

# CURRICULUM VITAE

## I. Personal Data:

**Name:** Igwe, Charles Arizechukwu

**Designation/Position** Professor

**Place and State of Birth:** Awka, Anambra State, Nigeria

**Nationality:** Nigerian

**Date of Birth:** August 23, 1958

**Sex:** Male

**Permanent Home Address:** #3 Oguguo Nwosu Street, Off Arthur Eze Road  
Awka

### Correspondence Address:

Department of Soil Science,  
Faculty of Agriculture  
University of Nigeria  
Nsukka, **NIGERIA.**

Phone: +234-803-5408495

E-mail: [charigwe1@hotmail.com](mailto:charigwe1@hotmail.com), or  
[charles.igwe@unn.edu.ng](mailto:charles.igwe@unn.edu.ng)

**Marital Status:** Married with 4 children

**Specialization:** Soil Conservation/Mineralogy.

### Present Employer:

University of Nigeria, Nsukka,  
**Nigeria.**

## II Educational Qualifications Obtained and Institutions Attended:

Degree	Year	Name of University
B.Agric. (Soil Science)	- 1984	University of Nigeria, Nsukka, Nigeria
M.Sc. (Soil Science)	- 1988	University of Nigeria, Nsukka, Nigeria
Postgrad. Diploma (Soil Sci.)	- 1990	Agricultural University, Norway, Ås
Ph.D. (Soil Science)	- 1994	University of Nigeria, Nsukka, Nigeria

### III. Employment Records at University of Nigeria:

Soil Surveyor	1987 - 1991
Lecturer II	1991 - 1994.
Lecturer I	1994 - 1997.
Senior Lecturer	1997 - 2003
Professor	2003 - Date

### IV. Administrative Records at the University of Nigeria

- Member, University of Nigeria, Senate 2003 - Date
- Head, Department of Soil Science 2005 - 2008
- Associate Dean, Faculty of Agriculture 2006 - 2008
- Dean, Faculty of Agriculture 2008 - 2010
- Elected Member, Univ. of Nigeria Governing Council 2013 - 2017

*As University Council Member Representing Senate, I belong to the following standing Committees;*

- i. Appointments & Promotions Committee (Academics)
- ii. Tenders Board
- iii. I have also served in many *ad hoc* Council Committees

- Director, University of Nigeria Advancement Centre 2014 - 2016
- Served in the following Faculty/University Committees
  - Chairman, Faculty of Agric Farm Project Committee 2002-2006
  - Chairman, Faculty Time Table Committee 2002-2005
  - Member, Faculty of Agric Library Committee 1992-2002
  - Member, Faculty of Agric Seminar Committee 2005-2008
  - Member, Faculty of Agric 4th Year Project 1998-2002
  - Fin. Secretary, Faculty of Agric Welfare Committee 1994-2006
  - Member, Board of JUPEB, University of Nigeria 2015-Date
  - Member, Municipal Services Maintenance Committee 2016-Date
  - Member, Board of Institute Climate Change Studies 2015-Date
  - Member, Transition Committee on IGR 2014-Date
  - Member, Committee on Repositioning of PG Programme 2015
  - Member, TETFUND Committee-UNN 2014-Date
- Deputy Vice Chancellor (Administration) 2016-Date  
*As Deputy Vice Chancellor Administration, I am the Chairman of the following University Committees;*
  - Act for the Vice Chancellor whenever he is officially away from campus
  - Chairman of Education and Re-orientation Standing Committee, NEC of UNN Alumni Association (2016-Date)
  - Chairman, University of Nigeria Management Tenders Board

- Chairman, Board of Directors, University of Nigeria Lion FM Radio Station
  - Chairman Committee on Institution of Excellent Performance Award for Deserving Staff of the University of Nigeria
  - Chairman, Committee on Monitoring/Evaluation of 2016 Sandwich Programme
  - Chairman, Committee on Debts owed to Teachers in the University Staff Schools with effect from 2009. 2017
  - Chairman, Committee to look into the issue of denial of status and other benefits of staff of the university of Nigeria secondary school, Nsukka and Enugu campuses (2017).
- Again, Member of University of Nigeria Governing Council as DVC  
2017-Date
    - *As Governing Council Member 2017-2021, I am serving in the following Committees*
      1. Member, Finance & General Purposes (F&GPC) Committee
      2. Member, Building, Works & Site Committee
      3. Member, Appointments & Promotion Committee (Senior & Technical Staff (SATS))

