

# CURRICULUM VITAE



## ENGR IKECHUKWU CHRISTIAN EZEMA (R.COREN, MNSE, MMRSI)

### PERSONAL INFORMATION

**Name** Ezema, Ikechukwu Christian  
**Status:** Lecturer  
**E-mail:** [ikechukwu.ezema@unn.edu.ng](mailto:ikechukwu.ezema@unn.edu.ng); [ikeezema@gmail.com](mailto:ikeezema@gmail.com);  
**Phone:** +2348148320961; +2348059630816  
**Date of Birth:** 15<sup>th</sup> April, 1967  
**Marital Status:** Married with four children

**Office Address:** Department of Metallurgical and Materials Engineering,  
University of Nigeria, Nsukka.

### EDUCATION QUALIFICATIONS WITH DATE

University of Nigeria, Nsukka; Ph.D - 2015  
M. Eng.-Mechanical Engineering (Industrial Engineering. & Management) - 2001  
Federal University of Technology, Owerri; (1987-1992)  
B. Eng. -Metallurgical & Materials Engineering (Second Class Upper Div). - 1992

### MEMBERSHIP OF PROFESSIONAL BODIES

COREN Registered Engineer (R21, 193)  
Member Nigeria Society of Engineers  
Student Member American Society of Mechanical Engineers (ASME)  
Life Member Material Research Society of India (MRSI)

### MEMBERSHIP OF NON – PROFESSIONAL BODIES

Member Full Gospel Business Fellowship International Nigeria

### FELLOWSHIPS/ SCHOLARSHIPS /AWARDS

Best Graduate Student MME Dept FUT- Owerri 1992  
INSA-JRD-TATA Fellow, 2010 - (NIIST Trivandrum, Kerala India)  
World Bank Step-B, Iot 2010 Awardee  
Best Student- 1991/1992 graduation set - MME Department, FUT Owerri

### FULL TIME -WORK EXPERIENCE

(1) Department of Mechanical/ Metallurgical and Materials Engineering  
University of Nigeria, Nsukka

**Designation :** LECTURER I 2009-Date

### (A) TEACHING

**Courses Taught:**

S/N	Course Code	Course Title
	ENGR 201	Materials Science & Engineering
	MEC 343	Measurement and Instrumentation
	MME 381	Semiconductor Materials and Devices
	MEC 391	Engineering Metallurgy
	MME 301	Metallurgical Thermodynamics
	MME 342	Metallurgical Furnaces & Foundry Technology
	MME 461	Polymers Technology,
	ENGR 402	Student Industrial Work Experience Scheme (SIWES)
	MME 551	Introduction to Composite Materials
	MME 541	Theory & Design of Engineering Alloys
	MME 572	Pulp and Paper Technology
	MEC 683	Inspection, Quality Control and Reliability

**(B) ADMINISTRATIVE**

S/N	Job Function	Period
1	Ag. Head of Department of Metallurgical & Materials Engineering	10/11/2015- 31/07/2016
2	Departmental SIWES co-coordinator	2014-2016
3	Exam Officer (3 <sup>rd</sup> & 4 <sup>th</sup> Year ) MME Department	2009- 2014
4	Exam Officer Mechanical Engr. Dept	2006-2009

**(2) Federal Civil Service Commission**

Federal Ministry of Education Abuja  
Federal Government Girls College Lejja EDUCATION OFFICER (1995-2005)

**Job Description:** Taught Mathematics, Technical Drawing and Introductory Technology.  
Adviser to the Principal on Materials Procurement & Civil works.

(3) Allwell Aluminium & Steel Company Limited, Agbani Road Enugu  
Designation: Production Manager 1/04/ 1994-30/09/1995

**Job Description:** Materials costing , Procurement schedules. Welding & Fabrication, staff Job schedules. Materials planning and control. Inspection, job delivery to sites and installations

**RESEARCH INTERESTS**

- ✓ Core/Primary Research Areas;
- ✓ Polymer, Ceramic and Metal Matrix composites,
- ✓ Bio Hybrid Composite

- ✓ Functionally Graded Materials (FGMs) for Energy, automobile and Biomedical applications
- ✓ Multifunctional Materials, Additive Manufacturing, and Surface Engineering
- ✓ Simulation and Modeling of Materials

### **Selected Supervised Undergraduate Research .**

Mechanical and Microstructural Properties of Al-Cu-Mg Alloy/Irvingia Gabonensis Ash Composite

Effect Of Cao Addition on Physico-Mechanical Properties of Al-Zn-Alloy Composite

Determination of Mechanical Properties and Suitable Applications of Natural Fiber Reinforced Synthetic Resin.

