

CURRICULUM VITAE

PERSONAL DATA

Name: Ibrahim Dauda, Muhammad
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EDUCATION BACKGROUND

S/No.	Name of Institution	Certificate	Date
1.	Universiti Teknologi PETRONAS, Malaysia	PhD (Mech. Eng.)	2015
2.	Fed. Uni. Of Tech. Minna	M.Eng. (Prod/Ind. Eng)	1998
3.	Fed. Uni. Of Tech. Minna	B.Eng (Mech. Eng.)	1992
4.	Govt. Sci. Coll. Kagara, Niger State	WAEC/GCE	1985
5.	Central Pri. School Minna	Pri. Sch. Leaving Cert	1980

POSTGRADUATE TRAINING

1. COMSOL Multiphysics, organized by I-Math Pte Ltd Singapore held at Universiti Teknologi PETRONAS, Malaysia on 30th September 2014.
2. Outcome Based Education (OBE) Workshop for Graduate Assistants Outcome Based Education (OBE) Workshop for Graduate Assistant, organized by Electrical and Electronic Department, Universiti Teknologi PETRONAS, Malaysia on 28th Aug.2013.
3. Getting Started with LATEX Typesetting, organized by Postgraduate Student Council, Universiti Teknologi PETRONAS, Malaysia on 26th April 2013.
4. Preparation of Manuscripts for International Journal Publications, organized by Postgraduate Student Council, Universiti Teknologi PETRONAS, Malaysia on 19th September 2012.
5. SOLIDWORKS Simulation Seminar, held at CADVision Training Centre, 47810 Petaling Jaya, Selangor Darul Ehsan, Malaysia on 3rd August 2012.

6. Two-Day Course on Nanomaterials and Nanotechnology, conducted by the School of Materials and Mineral Resources Engineering, Universiti Sains Malaysia on 22 & 23 May 2012.
7. Short Course on Electron Diffraction and Electron Energy Loss Spectroscopy, organized by Central Analytical Laboratory, Universiti Teknologi PETRONAS, Malaysia and Carl Zeiss Germany held on 10-11 May 2012 at Universiti Teknologi PETRONAS, Malaysia.
8. Short Course on Cryo-Ultramicrotomy, organized by Hi-Tech Instruments Sdn Bhd held at Universiti Teknologi PETRONAS, Malaysia on 12th April 2012.
9. Journal Writing Course, organized and held at Universiti Teknologi PETRONAS, Malaysia on 29th February 2012,
10. Three day workshop on the Modern trends in Engineering Project Management, organized by the Nigerian Society of Engineers Metallurgy and Mining Division held at Elephant House Broad Street Lagos from 19th _ 21st May 2008.
11. One day workshop on Deepwater Operations and Challenges – An Oil and Gas Seminar for the Academia, organized by Shell Exploration & Production (SNEPCO) held at Elion House Hotel Ikoyi-Lagos on 19th November 2007.
12. National Stakeholders Conference on Entrepreneurship Education in Engineering and Technology organized by the Nigerian Society of Engineers in Collaboration with Hewlett Packard held at Transcorp-Hilton Hotel, Abuja on 8th November 2007.
13. Specialist Course on Corrosion Modelling and Optimization organized by Emster Engineers and Corrosion Consultants held at Gateway Hotel Ota Ogun State from 27th – 29th March 2007.
14. GTZ-EoPSD Stakeholders Workshop held at Rockview Hotel, Wuse Abuja from 30th November to 1st December 2006.
15. Training on MS-PowerPoint Presentation for E-Lectures organized UNESCO Nigeria TVE Project in collaboration with Alekanet Ltd at Federal Polytechnic Bida from 5th to 7th December 2006.
16. Skill Development Workshop for Computer Application on PowerPoint and Internet held at NBTE Staff Development Centre, Federal Polytechnic, Bida from 9th to 11th May 2006.
8. Strategic Planning for Educational Development (SPED) workshop held at the Nigerian Educational Research and Development Council (NERDC), Sheda, Abuja, from 2nd to 3rd February 2006.
9. Computer Aided Design (AutoCAD) workshop organized by the Nigerian Society of Engineers and Logic Gate Computers held at the Mutawakil Plaza Minna from 21st June to 2nd July 2004.
10. Development of a New Curriculum in Mechanical Engineering workshop held at the UNESCO-NBTE Centre, Polytechnic, Bida from 9th – 11th September 2002.
11. Workshop on Symbolics and Computer Algebra Systems held at the National Mathematical Centre, Abuja from 18th to 31st July 1999.
12. Foundry Management Course held at the National Metallurgical Development Centre, Jos from 1st to 31st January 1995.

