

THE OKE OGUN POLYTECHNIC, SAKI
ACADEMIC STAFF CURRICULUM VITAE FOR
ANNUAL ASSESSMENT

SECTION A- PERSONAL DATA

ACADEMIC STAFF FILE NO:

TOPS/PER/803

- | | |
|---|---|
| 1. NAME (SURNAME FIRST) | AJAO, Olatunji Samson |
| 2. DATE OF BIRTH | 9 th February, 1979 |
| 3. NATIONALITY/ STATE OF ORIGIN | Nigeria/Oyo State |
| 4. MARITAL STATUS: | Married |
| 5. NAME / ADDRESS OF NEXT OF KIN: | Ajao, Esther Ifeoluwa / No2 Anthony close Eleyele Ibadan |
| 6. CONTACT ADDRESS: | Department of Sci. Lab. Tech. The Oke Ogun Polytechnic, Saki. PMB 021 |
| 7. E-MAIL ADDRESS/PHONE NUMBER: | ajaosamson2004@yahoo.com /08037407192 |
| 8. SCHOOL: | Science |
| 9. DEPARTMENT | Science Laboratory Technology |
| 10. DATE AND GRADE OF FIRST APPOINTMENT | 21 th January, 2009, CONTIS7 Step 1 |
| 11. DATE AND GRADE OF LAST PROMOTION: | 1 th October, 2019, CONPCASS 5 Step 2 |
| 12. PRESENT GRADE AND SALARY: | CONPCASS 5 Step 3 |
| 13. DATE AND GRADE OF CURRENT APPOINTMENT | As in 12 Above |
| 14. HAS APPOINTMENT BEEN CONFIRMED | Yes |
| IF NOT CONFIRMED, WHY: | |
| 15. DATE OF CONFIRMATION | 1 st September, 2012. |

SECTION B – QUALIFICATIONS AND EXPERIENCE

1. School/ Institution Attended with dates:

| S/N | Schools / Institutions | Dates |
|-----|---|-----------|
| i | Ladoke Akintola University of Technology, Ogbomoso | 2012-2016 |
| ii | Ladoke Akintola University of Technology, Ogbomoso. | 2002-2007 |
| iii | Adeniran Memorial Grammar School, Ogbomoso | 1992-1998 |
| iv | Ebenezer Baptist Primary School, Ogbomoso | 1985-1991 |

2. Academic Qualification with dates:

University degree/Class (If any)/ Institution/ Date of award

| S/N | University Degree/Diploma | Class | Institution | Date of award |
|-----|---|--------------------|---|---------------|
| i | M.Tech in Physics Electronics and Communication | Ph.D Grade | Ladoke Akintola University of Technology Ogbomoso | 2016 |
| ii | B.Tech in Pure and Applied Physics | Second Class Lower | Ladoke Akintola University of Technology Ogbomoso | 2007 |
| iii | WASC | Passed | Adeniran Memorial Grammar School, Ogbomoso | 1998 |
| iv | Primary School Leaving Certificate | Passed | Ebenezer Baptist Primary School, Ogbomoso | 1991 |

3. Professional Qualifications/ Awarding Body/ Society/ Date of Award: Nil

4. Work Experience

a) Teaching Experience

Employer and Address/ Designation/Subject Taught/Date

| S/N | Employer and Address | Designation | Subject taught | Date |
|-----|--|--------------------|----------------------------------|--------------|
| I | The Oke-Ogun Polytechnic, Saki | Lecturer | STP 121, STP 221, STP 222 | 2014 to Date |
| ii | The Polytechnic Ibadan, Saki Campus | Lecturer | STP 112, STP 211, STP 212 | 2009 – 2014 |
| iii | Kwara State Polytechnic, Ilorin | Assistant Lecturer | BPH 111, BPH112, BPH121 | 2008- 2009 |
| iv | Plateau State Polytechnic Barikiladi, Jos | Graduate Assistant | General Physics and Practical | 2007-2008 |

b) Courses Taught in the Current Academic Year:

Employer and Address/ Designation/Subject Taught/Date

| Semester | Class | Course Code | Course Title |
|----------|----------------|-------------|---------------------------------------|
| First | ND1 | STP111 | Mechanics |
| | ND2 | STP211 | Electronics |
| | HNDI (Physics) | PHY 313 | Electric Circuit Theory |
| | HND1 (Physics) | PHY 327 | Physics Optics |
| | HND2 (Physics) | PHY 411 | Electronics/ Instrumentation workshop |
| | HND2(Physics) | PHY 412 | Instrumentation |
| | HND2 (Physics) | PHY 413 | Radio Communication Principles |
| | HND 2(Physics) | PHY 414 | Analogue Electronics II |
| | HND 2(Physics) | PHY 418 | General Physics Practical II |

| | | | |
|--------|-----------------|---------|----------------------------------|
| Second | ND 1 | STP122 | Optics |
| | ND2 | STP221 | Maintenance of Science Equipment |
| | HND1 (Physics) | PHY325 | Analogue Physics I |
| | HND 1(Physics) | PHY326 | Telecommunication Principles |
| | HND1 (Physics) | PHY 328 | Electronics Practical I |
| | HND 2 (Physics) | PHY 421 | Instrumental II and Control |
| | HND 2(Physics) | PHY 422 | Micro-electronics Systems |
| | HND 2 (Physics) | PHY 423 | Equipment Reliability |
| | HND 2(Physics) | PHY 424 | Electronics Practical II |
| | HND 2(Physics) | PHY 426 | Project |

c) Professional work experience

Employer and Address/ Designation/Subject Taught/Date

| S/N | Employer and address | Designation | Nature of duty | Date |
|-----|----------------------------|---------------|-------------------------------|------|
| i | Solarvat Technology | Field Manager | Field Installation | 2009 |
| ii | Solar Turbine (Student IT) | Technicians | Field Installation | 2005 |
| iii | Ajao Laundry Services | Manager | Inspection of General Service | 2004 |

d) Administrative Experience

Assignment/Date

| S/N | Assignment | Date |
|-----|--|--------------|
| i | Sub Dean Directorate of Students' Affairs The Oke Ogun Polytechnic, Saki | 2021 To 2022 |

e) Membership of Professional Bodies /Learned Societies

| S/N | Position | Professional Body | Year |
|-----|----------|--|------|
| i | Member | Nigeria Institution of Physics | 2014 |
| ii | Member | Association of Science Laboratory Technology of Nigeria (ASLTON) | 2014 |
| iii | Member | Electronics and Communication Research Group | 2013 |

SECTION C: RESEARCH /PROJECT/INVENTION/ INNOVATION/ DESIGN

1. Research in Progress/ Brief description with date:

- (i) **Ajao, O.S. (2022).** Development of smart health performance for overweight and Obesity using internet of things (IoT) Based Body Mass Index (BMI) in Saki Oke Ogun Area of Oyo State.

Brief description:

Overweight and obesity have become a major health concern associated with diseases such as cardiac arrest, type 2 diabetes, stroke, high blood pressure, and other non-communicable diseases (NCD) and are the leading risks for death globally, killing people more than underweight. Body Mass Index (BMI) is a measurement that uses weight and height to work out a person nutrition status. Researches all over to calculate BMI are based on traditional manual methods which are time consuming, error prone and they are not cloud based. Very few systems have incorporated machine learning yet with low accuracy. Based on these findings this work will take a technological approach of calculating BMI among the residents of Saki Oke Ogun Area in Nigeria. This research will presents the design and development of a IoT based body mass index prediction model. This system will consist of ATMEGA328P microcontroller for computations with an on built ESP8226 Wi-Fi module, human load cell for body weight measurements a HX711 load cells amplifier module and HC-SR04 ultrasonic sensors for height measurement. Values will be displaced on a 16x2 LCD and will be sent to Thing speak for storage and analysis. Thing speak is an integrated with MATLAB Machine Learning to make the prediction based on height and weight sensory data. Supervised Exponential Gaussian process Regression algorithm will predict whether a person is underweighted, normal weight, overweight or obese. **BMI:** Body Mass Index, **IoT:** Internet of Things, **LCD:** Liquid Crystal Display, **ML:** Machine Learning, **NCD:** Non- Communicable Disease, Overweight, Obese.