Determination of Mechanical Properties and Suitable Applications of Natural Fiber Reinforced with Cashew Nut Shell Liquid Resin.

Effect of Volume Fraction on the Mechanical Properties of saw dust polyester composite

Effect of cow Volume Fraction on the Mechanical Properties of cow bone polyester composite

### **Selected Supervised Postgraduate Research**

Effect of soaking Time of Surface Treatment Reagents on the Physical & Mechanical Properties of Natural Fiber Reinforced Polymer Composite

### **PUBLICATIONS**

- 1 V. S. Aigbodion, L. A. Isah, · F. M. Achiv, **I. C. Ezema**, C. C. Daniel-Mkpume· F. Asuke: Anti-Wear Enhancement of Silicon-Grey Cast Iron for the Production of Grinding Plates: Effect of Snail Shell Powder as Carbide Forming Materials; *Silicon* DOI 10.1007/s12633-016-9467-z; *Accepted August 22, 2016*. THOMSON REUTERS IF=0.860
- 2 A.D. Omah, E.C. Omah, V.S. Aigbodion,**I.C. Ezema**, P.O. Offor: Characterization of the Thermo-Physical Performance of Bone Particles Proposed for Polymer Composites Production. *National Academy Science Letters Accepted June 2016* THOMSON REUTERS IF=0.345
- 3 V. S. Aigbodion1· O. J. Agunsoye · R. O. Edokpia · **I. C. Ezema**: Performance Analysis of a Connecting Rod Produced with Al-Cu-Mg/Bean Pod Ash Nanoparticles *Silicon*. Volume 8 Issue 2 2016 . DOI 10.1007/s12633-015-9382-8 **THOMSON REUTERS IF=0.860**
- 4 A. D. Omah1, B. A. Okorie , E. C. Omah2 , **I. C. Ezema**, V. S. Aigbodion , P. O. Offor: Measurement of dielectric properties of polymer matrix composites developed from cow bone powder. *Int J Adv Manuf Technol*. Volume 84 NO1-4, 2016. DOI 10.1007/s00170-016- 8759-1 **THOMSON REUTERS IF= 1.568**
- 5 **I. C Ezema, P.O Ogbobe and A.D Omah**: Initiatives and Strategies in Development of Nanotechnology in Nations: A lesson for Africa and other least Developed Countries. *Nanoscale Research Letters( Springer Open)* **THOMSON REUTERS IF= 2.584**
- 6 **I.C Ezema** , S.O. Edelugo A.R.R Menon and A.D Omah: A Comparative Prediction of the Tensile Properties of Sisal Fiber Reinforced Epoxy Composite Using Volume Fraction and Mass Fraction Models;; *Journal of Metallurgical & Materials Engineering Research, (JMMER)* **Vol. 1, Issue2, Dec 2015, 9-18**
- 7 **I.C. Ezema** , A.R.R. Menon and C.S Obayi : Effect of Surface Treatment and Fiber Orientation on the Tensile and Morpholoical Properties of Banana Stem Fiber Reinforced Natural Rubber Composite.:*The Journal of Minerals and Materials Characterization and Engineering* ,*JMMCE* Published Online May 2014 in SciRes.<http://dx.doi.org/10.4236/jmmce.2014.23026>.