#### V. **Periods Acted for the Vice Chancellor, University of Nigeria**

<b>S / N</b>	<b>From</b>	<b>To</b>	<b>Remarks</b>
1	April 28, 2016	May 19, 2016	
2	August 15, 2016	August 28, 2016	
3	November 15, 2016	November 20, 2016	
4	November 28, 2016	December 04, 2016	
5	April 03, 2017	April 05, 2017	
6	April 10, 2017	April 17, 2017	
7	May 06, 2017	May 11, 2017	
8	May 15, 2017	May 18, 2017	
9	May 29, 2017	June 11, 2017	<i>Hosted, Minister of Education on June 1<sup>st</sup> &amp; Executive Secretary NUC 7-9 June 2017</i>
10	June 15, 2017	July 01, 2017	
11	July 04, 2017	July 08, 2017	
12	July 11, 2017	July 22, 2017	
13	August 04, 2017	August 10, 2017	
14	August 18, 2017	August 27, 2017	
15	September 08, 2017	September 23, 2017	
16.	September 26, 2017	October 01, 2017	
17	October 25, 2017	October 29, 2017	
18	November 01, 2017	November 12, 2017	
19	December 03, 2017	December 10, 2017	
20	January 30, 2018	February 15, 2018	<i>Supervised the annual Matriculation ceremony &amp; hosted the Cultural Affairs Officer of US Embassy</i>
21	February 23, 2018	February 26, 2018	
22	March 03, 2018	March 14, 2018	
23	March 19, 2018	March 21, 2018	
24	March 24, 2018	April 04, 2018	

25	April 11, 2018	April 16, 2018	
26	April 30, 2018	May 14, 2018	
27	May 20, 2018	May 24, 2018	<i>Hosted Prof Wole Soyinka Dr Chukwuemeka Ezife (former Governor of Anambra State) who was an invited guest at 2018 Chinua Achebe memorial lecture</i>
28	May 31, 2018	June 10, 2018	
29	June 18, 2018	June 28, 2018	
30	July 03, 2018	July 08, 2018	
31	July 14, 2018	August 02, 2018	
32	August 07, 2018	August 10, 2018	
33	August 12, 2018	August 20, 2018	
34	August 17, 2018	August 22, 2018	
35	August 29, 2018	September 06, 2018	
36	September 17, 2018	September 20, 2018	

## VI. Professional Background:

07-09/1983: Led a Soil Survey team in the Soil Survey and Productivity in Feasibility Study of the Lower Niger Floodplain for Anambra-Imo River Basin Development Authority.

08/1984-09/1985 Compulsory National Youth Service Corp. Member, Okene, Kwara State Nigeria

09-11/1985: A Principal Soil Scientist in the Land Census and Utilization Survey of Anambra State for the Government of Old Anambra State of Nigeria.

03-09/1986: A principal Soil Surveyor in the detailed soil survey of 500 hectare. Life Breweries Farm at Anaku, Ayamelum Local Government Area of Anambra State.

09/1987: Participant in the detailed soil survey and Farm Design of the Spiritan Farm at Okija, Ihiala Local Government Area, Anambra State, Nigeria.

03-08/1988: Principal Soil Surveyor of Gully Erosion Sites for Soil Conservation purposes & control measures in the following areas:

- i) Utuh gully site
- ii) Ukpor gully site
- iii) Enugu Ukwu and Opi gully sites

The client for these studies was Old Anambra State of Nigeria, government.

05-08/1990: Principal Soil Surveyor in Detailed Soil Survey of Lower Anambra River Irrigation Project Extension.

06/1994-03/95: Consultant Soil Surveyor; World Bank assisted Bauchi State, Nigeria Agricultural Development Programme (BSADP) Fadama Development Project.

01-02/1996: Consultant soil surveyor for National Agric. Land Development Authority (NALDA) in the land developments at Enugu, Anambra and Cross River States of Nigeria