- (ii) **Ajao, O.S. (2022).** Measurement of attenuation due to some Nigeria roofing materials.

Brief description:

The Measurement and analysis of radio waves propagation play significant part in the plan and function of Wireless Local Area Network (WLAN) application. This project compares the effect that selected roofing materials have on radio wave propagation. To achieve this, the GSP 730 spectrum analyzer connected with a dipole antenna which serve as a receiver is used to receive the signal transmitted from a high power wireless outdoor CPE (Raulter) at a frequency of 2.4 GHz being obstructed by each roofing material. The study considered effects of metal tile roofing sheet and asbestos roofing sheet materials on radio propagation. The study found that effects of roofing material on radio propagation varied depending on the type of selected roofing material. Signals via plastic materials decreased with distance as those via aluminium increased with distance. However the overall effect of roofing materials on radio

wave propagation was not significant since the received signal was within the recommended strength. Also the materials had path loss exponent factor.

- (iii) **Ajao, O.S. (2021).** Comparison and Evaluation of Output Power on Monocrystalline and Polycrystalline Solar Panel Under the Same Condition.

Brief description:

The energy consumption in the world is increasing greatly owing to the growing population and to increase energy consumption per capital. The experiment investigates the comparison of the efficiency of monocrystalline and polycrystalline solar panel at one hour interval for each day within the month of August 2021. The measured parameters are temperature, maximum voltage, maximum current, relative humidity and light intensity. The relationship between the output power of the measured parameters are also identified. The efficiency and performance value of both panels were analysed and compared. The performance evaluation of both panels shows that monocrystalline solar panel has highest efficiency rate of 15 - 20% while polycrystalline panel has 13 – 18%. However monocrystalline solar panel has more advantages over the polycrystalline solar panel for the installation of solar energy.

Project/Invention etc/completed but not yet patented with dates: Nil

2. Publications/ Exhibitions/Designs/Give details of the book and articles in reversed chronological order, using APA 6th edition format
3. Publication/ Exhibition/ Designs

(a) Dissertation or Thesis

1. **Ajao, O.S. (2016).** Experimental Modeling of Radio Waves Propagation Loss Due to Haze at Frequency Band of 92.1MHz and 98.0 MHz. Ladoke Akintola University of Technology Ogbomosho.
2. **Ajao, O.S. (2007).** Design and Construction of 3 KVA Inverter with Charging Unit. Ladoke Akintola University of Technology Ogbomosho.

(b) Book/ Monographs

- (i) **Ajao, O.S. (2019).** Principles of optics and waves. Gak publishers, SW9/615 Oke ayo, ago taylor, Ibadan. ISBN: 978-978-55092-5-0
- (ii) **Ajao, O.S. (2019).** Introduction to electronics equipment, maintenance and repairs. Gak publishers, SW9/615 Oke ayo, ago taylor, Ibadan. ISBN: 978-978-55307-9-7