- 8 **I.C. Ezema**, A.R.R. Menon, S.O Edelugo, V.B. Manilal, M. Brahmakumar, A.D Omah and I.U Agbo: Characterization of Selected Natural Fibres As Reinforcements Materials For Polymer Matrix Composites; *JORMAR* 7 (1&2) **2012** pp 58-69
- 9 **I.C Ezema**, A.R.R Menon, S.O Edelugo, A.D Omah and I.U Agbo: Ply Properties of Banana Stem and Banana Bunch Fibre Reinforced Natural Fibre Composite: *Nigerian Journal of Technology* Vol.31, No1 March, **2012** pp 25-31.
- 10 A.D Omah, DON Obikwelu and **I.C Ezema**: Wet ability Studies of Lead Free Solder: *Nigerian Journal of Technology* Vol.31, No1 March, **2012** pp 93-97
- 11 Omah A.D, D.O.N Obikwelu and **I.C Ezema** (2010); Comparative Microstructure and Wettability Studies of 63Sn-37Pb and 58Sn-42In Solders: *Nigerian Journal of Technology*, Vol. 2009 No 2, and pp 113-117
- 12 Offiong A. and **Ezema, I. C.** (2005); Decision in Production Control and Implementation of Optimal Production Policies, *Journal of Management and Enterprise Development*, Vol.2 No 2, Page 30-37
- 13 Offiong A. and **Ezema, I. C.** (2002); Development of an Integrated Production Inventory Model for a Multi-stage Serial System, *Global Journal of Engineering Research*, Vol.1, No. 1, Page 1-10.
- 14 Offiong, A. and **Ezema, I. C.** (2001); Determination of Optimal Production Inventory Parameter for Multistage Serial System, *Global Journal of Mechanical Engineering* Vo.2, No.1, Page 31-37.

#### (ii) CONFERENCE PROCEEDINGS PAPERS

- 15 **Ezema I.C, Agbo I.U and Enetanya A.N**; Natural fibre Reinforced Composite- Initiatives in Cashew Nut Shell Liquid Development and Applications: *Proceedings of 1st International Conference on Polymer Development and Applications*. University of Nigeria Nsukka, March 18-21, 2009
- 16 **I.C Ezema**, I.U Agbo, C.S Obayi, A.N Enetanya; Development Of Natural Fibre Composite; The Challenges And Prospects For Sustainable Development.; *Proceedings of 2nd Raw Materials Research and Development Council International Conference on Natural Resources Development and Utilization* ,RMRDC Head Quarters Abuja. February 9-11, 2010
- 17 **I.C Ezema**, A.R.R Menon, S.O Edelugo, A.D Omah and I.U Agbo: Review of the Potential Applications of Natural Fibre Polymer Composites: A Panacea for Sustainable Industrial Development; *3<sup>rd</sup> RMRDC International Conference on Natural Resources Development and Utilization*, Abuja Nigeria, April, 24-26, 2012
- 18 C.S. Obayia, Afghany Mostovanb, S.I. Neifec, **I.C. Ezemad**, B.A. Okoriee, Diego Mantovanif. Effect of Ferrite Grain Size on the Corrosion Behaviour of High-Purity Iron for Biodegradable Metallic Stent Application. NIMACON 2012

#### B/. PAPERS DELIVERED AT CONFERENCES

- 1 **I.C Ezema**, P.O Ogbobe and A.D Omah (2014). Nanotechnology Initiatives In Nations: The Challenges, Opportunities and Prospects for African Nations. *African International Conference/Workshop on Application of Nanotechnology for Energy, Environment and Health*, University of Nigeria, Nsukka 23rd – 29th March 2014

- 2 **I. C Ezema:** Nanotechnology in National Development: Enugu State 2012 National Science and Technology (NASTECH) Week, Nike Lake Resort Hotel Enugu, September 24-29<sup>th</sup>, 2012 ( **An invited paper delivered** )
- 3 **I.C Ezema**, A.R.R Menon, S.O Edelugo, A.D Omah and I.U Agbo: Review of the Potential Applications of Natural Fibre Polymer Composites: A Panacea for Sustainable Industrial Development; *3<sup>rd</sup> RMRDC International Conference on Natural Resources Development and Utilization*, Abuja Nigeria, April,24-26,2012
- 4 5th Mid-year Chemical Research Society of **India** (CRSI) Symposium in Chemistry, National Institute of Interdisciplinary Research in Science & Technology, (NIIST) Thiruvananthapuram, Kerala India, July 23-24, 2010.
- 5 2nd Raw Materials Research and Development Council International Conference on Natural Resources Development and Utilization, RMRDC Head Quarters Abuja, February 9-11, 2010

