u Bello	143
Secured voting system in nigeria general election Yusuf I.T, Akanbi M.B, Bolaji-Adetoro, D.F, Jimoh, R.G	152
Determining risk factors in the formulation of anfis model for the security risk assessment of sdlc phases Olusanya Olufunmilayo Olayinka, Jimoh Rasheed Gbenga	162
Hacktivism or bloggerpreneurship: a critical political economy of the nigerian blogosphere Badmus, Idowu Rasheed, Okaiyeto, Simon Ayodele	181
Soft-output maximum likelihood receiver for quadrature spatial modulation Muhammed Adekilekun Tijani and Abdulmajeed Adekilekun Tijani	195
An enhanced fault tolerant in wireless sensor network using intelligent multi-agent system Raji Ayodele Kamaldeen, Gbolagade Kazeem Alagbe	205
Redefining the directivity value of radial-lines-slot-array antenna for direct broadcast satellite (dbs) service Monebi Matthew Ayodeji, Caroline O. Alenoghena, and J.A. Abolarinwa	217
Review of selected spectrum occupancy models T. A. AbdulRahman, R. O. Oladele, and N. Faruk	229
The relevance of data mining techiques in alleviating cybersecurity breaches in nigeria healthcare sector Ayoade Oluwafisayo Babatope, Oladele Tinuke Omolewa, and Saheed Yakub Kayode	247
A classified media access control algorithm for traffic management in ieee 802.11ah networks Kehinde Oyegbola, Suleiman Zubair, Elizabeth Onwuka, Yusufu Ramat, Ademoh A. Isah	263
A bat-inspired algorithm for the detection of hidden nodes in ieee802.11ah networks Fapohunda K. O., Zubair S., David M. and Nuhu B. K., Nwaocha V. O.	272
Information literacy for sustainable development: a review <i>Agboola, O.M., Bajeh, A.O., Dada, O.M.</i>	280
Hierarchy extraction for covert network destabilization and counterterrorism mechanism <i>Ismail A. A., Ganiyu, S. O., Alabi, I. O., Abdulrazaq, A. A., Muritala S.</i>	290

Assessing urban transport sustainability for people with disabilities in the digital era <i>Ayantoyinbo, Boye. B. and Kolawole, Olusola. J</i>	303
Adoption of cyberspace in sustaining community development in Nigeria Abdulrauf Tosho, Muhammad Thani Sefinat, Shakirat Oluwatosin Sulyman-Haroon	316
Social media and sexual expression among adolescents Amina Shehu, Aishat AbdulRauf-Salau, Naeem Atanda Balogun	328
Role of information and communication technologies (icts) in curbing corruption among public servants in kwara state inland revenue service (kwirs) Aishat Abdulrauf-Salau, Adesina Lukuman Azeez, Rukayat Ololade Adegoke	344
Stock market prediction using combination of five (5) data mining techniques Idepefo Olutokunbo Felix, Awotunde Joseph Bamidele, Ayo Emmanuel Femi, Oladipo Idowu Dauda, and Adeniyi Aruna Adekunle	355
Improving performance of principal component analysis based face recognition using illumination normalization techniques: proposed study Shoyemi Olufunmilayo Iyabo, Abikoye Oluwakemi Christiana, and Aro Taye Oladele	371
Adoption of virtual reality for learning among students Shakirat Oluwatosin Sulyman-Haroon, Sulyman Age Abdulkareem, Abdulrauf Tosho	380
Strategies for knowledge sharing in nigerian agricultural research institutes <i>Kabiru Dahiru Abbas</i>	390
Usage of social media among student entrepreneurs in Nigeria University Shakirat Oluwatosin Sulyman-Haroon, Kadijat Kehinde Kadiri	398
Mobile based test (mbt) system Ogunyinka Oluwaseun Joshua, Usman–Hamza Fatima. E, Bajeh Amos Orenyi	413
The journey of 5g mobile communication networks Olugbenga A. Sowande, F. E. Idachaba, E. Agboje, Q. R. Adebowale, N. Faruk, L. A. Olawoyin, S. O. Onidare, A.O. Ilesanmi	419
Quality of service (qos) evaluation of mobile network services: a case study on the federal polytechnic bida, nigeria Salihu Alhaji Bala, Caroline O. Alenoghena, Aliyu Alhaji Ndakotsu	434

Provision and utilization of offline electronic resources in Nigerian academic libraries and its implication for sustainable national development Usman Hassan, Binta Ladan Farouk, Aminu Musa Umar, Askia Nasiru Kabara, Muktar Mohammad Magaji, Jamila Mansur Chiranchi	447
Perceptions of academic librarians on knowledge management for sustainable development in northwest federal universities in Nigeria Musa Aminu Umar, Usman Hassan, Ja'afaru Sani, Musa Abubakar Mohammed, Mustap Mannir, Amata S. Bello	456 oha
Performance analysis of empirical propagation models for fixed wireless application Quadri R. Adebowale, Caroline T. Adeniran, Olugbenga A. Sowande, Yusuf O. Imam-Fulani, Samuel O. Onidare, Ismael A. Sikiru	470
A survey of application of nature-inspired computational methodologies in radio propagation Quadri R. Adebowale, Shamsudeen A. Olanipekun, Nasir Faruk, Lukman A. Olawoyin, Abdulkarim A. Oloyede, Nazmat T. Surajudeen-Bakinde, Segun I. Popoola	482
Prospects and challenges of different technology options for public safety and disaster relief networks in nigeria Nazmat T. Surajudeen-Bakinde, Nasir Faruk, Adeseko. A. Ayeni, Olayiwola.W. Bello, O. Fadipe-Joseph and Olabanji Kolade	493 A.
Assessment of the utilization of e-learning facilities among lecturers in kaduna polytechnic for sustainable national development in Nigeria Ali Garba, Abubakar Mohammed and Abubakar Mohammed Jega	504
Awareness, use and satisfaction of collections and services of college libraries in federal university of petroleum resources <i>A.A. Salman, A.S. Sambo, H.Shehu, K.A. Saka</i>	518
Undergraduate students' preferences for web-based and conventional library services in kwara state university, malete <i>A. O. Aleem and A. A. Salman</i>	530
Information access using web 2.0 as panacea for attaining sustainable development goals: a review of related models <i>A. A. Olajide, A. A. Salman, and Ashaver Doosuur D.</i>	548
Social networking as a tool for library services and knowledge management in academic libraries in Nigeria M.T. Bashorun, Abdulmumin Isah and Ajibola, S. Adejumoke	559