(c) Published Journal Articles

1. Adeniran, A.O, Olabisi.O, & **Ajao, O.S.** (2020). Spatial coverage of FM radio signal variation measurement and comparison of two major radio stations within AkwaIbom state. *Journal of VLSI and its advancement, India.*<http://hbrppublication.com>,E/3(3):1-7
2. Olabisi, O, Adeniran, A.O, **Ajao, O.S.** & Areo, S.O (2020). Development of a bluetooth based scrolling display using light emitting diode. *Journal of advancement in electronics design, India.*<http://hbrppublication.com>,J3 (2): 1-5
3. Olabisi, O, Adewumi, A.S, **Ajao, O.S.** & Adeniran, A. O (2019). Bow-Tie microstrip patch antenna design and implementation for dual band WLAN applications. *International journal of trend in scientific research and development*, 3(4): 1136 – 1140.
4. Olabisi, O, Adeniran, A.O, **Ajao, O.S.**, Areo, S. O. & Olatunde, I.D (2019). Design and performance analysis of printed square log periodic array microstip patch antenna at 2.5 and 3.5 GHz”, *Journal of advancement in communication system (JACS), India*, <http://hbrppublication.com>, JACS, 2(3): 1 – 7.
5. Olabisi. O, Adeniran, A.O, **Ajao, O.S.** & Areo, S. O. (2019). *Comparative analysis of measured and simulated performance of printed excited rectangular log periodic array microstip patch. Journal of advancement in communication system (JACS), 2(3): 1 – 7.*India, <http://hbrppublication.com>.
6. Aremu, O.A, Olayiwola, A.F, Anie, N.O. & **Ajao, O.S.** (2019). Mathematical modeling of path- loss of electromagnetic signal at very high frequency using parabolic equation. *International journal of research and innovation in applied science.* 4 (4). 80-84.
7. Aremu, O.A, Adeshina, A.F.O, Anie, N.O. & **Ajao, O.S.** (2018). Estimation of k-factor to characterize refractive conditions of radio signal over Ogbomoso, Oyo State, Nigeria. *International journal of trend in research and development.* 5 (2). 549-553.
8. Adeniran, A.O, Olabisi. O, **Ajao, O.S.** & Ndeifrekeabasi, O.B (2018). Determination of wireless (2.45 GHz) attenuation loss through some Nigerian trees and foliage. *World Journal of Applied Science and Technology.* 10 (1B): 214-217.
9. Adeniran, A.O, Olabisi, O. & **Ajao, O.S.** (2018). Circuit simulation and etching of distributed phase shifter MMIC using lumped element coupler. *World journal of applied science and technology* 10(1B): 244-248.

10. Aremu, O.A, Oyinkanola, L.O.A, **Ajao, O.S.** & Akanbi, R.A. (2018). Modeling and mitigation of the effect of free space optical attenuation during fog at UHF band. *International journal of scientific research in computer science, engineering and information technology* 3 (5). 640-645.
 11. Olabisi, O, Adeniran, A.O, **Ajao, O.S.** & Adegboyega, O. (2018). Design and implementation of 4 element with high gain for 3.0GHz application. *International journal of scientific research in computer science, engineering and information technology*, 3 (5), 996 – 999.
 12. Aremu, O.A, **Ajao, O.S.**, Falade, J.T. & Oyinkanola, L.O.A. (2015). Investigation into path Loss propagation at UHF band in low latitude region. *International journal scientific research in science and engineering technology*. 1(4), 240-243.
 13. Adeniran, A.O, Ekpo, S.S. & **Ajao, O.S.** (2015). On the design and performance analysis of printed triangular starred array strip antenna. *International journal of communication on applied electronics (CAE)*. 1 (3),1-3.
 14. Ogherohwo, E.P, Adeniran, A.O. & **Ajao, O.S.** (2013). Performance analysis of 5 hairpin section microstrip filter at 3GHz. *International journal of electronics communication technology*. 3(3), 230-236
 15. Salawu, M.A, Sharafa, S.B, Lawal T.O. & **Ajao, O.S.** (2012). Computational analysis for prediction of pathloss based on COST-123 Hata model in sub-urban or rural Environment in Nigeria. *International journal of scientific innovations*. 4 (2), 88-99.
- (d) Papers Already Accepted for Publications (Please attach copy of paper): Nil
- (e) Exhibitions/Designs/Projects/Innovation etc:
- (i) **Ajao, O.S.** (2015). Design and installation of Stand Alone Solar Electricity in Science Laboratory Technology Department. The Oke Ogun Polytechnic, Saki.
 - (ii) **Ajao, O.S.** (2014). Design and Installation of Six Lecture Hall Public Address System Power by Solar Energy in The Oke Ogun Poltechnic, Saki.
- (f) Other works of relevance: Nil
- (f) Other Relevant Work: Nil

