

2021 PROCEEDINGS

**14th INTERNATIONAL
MULTI-CONFERENCE
ON ICT APPLICATIONS
AICTTRA 2021**



Theme
**APPLICATION OF INFORMATION AND
COMMUNICATIONS TECHNOLOGY
TO TEACHING, RESEARCH
AND ADMINISTRATION**

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28TH NOV. – 1ST DEC. 2021

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The 14th International Multi-Conference on ICT Applications

**Theme:
Application of
Information and Communications Technology
To Teaching, Research and Administration
(A I C T T R A)**

November 28th – 1st, 2021

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*Main Auditorium
African Centre of Excellence (OAK-Park)
Obafemi Awolowo University, Ile-Ife, Nigeria*

PROCEEDINGS - Volume XIV

**Edited by
Professor E.R. Adagunodo
Professor G.A. Aderounmu
Professor A.I. Oluwaranti
Dr. E.A. Olajubu
Dr. B.I. Akhigbe
Dr. I.P. Gambo
Dr. H. O. Odukoya**

*Type Setting & Formatting
Mr. H.O. Ola*

**Organized by
Department of Computer Science & Engineering
In Collaboration with
African Centre of Excellence
- Obafemi Awolowo University -**

FOREWARD

It is with great pleasure and delight that I welcome all of us to the 13th edition of the International Conference on Application of Information and Communication Technologies to Reaching, Research and Administration, tagged AICTTRA 2021, at the African Centre of Excellence (OAK-Park) Main Auditorium, Obafemi Awolowo University, Ile-Ife, Nigeria between November 28th and 1st, 2021. I understand that conferees came from different places within and outside Nigeria to attend this great event. I usually refer to the conference as the pilgrimage for ICT professionals and enthusiasts. This year's proceedings contain articles that have been subjected to reasonable reviews to make sure that written and submitted papers for the conference are up to presentable standards.

The Programme of the conference is varied with a wide range of applications to which ICT can be put to use. This has consistently been the case since the inception of the conference, and thus endorses the fact that it is impossible to place any specific bound or limit to what ICT can be applied to. The field of ICT has continued to grow like wild fire in the Harmattan with evidences that are mind blowing in terms of its area of application. The exploration of ICT in these areas has been the main business of all the previous editions of the conference as well as this current one.

The programme of the conference has been threaded into Technical and Plenary Sessions. The sessions as usual have huge promises in that fruitful debates are stimulated on emerging and already consolidated areas of research in the use of ICT. Crosscutting issues are also included in organized syndication with informal sessions on discussions during the conference. The immediate past President of the Nigeria Computer Society (NCS), Professor G.A. Aderounmu who happen to be one of the initiators of the conference and the current Dean of the Faculty of Technology, Obafemi Awolowo University will be on hand to share his wealth of experiences in teaching, research and administration using ICT. There will be lead paper presentations by eminent researchers and practitioners in ICT. This year several key players in the ICT industry will be on hand to share their ICT experiences from industry perspective.

The organizers of the event owe special thanks to the Vice-Chancellor of Obafemi Awolowo University, Ile-Ife, Nigeria, Professor E.O. Ogunbodede for his continuous support in the organization of the conference. The fathers of the conference - Professor L.O. Kehinde and Professor E.R. Adagunodo are also well acknowledged for being visionary and for their continuous support. The Local Organizing Committee members – Prof. A.I. Oluwaranti (Chairman) and members – Dr. E.A. Olajubu, Dr. I.P. Gambo, Dr. B.I. Akhigbe, Dr. B.O. Akinyemi, Dr. R.N. Ikono, Engr. Tope Ajayi, Miss A.R. Lawal, Dr. S. Aina, Dr. H.O. Odukoya are well acknowledged and appreciated for the tireless efforts put in to make this year's conference a success.

Professor E. R. Adagunodo

Department of Computer Science & Engineering,
Obafemi Awolowo University, Ile-Ife.

LIST OF REVIEWERS

| S/No. | Name of Reviewers | Contact Address |
|-------|------------------------|--|
| 1 | Prof. E.R. Adagunodo | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 2 | Prof. G.A. Aderounmu | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 3 | Prof. K. Gbolagade | Department of Computer Science, Kwara State University, Ilorin, Kwara State |
| 4 | Prof. A.O. Oluwatope | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 5 | Prof. B.S. Afolabi | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 6 | Prof. A.I. Oluwaranti | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 7 | Prof. A.O. Odejobi | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 8 | Dr. (Mrs.) R.N. Ikono | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 9 | Dr. K.I. Ogundoyin | Department of Computer Science, Osun State University, Osogbo |
| 10 | Dr. A.O. Ajayi | University of the West of England, United Kingdom (UK) & Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
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| 14 | Dr. S. Aina | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 15 | Dr. Samara Bright | Department of Computer Science, Benue State University, Benue |
| 16 | Dr. K.C. Olufokunbi | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 17 | Dr. (Mrs.) G.O. | Binuyo African Institute for Science Policy and Innovation, Obafemi Awolowo University, Ile-Ife. |
| 18 | Dr. F.O. Asahiah | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 19 | Dr. (Mrs.) S.A. Bello | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 20 | Dr. S. Aina | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 21 | Dr. H.O. Odukoya | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |

| | | |
|----|-------------------|--|
| 22 | Dr. A.O. Amoo | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 23 | Dr. I.P. Gambo | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 24 | Dr. T.O. Oyegoke | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 25 | Dr. B.I. Akhigbe | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 26 | Dr. S. T. Yange | Department of Computer Science, Federal University of Agriculture, Markurdi, Benue State |
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| 28 | Dr. I.O. Awoyelu | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 29 | Dr. O.D. Ninan | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |
| 30 | Dr. F.O. Asahiah | Department of Computer Science & Engineering, Obafemi Awolowo University, Ile-Ife |

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