- 05/2003 Co-participant, Study on the sources and availability of raw materials at FAO Sponsored Special Programme for Food Security (SPFS) sites in Anambra, Enugu and Ebonyi States of Nigeria.
- 01/2004 Team Leader, Detailed Soil Survey and Land Capability Classification of 500 Ha of Land at FAO Sponsored Special Programme for Food Security (SPFS) sites in Katsina-Ala, Benue state of Nigeria.
- 01/2005 Team Leader, Detailed Soil Survey and Land Capability Classification of 500 Ha of Land at FAO Sponsored Special Programme for Food Security (SPFS) sites in Ogboji, Anambra state of Nigeria.
- 04/2005 Team Leader, Detailed Soil Survey and Land Capability Classification of 500 Ha of Land at FAO Sponsored Special Programme for Food Security (SPFS) sites in Ogboji, Ebonyi state of Nigeria.
- 03/2014 Member, Committee to Develop Soil Fertility Strategy Document for WAAPP-Nigeria. Sponsored by the West Africa Agricultural Productivity Programme (WAAPP-Nigeria). Agricultural Research Council of Nigeria.
- 25/7-28/7/2017 Resource Person, Gap-Bridging Training for Technical Staff (Safety& Laboratory Ethics and Basic Laboratory Techniques Module 1) at the Training Workshop for Technical Staff in the University of Nigeria, Nsukka. *Organized by the University of Nigeria Consultancy Services Ltd.*
- 20-23/2018 Certificate of Participation in the 1<sup>st</sup> International Workshop on Science Parks & Innovation Ecosystem for National Development (SPIE4ND). *Organized by the University of Nigeria & IDEON Science Park with Lundavision, Sweeden.*

## VII. Place and Time Spent Abroad on Studies and Research

<b>Time (MM/YY)</b>	<b>Name &amp; Place of Institution</b>	<b>Purpose of Stay</b>	<b>Financed By</b>
08/1989-06/1990	Agricultural University of Norway, Ås, <b>Norway</b>	Study Fellowship	Norwegian Agency for Development Co-operation ( <b>NORAD</b> )
06/1996-11/1996	Dipartimento di Scienze Chimico-Agrarie, Universita di Napoli "Federico II" Via Universita 100, 80055 Portici <b>Italy</b> .	Research Fellowship	European Union ( <b>EU</b> )
12/1996-06/1997	Centre des Sciences de la Terre, Universite de Bourgogne, 6 Bd Gabriel, 21000 Dijon,	Visiting Research Fellowship/ Scientist	European Union ( <b>EU</b> )

**France.**

10/1999-12/2000; 09-12/2006 09-12/2010	Institut für Bodenkunde und Standortslehre, Universität Hohenheim, D-70593 Stuttgart <b>Germany</b>	Research Fellowship/ Visiting Professor	Alexander von Humboldt- Foundation, <b>Germany</b>
04-06/2004, 04-07/2005 & 01-04/2008	Abdus Salam International Centre for Theoretical Physics, Trieste, <b>ITALY</b>	Regular Associate/ Visiting Scientist	Swedish International Development Agency ( <b>SIDA</b> ) and <b>UNESCO</b>
06/ 2011- 05/ 2012	Faculty of Agriculture, Department of Environmental Management, Kinki University, 3327-204, Nakamachi, Nara, <b>JAPAN</b>	JSPS Invitation Fellowship-Long Term	Japanese Society for the Promotion of Science ( <b>JSPS</b> )
07/2015	Wright State University, College of Education & Human Services <b>USA</b>	Global Academy for Teaching Excellence ( <b>GATE</b> )	NUC/ TETFUND Nigeria
07/2016	Galilee International Management Institute, <b>Israel</b>	(i) Certificate in Management of Higher Education Institute  (ii) Agriculture Study Tour	University of Nigeria, Nsukka

**VIII. Community Service Rendered, including Dates**

- President, Awka Development Union (ADU), Nsukka Branch (2012 - Date)
- Member, National Working Committee, Awka Development Union (2012-Date)
- Treasurer, National Association of Agricultural Students, UNN (1982/83 Session)
- Vice Chairman, Aja-Nwachukwu Hall, University of Nigeria (1981/82 Session)
- Jerusalem Pilgrim, (JP) July 2016