WORKING EXPERIENCE

s/no	Establishment	Status	Period	Responsibilities
1.	University of Abuja	Lecturer I	Jan. 2007 - date	<ul style="list-style-type: none"> ➤ Teaching and research duties; Administrative duties such as Acting Dean (Feb. – Dec. 2007), Departmental SIWES Coordinator, Member ICT Committee, etc.
2.	Federal Polytechnic, Bida Niger State	Senior Lecturer	Dec.1993–Jan 2007	<ul style="list-style-type: none"> ➤ Teaching and research duties; Administrative duties such as Projects Supervisor, Officer in charge of Foundry and Forging workshop, SIWES/IT Coordinator, Member of several Management Committees (Research and Publication, Consultancy Services, Accreditation etc), Member of Editorial Boards of <i>POLYMATH Journal</i> and <i>Landzun Journal of Engineering and Appropriate Technology</i>, etc.
3.	Try System Nig. Ltd. Kaduna	Prod. Manager	June – Dec. 1997	<ul style="list-style-type: none"> ➤ Officer in charge of the Production unit of the Company to fabricate various metal products.
4.	Ajaokuta Steel Company, Ajaokuta	Engineer (NYSC)	Nov.1992– Oct.1993	<ul style="list-style-type: none"> ➤ Engineer in charge of the Scrap & Baling Unit. Restarted the Unit after stoppage for several years.
5.	Peugeot Automobile Nigeria (PAN)	Trainee Engineer	May – October 1991	<ul style="list-style-type: none"> ➤ Attached to the “think tank” of the Company – Study and Methods Department. Took part in design of parts, products and systems; specifications, methods, time schedule etc. Also went to production and maintenance Departments.
6.	Defence Ind. Corp. (DIC) Kaduna	Trainee Engineer	Aug. – October 1990	<ul style="list-style-type: none"> ➤ Training at various units of the Armament Factory for experience in Design and Fabrications.

RESEARCH WORKS

Project/thesis

1. Modeling the Mechanical Behaviors of Zirconia Nanotubes using Non-linear Finite Element Analysis, PhD Thesis, Universiti Teknologi PETRONAS, Malaysia, 2011- date.
2. Effect of Additives of some Properties of Bida Foundry Sand, thesis submitted to Federal University of Technology, for M.Eng. Degree (Prod. /Indus), October 1998.
3. Design, Construction and Performance Analysis of a Solar Oven, Project submitted to Federal University of Technology, for B.Eng. Degree in Mechanical Engineering, August 1992.

Journal Papers

1. Muhammad, I. D., Awang, M., Mamat, O., & Shaari, Z. B. (2015). Estimating Young's Modulus of Single-Walled Zirconia Nanotubes Using Nonlinear Finite Element Modeling. *Journal of Nanomaterials*, 2015.
2. Muhammad, I. D., Awang, M and Shaari, Z. B (2014), Potentials of Nano Catalysts for Energy Reduction During Synthesis of Ammonia, *International Journal of Engineering Innovation & Research*, 6(3), 904-908.
3. Muhammad, I. D., & Awang, M. (2014). Extracting the Atomic Coordinates and Connectivity of Zirconia Nanotubes from PDB Files for Modeling in ANSYS. *Advances in Nanoparticles*, 3(03), 92.
4. Muhammad, I. D., Awang, M., Mamat, O., & Shaari, Z. B. (2014). First-Principles Calculations of the Structural, Mechanical and Thermodynamics Properties of Cubic Zirconia. *World Journal of Nano Science and Engineering*, 2014.
5. Performance Evaluation of a Manually Operated Groundnut Stripper: A Paper published in the POLYMATH JOURNAL of the Federal Polytechnic Bida, Vol. 6 No. 1, 2005.
6. Viable and Sustainable Option Available for Technological Development of Nigeria: A paper published in LADZUN JOURNAL of ENGINEERING and APPROPRIATE TECHNOLOGY Vol. 1 Supplementary, 2004.
7. Design and Development of a Rice Reaper for Farmers Use: A paper published in the NIGERIAN JOURNAL of RESEARCH and PRODUCTION (NIJOREP), Vol. 3 No.4, September 2003.
8. Improving the Strength of Foundry Sand Using Cassava and Maize: A Paper Published in the JOURNAL of ENGINEERING and INDUSTRIAL APPLICATIONS, Vol. 1 No. 2, 2000 pp. 175-182.

Books of Proceedings

1. I.D. Muhammad and M. Awang, Modeling the Interatomic Potential of Cubic Zirconia, Presented at 3rd International Conference on Nanomaterials and Electronics Engineering (ICNEE 2013) held on 5-6, October 2013 at Bayview Hotel Melaka. Published in: *Applied Mechanics and Materials Vols.446-447 (2014) pp151-15*.
2. I.D. Muhammad, M. Awang and O. Mamat, Modeling the Elastic Constants of Cubic Zirconia Using Molecular Dynamics Simulation, presented at the 1st International Materials, Industrial and Manufacturing Engineering Conference (MIMEC2013), held on 4-6 December, 2013 at the Puteri Pacific Johor Bahru Hotel. Published in: *Advanced Materials Research Vol. 845 (2014) pp. 387-39*.