Proceedings of the 1st International Conference on ICT for National Development and Its Sustainability, Faculty of Communication and Information Sciences, University of Ilorin, Ilorin, Nigeria- 2018

Congestion as index of quality of service of mobile communication networks in osogbo metropolis, osun state <i>Lasisi Hammed, Aderinkola B. Fatimah and Olawoyin Lukman A.</i>	571
Knowledge management and 21 st century libraries as panacea for sustainable development	586
Tella Adeyinka, Ajibola Tunde Shamsudeen, Akanbi Mohammed Lawal, Bashorun M.T, A Adelodun Muhammed and Ogunlade O.R	1jao
New media and satisfaction with democracy among students of selected universities in kwara state, Nigeria Lambe Kayode Mustapha, Aminat Bukola Anafi and Maryam Lasisi Mustapha	604
On backhauling options for future heterogeneous networks Nafiu Adetokun, Nazmat T. Surajudeen-Bakinde, Nasir Faruk, Segun I. Popoola, A.Abdu.	621 lkarim
An enhanced salting fingerprint transformation algorithm for securing biometric system <i>Omotosho Folorunsho Segun, Babalola Florence Moyin</i>	634
An investigation into packet routing in mobile ad-hoc network using a nomadic community scenario <i>Oyelakin A.M., Jimoh R.G</i>	647
Development of an Integrated Digital Library in a Networked Environment Akanbi Bola Mulikat and Raji Ayodele Kamaldeen	658
ICT skills and Use of Electronic Information Resources by National Open University Students in South-West Nigeria Adedokun Titilayo Oludayo and Babalola Yemisi T.	670
Scrum process model for the development of smart payroll integrated with task manager Musa Nehemiah, Mustapha L. Abdulrahman, Ramson Emmanuel N., Babangida Mubara Muhammad M. Aliyu, Gazali M. Abdulhamid, Lubna A. Gabralla, Amina Nuhu Muhamma Abdulsalam Y. Gital, Haruna Chiroma	k,
Assessment of patients' knowledge and perception towards conventional and digital radiograph in dental imaging. Moshood Adeyemi, Junaid Ayinde, Issa Aremu, Hassan Kalejaye, Halimat Akande	693
The Prospect of Addressing Property Management Challenges with Information and Communication Technology (ICT): A Survey of Minna Metropolis, Niger State S.O. Ganiyu, C.F. Essien, I.O. Alabi, V.J. Ukam	703

Promoting Local Content Software Products through Agile Process Models Nehemiah Musa, Emmanuel Nannim Ramson., Umar Sa'idu Abashe, Amina Nuhu Muhan Abdulsalam Ya'u Gital, Gazali Muhammed, Lubna A. Gabralla, Haruna Chiroma	714 nmad,
Appraising the role of information and communication technology (ict) as a change agent for university libraries in Nigeria Kennedy Arebamen Eiriemiokhale (CLN)	730
SQL Injection Attack: A Systematic Literature Review on Detection, Prevention and Classification with Machine Learning Approach Morufu Olalere, Raji Abdullahi Egigogo, Umar Rukayya, Shafi'i Muhammad Abdulhamid Victor Legbo, Rasheed Gbenga Jimoh	743 d, Yisa
Assessment of the Use of Social Media by Undergraduate Student of University of Ilorin <i>Ibrahim Latifat Ahuoiza and Afolayan Oluyinka Titilope</i>	759
An online diagnostic model for detecting severity of diabetes O. M. Omisore, L. Wang, A. E. Babalola, B. A. Ojokoh and O. S. Adewale	774
Providing information access to all and sundry: a panacea for better livelihood and sustainability in the 21 st century Tella Adeyinka, Bamidele Sunday Segun, Adigun Ganiyu Ojo, Olaniyi Oluwakemi Titilola Firdausi Abdullahi	787 a,
Electronic voting system implementation in nigeria higher institutions <i>Murtala K., and Adeniyi A. E.</i>	809
Cryptographic system using Caesar cipher and DNA sequences Akintola A.G. Daiel A.O. Bajeh, A.O, Balogun, A.O	820
Effect of repetitive search on binary and linear search algorithms Balogun Ghaniyyat Bolanle	828
A spatiotemporal decision support system for software collaboration using x-kruskal algo Femi Emmanuel Ayo1, Olusegun Folorunso2, Joseph Bamidele Awotunde3, Olusakin Muyiwa Fatokun4	erithm 837
English competence and search for information resources for academic development amo colleges of education students in kwara state, nigeria <i>Omopupa, Kamal Tunde, Iliyas, Rasaq Ayodeji, Adio, Saliu Wahab</i>	ong 862