**IX. Scholarly Awards:**

1. Fellowship Award by **Norwegian Agency for Development Cooperation (NORAD)**, 1989 - 1990.

2. Visiting Fellowship to attend **College on Soil Physics. International Centre for Theoretical Physics (ICTP)**, Trieste, Italy - (September 1993).
3. Winner of the **University of Nigeria Vice-Chancellor's Prize** for the best Postgraduate student in the Faculty of Agriculture 1992/93.
4. Winner of the **University of Nigeria Vice-Chancellor's Prize** for the best Ph.D graduand of the University of Nigeria for 1992/93.
5. **European Union Training Fellowship** at the Dipartimento di Scienze Chimico-Agrarie, Università di Napoli Federico II, Via Università 100, 80055 Portici, Italy, (June 1, 1996- November 30, 1996); and at The Centre Des Sciences De La Terre, Universite De Bourgogne, 6 Bd. Gabriel 21000 Dijon, France (December 1, 1996- May 31, 1997). This Fellowship is on the EU project "Evaluation of the stability of soil organic matter (SOM) pools in African Ecosystems (Ethiopia and Nigeria) for the Improvement of a sustainable soil management".
6. Award winner one-year visiting Research Fellowship of **ALEXANDER von HUMBOLDT FELLOWSHIP (Georg Forster Research Fellowship)** at the Institut für Bodenkunde und Standortslehre, Universität Hohenheim, D-70593 Stuttgart, Germany. (October 1999- December 2000)
7. Visiting Research Fellowship of **ALEXANDER von HUMBOLDT FELLOWSHIP** at the Institut für Bodenkunde und Standortslehre, Universität Hohenheim, D-70593 Stuttgart, Germany, September - December 2006.
8. Visiting Research Fellowship of **ALEXANDER von HUMBOLDT FELLOWSHIP** at the Institut für Bodenkunde und Standortslehre, Universität Hohenheim, D-70593 Stuttgart, Germany, September - December 2010.
9. Regular Associate, **Abdus Salam International Centre for Theoretical Physics, Trieste, Italy**, (January 2003 to December 2008).
10. Listed in the 2003-2004 **Marquis Who's Who** in Science and Engineering.
11. Invited Participant in the "**Sustainable Value Chains – Integrated Technologies for a Sustainable Resource Utilisation in Africa**", Lusaka, Zambia 14 March – 18 March 2009
12. Invited Participant in the **2nd DAAD/DIES Deans Course for Africa** in Osnabrück and Berlin, Germany, 2<sup>nd</sup>- 15<sup>th</sup> May 2009, Part II in Abuja, Nigeria and Part III at Addis Ababa, Ethiopia, 2010.
13. Award Winner, **Japanese Society for Promotion of Science (JSPS)** "Invitation Fellowship- Long Term" (June 2011 – May 2012).
14. Global Academy for Teaching Excellence (**GATE**) Award, Wright State University, College of Education & Human Services, United States of America. (**USA**) July, 2015.
15. Mentor, African Women in Agricultural Research and Development (AWARD), 2014-2015.
16. Certificate in **Management of Higher Education Institutes**, Galilee International Management Institute, Israel

17. Winner of the **University of Nigeria Vice-Chancellor's Research Prize** for the best Lecturer in Research for the University of Nigeria for 2015/16.
18. Fellow, Nigerian Association of Technologists in Engineering (FNATE) 2017
19. Fellow, Nigerian Association of Hydrological Sciences (FNAHS) 2017
20. LEADS (The League of African Development Students) Merit Award, Africa's Patriotic Academic of the Year, October, 2017

#### **X. External Grants/Donations**

- Recipient of **1996 THE ACADEMY OF SCIENCES FOR THE DEVELOPING WORLD (TWAS)** Research Grants (Grant No: 95-335 RG/PHYS/AF/AC) **\$3,800**
- Recipient of **2008 THE ACADEMY OF SCIENCES FOR THE DEVELOPING WORLD (TWAS)** (Grant No: 08-002 LDC/PHYS/AF/AC). **\$24,000**
- Scientific Equipment Donation Programme by **ALEXANDER von HUMBOLDT FOUNDATION 2001** worth Forty thousand Deutsche Mark (**DM 40,000**).
- Scientific Equipment Donation Programme by **ALEXANDER von HUMBOLDT FOUNDATION 2008** worth Fifteen thousand Euro (**€15,000**).
- Recipient of **2012 United Nations University, Tokyo**, Research Grants on "On-the-Job Research Capacity Building for Sustainable Agriculture in Developing Countries" (Grant No: 600UU- 1058) **\$18,800**

#### **XI. PhD. Supervision**

Supervised and graduated many Undergraduates and MSc Students including Nine (9) PhD Students at University of Nigeria Nsukka;

S/N	Names	Reg. No.
1.	<i>Onweremadu, Emmanuel Uzoma</i>	<i>PG/PhD/02/33396</i>
2.	<i>Nwite, John Chukwu</i>	<i>PG/PhD/07/42840</i>
3.	<i>Okpara, Ifeyinwa Monica</i>	<i>PG/PhD/05/40241</i>
4.	<i>Tsado, Philips Alkali</i>	<i>PG/PhD/09/50707</i>
5.	<i>Nwokocha, Christopher Chukwuma</i>	<i>PG/PhD/07/48166</i>
6.	<i>Ohaeri, John Emeka</i>	<i>PG/PhD/09/51073</i>
7.	<i>Okon-Inyang, Paul Bassey</i>	<i>PG/PhD/05/40388</i>
8.	<i>Onunwa, Akudo Ogechukwu</i>	<i>PG/PhD/10/52853</i>
9.	<i>Agim, Leonard Chimaobi</i>	<i>PG/PhD/11/58380</i>
10.	<i>Kwaghe, Emmanuel Joseph</i>	<i>PG/Msc/PhD/13/65431</i>