4. Conferences, Workshops Attended with Papers Presented stating in reversed chronological order (or APA 6th Edition format)

(a). **Conferences**

1. **Ajao, O.S**, Shogo O.E & Anie, N.O. (2021, February). Effects of dust accumulation and water droplets on the tilted monocrystalline and polycrystalline solar panels. *Paper presented at 2nd International conference held between 7th-10th February, 2021. At school of science and engineering. The oke ogun polytechnic, Saki.*
2. **Ajao, O.S**, Olabisi, O. Shogo O.E & Anie, N.O. (2021, February). Effect of different roofing materials on wireless communications. *Paper presented at 2nd international conference held between 7th-10th February, 2021. at school of science and engineering. The oke ogun polytechnic, saki.*
3. **Ajao, O.S**, Aremu, O.A, Shogo O.E & Anie, N.O. (2021, February). Estimation of path loss at high frequency (VHF) band on radio wave propagation through hill in Saki oke ogun area of Oyo State. *Paper presented at 2nd International conference held between 7th-10th February, 2021. at school of science and engineering. The oke ogun polytechnic, saki.*
4. Olabisi, O, **Ajao, O.S**, Adeniran, A.O & Areo, S.O. (2019). Investigation of temperature effect on radio signal strength in outdoor wireless system. *Paper presented at 42nd annual conference Nigerian institution of physics (NIP).*
5. Adeniran, A.O, Olabisi, O. & **Ajao, O.S**. (2018, October). Determination of attenuation loss of some nigerian trees and foilage's on wireless signal (network) 2.45GHz. *Paper presented at world conference on applied science and technology at faculty of science, university of Uyo, Nigeria. 22th – 26th. October*
6. Adeniran, A.O, Olabisi, O. & **Ajao, O.S**. (2018, October). Circuit simulation and etching of distributed phase shifter MMIC using lumped element computer. *Paper presented at world conference on applied science and technology at faculty of science, university of Uyo, Nigeria. 22th – 26th.*
7. **Ajao, O.S**, Olabisi, O,& Aremu, O.A. (2018, . May). Experimental modeling of radio wave propagation loss due to haze at frequency band of ajilete FM 92.1 MHz in Ogbomoso area of Oyo state. *Paper presented at national conference of faculty of science, The polytechnic Ibadan, 1th – 4th.*

8. Aremu, O.A, Oyinkanola, L.O.A, Olayiwola, O.G. & **Ajao, O.S.** (2018, *May*). Investigation of ambient temperature and relative humidity on UHF free space optical communication in foggy weather. *Paper presented at national conference of faculty of science, The polytechnic Ibadan, 1th – 4th.*
9. **Ajao, O.S**, Adejumobi, C.A. & Adeniran, P.O. (2016, *February*). Experimental modeling of radio wave propagation loss due to haze at vhf band in tropical region. *Paper presented at International conference of school of environmental. The oke-ogun polytechnic, Saki held on 16th – 19th.*
10. Aremu, O.A, **Ajao, O.S**, Olayiwola, O.G & Adesina, A.F. (2015, *June*). Development of instrumentation system to study the effect of dense fog on radio waves propagation at 900 and 1800 MHz in south western nigeria. *Paper presented at national conference at the faculty of science, The polytechnic, Ibadan held on 28th – 31st*
11. **Ajao, O.S**, Aremu, O.A & Salawu, M.A. (2015, *June*). Investigation into very high frequency (VHF) radio wave propagation loss over long tropical region in oke ogun area of oyo state. *Paper presented at national conference of the faculty of science, The polytechnic, Ibadan held on 28th – 31st.*
12. Salawu, M.A. & **Ajao, O.S** (2011, *August*). Determination of free space path-loss in satellite communication system. *Paper presented, 21st -24th at national conference of faculty of science held at Kwara state polytechnic*
13. Salawu, M.A. & **Ajao, O.S.** (2010, *August*). Computer aided design for prediction of some axial mode helical antenna's gain and size at VHF and UHF band. *Paper presented at national conference of faculty of science held at Kwara state polytechnic, 26th – 20th.*