#### Conferences /Workshops Attended

- 6 International Conferences on Polymer Development and Applications, Princess Alexandra Auditorium (P.A.A), University of Nigeria Nsukka, March 18-21, 2009
- 7 2-day National Symposium on Nuclear Research and Development tagged: The Place of Nuclear Science and Engineering in National Development; Princess Alexandra Auditorium (P.A.A) University of Nigeria Nsukka, 1-2 September, 2008
- 8 Education Trust Fund-Sponsored AutoCAD Training For Tertiary Institutions; Institute of Management & Technology (IMT) - Enugu; July 24-August 4, 2006
- 9 The Nigeria Society of Engineers Workshop on Preparation & Documentation for NSE Professional Interview, New Heaven Enugu, 12<sup>th</sup> August, 2006
- 10 Bioresources Development and Conservation Programme (BDCCP) & Center for Biomedical Informatics, University of Pittsburgh, USA: Medical Informatics Training for Africa (MED-ITA) workshop held at Ikenga Hotels Ltd, Nsukka on April 20-21, 2000.
- 11 Nanotechnology in National Development: Enugu State 2012 National Science and Technology (NASTECH) Week, Nike Lake Resort Hotel Enugu, September 24-29<sup>th</sup>, 2012 ( **An invited paper delivered** ) *3<sup>rd</sup> RMRDC International Conference on Natural Resources Development and Utilization*, RMRDC Head –Quarters Abuja Nigeria, April, 24-26, 2012
- 12 5th Mid-year Chemical Research Society of **India** (CRSI) Symposium in Chemistry, National Institute of Interdisciplinary Research in Science & Technology, (NIIST) Thiruvananthapuram, Kerala India, July 23-24, 2010.
- 13 2nd Raw Materials Research and Development Council International Conference on Natural Resources Development and Utilization, RMRDC Head Quarters Abuja. February 9-11, 2010
- 14 International Conferences on Polymer Development and Applications, Princess Alexandra Auditorium (P.A.A), University of Nigeria Nsukka, March 18-21, 2009
- 15 2-day National Symposium on Nuclear Research and Development tagged: The Place of Nuclear Science and Engineering in National Development; Princess Alexandra Auditorium (P.A.A) University of Nigeria Nsukka, 1-2 September, 2008
- 16 Education Trust Fund-Sponsored AutoCAD Training For Tertiary Institutions; Institute of Management & Technology (IMT) - Enugu; July 24-August 4, 2006

17 The Nigeria Society of Engineers Workshop on Preparation & Documentation for NSE Professional Interview, New Heaven Enugu , 12<sup>th</sup> August,2006

18 Bioresources Development and Conservation Programme (BDCCP) & Center for Biomedical Informatics, University of Pittsburgh, USA: Medical Informatics Training for Africa (MED-ITA) workshop held at Ikenga Hotels Ltd, Nsukka on April 20-21, 2000.

### **JOURNAL PAPERS REVIEWED**

Nigerian Journal of Technology	-	2010-Date
Iranian Polymer Journal (IPOL-D-16-00107_R1)	-	2016
British Journal of Applied Science & Technology (Ms_BJAST_28784)	-	2016
Journal of Biology & Nature (Ms_JOBAN_2316)	-	2015-Date

### **REFEREES**

- 1 Dr V.S Aigbodion  
Head Department of Metallurgical & Materials Engineering  
University of Nigeria, Nsukka  
e-mail: [victor.aigbodion@unn.edu.ng](mailto:victor.aigbodion@unn.edu.ng);
- 2 Engr. Prof S.O. Edelugo  
Department of Mechanical of Engineering  
University of Nigeria, Nsukka  
[Sylvester.edelugo@unn.edu.ng](mailto:Sylvester.edelugo@unn.edu.ng);
- 2 Prof Charles Anyakwo  
Head, Department of Metallurgical & Materials Engineering  
Federal University of Technology Owerri Imo State Nigeria  
[charlesanyakwo@yahoo.com](mailto:charlesanyakwo@yahoo.com); ;