Conference Papers

1. I.D.Muhammad., M. Awang and L.K. Seng, Numerical Modeling of Young's Modulus of Single-Layered Cubic Zirconia Nanosheet. Presented at the 8th International Conference on Advanced Computational Engineering and Experimenting (ACE-X2014) held in Paris, France (at Espaces CAP 15, 1-13 Quai de Grenelle - 75 015) from 30th June – 03rd July, 2014.
2. Ibrahim .D. Muhammad, Mokhtar Awang and Othman Mamat, Structural and Dimensional Modeling of Single-Wall Zirconia Nanotubes with Hexagonal Morphology. Presented at the 4th International Conference on Production, Energy and Reliability (ICPER 2014), held from 3-5 June, 2014 at the Kuala Lumpur Convention Centre.
3. I.D. Muhammad and M. Awang, Determining the Bulk Mechanical Properties of Cubic Zirconia Using Semi-Empirical Modeling, presented at the 2nd OneBaja PG Colloquium at Universiti Putra Malaysia (UPM) on 12-13/Sept/2013.
4. Ibrahim .D. Muhammad, Mokhtar Awang, Othman Mamat, and Zainova Lockman, Geometrical Modelling of Cubic Zirconia Nanosheet, presented at the Joint International Conference on Nano science. Engineering and Management (BOND21) held at Bayview Beach Resort. Penang Malaysia on 19th-21st August 2013.
5. I.D. Muhammad, M. Awang and O. Mamat, Review of the Geometric Dimensions of Cubic Zirconia Nanotubes, Presented at the 3rd International Conference on Production, Energy and Reliability (ICPER 2012) held at Kuala Lumpur Convention Centre from 12-14 June 2012 (ISBN: 978-983-2271-82-6).
6. I.D. Muhammad, M. Awang and Z. Lockman, "Molecular Mechanics Approach for Predicting the Mechanical Properties of Zirconia Nanotubes", Presentation at OneBaja PG Colloquium Held at Universiti Teknikal Malaysia (UteM) on 14/12/2011.
7. Study of Portable Acetylene Generators Used by Roadside Gas Welders in Bida, Nigeria. A paper presented at the 2010 International Conference of the Nigerian Institute of Industrial Engineers held at University of Ibadan from 22 – 24, 2010.
8. Upgrading the Skills in the Informal Sector in Nigeria: A case study of Metal workers/Welders and Blacksmith in Niger State, Nigeria. A paper presented at the International Conference on Science and Technology held at the University of Abuja from 28 – 30, October 2008.
9. Secondary Contraction and Riser Design Requirements for Grey Iron Castings: A Paper presented at the 2nd National Engineering Conference held at the Federal Polytechnic Bida from 31st May to June 2nd 2005.
10. Integration of Local Foundries into the Nigerian Education System: A Case study of Federal Polytechnic Bida. A Paper presented at the 2nd National Engineering Conference held at the Federal Polytechnic Bida from 31st May to June 2nd 2005.
11. Utilizing Potentials at Centres of Indigenous Technology: A case study of Bida and Surrounding Environment: A Paper presented at the 1st National Engineering Conference held at Auchi Polytechnic from 9th to 12th October 2001.
12. The Impact of Computers as Teaching/Training Aid: The Federal Polytechnic Bida as a case study. A paper presented at the monthly seminar series, School of Engineering, Federal Polytechnic, Bida held on 11th June 1999.
13. Local Raw Material Utilization in the Nigerian Foundry Industry: A paper presented at the Annual Conference of the Nigerian Institution of Production Engineers held at the University of Benin from 24th to 25th July 1998.

14. Mechanical Production/Manufacturing: Problems and Prospects in the Nigerian Economy. A paper presented at the maiden National Engineering Conference held at the Federal Polytechnic, Bauchi from 17th to 19th April 1998.
15. Preliminary Investigation on the Suitability of Bida Sands for Foundry Use: A paper presented at 3rd National Engineering Conference held at Kaduna Polytechnic from 11th to 13th Dec. 1997 and published in the Book of Proceedings (vol. 3 No.1/ 97).
16. Evolution of the Nigerian Foundry Industry and the Challenges Ahead. A paper presented at the Foundry Management Course held at the National Metallurgical Development Centre Jos from 1st to 31st January 1995.