(b) Workshop:

1. Workshop on artificial intelligence for clean energy January 13th 2020 at Federal University of Technology Minna.
2. 3 days National workshop on common disasters on our campuses, Held on 24th – 26th March, 2021 at Mini conference HALL, U.I. Ventures Limited University of Ibadan, Ibadan, Oyo State.

SECTION D: EXTRA CURRICULAR ACTIVITIES

1. Other activities within the polytechnic, e.g. position in Academic Board, Polytechnic Sports, and Membership of Committees/Panels etc.

| | | |
|--------|--|--------------|
| i. | School of Science Rep. Directorate of Research and Linkages. TOPS | 2022 |
| ii. | Secretary Departmental Academic Programme Advisory Committee | 2019 To Date |
| iii. | Member, Departmental Library Committee | 2019 To Date |
| iv. | Member, ASUP (TOPS) Building Committee | 2019 To Date |
| v. | Member, Departmental Management Committee | 2019 To Date |
| vi. | Member, Departmental Admission Committee | 2019 To Date |
| vii. | Member, ASUP (TOPS) Bus Committee | 2019 |
| viii. | Financial Secretary Nigeria Institute of Physics Oyo State Chapter | 2019 To Date |
| ix. | Welfare Official ASUP (TOPS) | 2018 To Date |
| x. | Chairman, The Oke Ogun Polytechnic, Saki FCICS | 2017 To Date |
| xi. | Member, Departmental Examination and Time Table Committee | 2015 To Date |
| xii. | Level Adviser S.L.T NDII Student | 2015 To 2018 |
| xiii. | Chairman, Departmental I.G.R Committee | 2015 To 2018 |
| xiv. | P.R.O Academic Staff Union The Oke Ogun Polytechnic, Saki | 2014 To 2018 |
| xv. | Member, Departmental Seminar Committee | 2013 To Date |
| xvi. | Head of Physics Unit SLT Department The Oke Ogun Polytechnic Saki | 2013 To Date |
| xvii. | Member, ASUP Internet Committee | 2012 To 2015 |
| xviii. | Staff Adviser to J.C.I The Oke Ogun Polytechnic, Saki | 2012 To 2016 |
| xix. | Staff Adviser Federation of Oyo State Student (TOPS) | 2011 To Date |
| xx. | Staff Adviser Federation of Ogbomoso Student (TOPS) | 2010 To Date |

2. Other activities outside the Polytechnic Work (list other extra-curricular activities that you consider necessary and important to you and The Polytechnic)

| | | |
|------|--|--------------|
| i. | President Afurugbin Society Eleyele Baptist Church Ibadan | 2019 To Date |
| ii. | Vice President Afurugbin Society Eleyele Baptist Church Ibadan | 2017 To 2019 |
| iii. | Member, Technical Committee Eleyele Baptist Church Ibadan | 2017 To 2018 |
| iv. | Secretary Church Constitution Committee Eleyele Ibadan. | 2016 |
| v. | Chairman, Environmental Sanitation Committee Anthony Close Eleyele | 2014 To 2016 |
| vi. | Financial Secretary Pure and Applied Physics Department (Lautech Ogbo) | 2003 To 2005 |
| vii. | Laboratory Prefect Adeniran Memorial Grammar School Ogbomoso | 2006 To 2007 |

3 Awards and Fellowship: Nil

4 Any other relevant Information

- i. Versatile in the use micro-soft Excel in plotting and analyzing complex equations

- ii. Versatile in the use Math Lab software for simulation and analyzing the complex circuit
- iii. Very good in Table Tennis Game

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Date

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Signature of Member of Staff