TRAININGS/TECHNICAL REPORTS

1. Core Trainer at the Workshop on Acceryl's MATERIAL STUDIO 6.1 organized by OneBaja LRGS and held at Universiti Teknologi PETRONAS, Malaysia from 22-23 August 2014.
2. Core Trainer at the one-day training of Accelrys Material Studio software, organized by the EM Research Group and held at Universiti Teknologi PETRONAS, Malaysia on 19th December 2013.
3. Report on the Training Needs Assessment for the Forthcoming Course on Maintenance and Repair for Electrical Linesmen, Prepared for GTZ and National Power Training Institute of Nigeria (NAPTIN), November 2009.
4. Report On Training Of Trainers On The Basic Of Welding Course. Organized For Welders Association In Garaku, Kokona LGA, Nassarawa State Held Between 26th November To 8th December 2007 Along Akwanga Road, Anguwan Loko Garaku, Nassarawa State.
5. Trainer in the Skills Upgrade Training (Training of Trainers [ToT]) for Welders organized by GTZ-EoPSD held at Mighty Metal Workshop, Akwanga Nassarawa State from 20th August – 1st Sept. 2007.
6. Report On ICT for University of Abuja after to National Institute Of Information Technology, NIIT, Lagos. June 2007
7. Curriculum Development, Assessment and Selection of Blacksmith and Welders for ToT Training in Fabrication of Agro-Processing Machines in Niger State; prepared as Consultant to GTZ-EoPSD, Asokoro Abuja. 2006.
8. Core Trainer and Trainer on Electric Arc welding and Sheet Metal respectively at the Training workshop for Blacksmiths, Welders and Metal Work Instructors organized by GTZ-EoPSD held at the Federal Polytechnic, Bida from 29th May to 10th June and 26th June to 10th July 2006.
9. Memorandum on the Establishment of a Ministry of Science and Technology in Niger State, November 2005.
10. Discussant at the two day workshop on Development and Promotion of Reading Culture among Pupils and Management of Children libraries held at G.S.S. Bida and sponsored by Bida Local Government Council on 6th – 7th April 2004.
11. Discussant on Introduction to Personal Computer and its Applications at the 3rd Biennial Conference of the National Association of Local Government Education Secretaries of Nigeria held at Murtala Mohammed library Complex Kano from 5th – 8th December 2002.
12. Specifications for the Proposed Foundry for Tri-System Nigeria Limited, Kaduna, August 1997.

COURSES TAUGHT

The Federal Polytechnic, Bida

Basic Workshop Practice	(MEC 106)
Engineering Measurement	(MEC 125)
Foundry Tech. & Practice	(MEC 213)
Mechanics of Machines	(MEC 315)
CAD/CAM	(MEC 316)
Foundry Tech. & Practice I	(MEC 328)
Foundry Tech. & Practice II	(MEP 444)
Machine Tools and Control	(MEP 441)
Testing & Failure of Materials	(MEP 435)

University of Abuja

Applied Mechanics I	(MEE 212)
Applied Mechanics II	(MEE 221)
Engineer in Society	(FEG 218)
Engineering Mathematics II	(FEG 221)
Theory of Machines I	MEE 311)
Manufacturing Technology	(MEE 321)
Cpt Programming & Engi. Application	MEE 324)
AutoCAD Application in Machine Drawing	(MEE 328)
Theory of Machines II	(MEE 411)
Technology Policy & Development	(MEE 416)
Intro. To Finite Element Analysis	(MEE 516)

Universiti Teknologi PETRONAS (Tutorials and Laboratory sessions)

Computational Numerical Methods (MATLAB)	(EAB 2113)
Statics	(MCB 1053)
Solid Mechanics	(MCB 2043)
Computer Aided Engineering (ANSYS & FDS)	(MCB 3063)

COMPUTER SKILLS

MS Office

Word
Excel
PowerPoint
Visio

Programming

Basic
Python
Mat lab

COMPUTER SKILLS (continued)

Engineering Software

AutoCAD
ANSYS (structural)
COMSOL
ABAQUS

Material Modeling

Surface Builder
Crystal Maker
Nanotube Modeler

Molecular Dynamics

GULP
Forcite
CASTEP

MEMBERSHIP IN PROFESSIONAL BODIES

1. American Society of Mechanical Engineers, 2011 (000100133593).
2. Institution of Mechanical Engineers (Affiliate), 2013 (80202609)
3. Registered Engineer, COREN, 2009, (No. 17680)
4. Corporate Member, Nigerian Society of Engineers, January 2007 (No. 17526)
5. Nigerian Institution of Engineering Management, NIEM 2001 (EM 157)
6. Foundry Association of Nigeria (FAN) 1994 (00161.1M)

REFEREES

1. Engr. Dr. Ishaya Dagwa
HOD, Mechanical Engineering,
University of Abuja.
2. Engr Abdullahi Sule
Rector,
The Federal Polytechnic,
Bida, Niger State.
3. Ass. Prof. Ir. Dr. Mokhtar Awang
Deputy HOD, Mechanical Engineering,
Universiti Teknologi PETRONAS, Malaysia.