*I have also mentored many Junior Faculty members, including finding them Scholarships and Fellowships in Overseas Universities to improve their academic wellbeing.*

#### **XII. Computer and ICT Knowledge**

- Microsoft Word



- Microsoft Powerpoint
- Data processing using Microsoft Excel, GENSATS, SPSS, MINITAB and Statgraphics
- Spreadsheet
- Internet Search
- E-mail
- Disk Operating Systems and their use

### **XIII. Service to Government Organisation:**

Member of Nigerian Federal Environmental Protection Agency (FEPA) Sub-Committee on Deforestation and Agricultural Pollution, Old Anambra State, 1990 - 1991.

### **XIV. Editorship of Journals**

Review for the following Journal

1. *Agro Science*
2. *Nigerian Journal of Soil Science*
3. *Samaru Journal of Soil Research*
4. *African Biotechnological Journal*
5. *CATENA (Elsevier)*
6. *Soil & Tillage Research (Elsevier)*
7. *Australian Journal of Soil Research*
8. *Pedosphere (Elsevier)*
9. *Soil Science Society of America Journal*
10. *Land Degradation & Development (John Wiley)*
11. The **only Sub-Saharan African Member**, in the **Editorial Board**, *International Agrophysics*, published by the Institute of Agrophysics, **Polish Academy of Science, Lublin, Poland**

### **XV. External Examinership/Assessor**

Delta State University, Asaba, Nigeria (B. Sc and M. Sc. Levels)

Federal University of Technology, Owerri, (B. Sc, M. Sc. & PhD, Ext. Assessor)

Enugu State University of Science & Technology, Enugu (External Assessor)

Michael Okpara University of Agriculture, Umudike, Umuahia (B.Sc & M.Sc.)

Olabisi Onabanjo University, Ago-Iwoye, Ogun State (External Assessor)

Federal University of Agriculture, Abeokuta, (External Assessor)

Obafemi Awolowo University, Ile Ife, Nigeria (External Assessor)

University of Maiduguri, Nigeria (External Assessor)

Cross River State University of Technology, Calabar, (External Assessor)

University of Uyo, Nigeria (MSc & PhD including External Assessment)

Ebonyi State State University, Abakaliki (MSc including External Assessment)

Anambra State University, Igbariam (B.Sc, M.Sc., PhD & External Assessment)

### **XVI. Membership of Scientific/Professional Organisation:**

- i. Member, International Society of Soil Science.
- ii. Member, Soil Science Society of Nigeria.
- iii. Member, Agricultural Society of Nigeria.
- iv. Member, Nigerian Society of Remote Sensing.
- v. Member, New York Academy of Sciences
- vi. Member, Soil Science Society of America
- vii. Member, Japanese Society of Soil Science & Plant Nutrition.

#### **XVII. Period of Visiting Research/ Visiting Professorship**

- a. **Visiting NORAD FELLOW**, Agricultural University of Norway, Ås 1989 – 1990.
- b. **Visiting Researcher**, Dipartimento di Scienze Chimico-Agrarie, Università di Napoli Federico II, Via Università 100, 80055 Portici, Italy, (June 1, 1996- November 30, 1996)
- c. **Visiting Researcher**, Centre Des Sciences De La Terre, Universite De Bourgogne, 6 Bd. Gabriel 21000 Dijon, France (December 1, 1996- May 31, 1997).
- d. **Visiting Researcher**, Institut für Bodenkunde und Standortslehre, Universität Hohenheim, D-70593 Stuttgart, Germany. (October 1999- December 2000); (Sept. –Dec. 2006) and September 2010-December 2010.
- e. **Regular Associate**, Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, (January 2003 to December 2008). ***\*Note that the visit was for 3 months each year for the entire period.***
- f. **Visiting Researcher/Professor**, Faculty of Agriculture, Department of Environmental Management, Kinki University, 3327-204, Nakamachi, Nara, **JAPAN**, (June 1, 2011- May 2, 2012)

#### **XVIII. Participation in National University Commission University's Accreditations**

- Member, Ad-Hoc Accreditation Panel, (Agriculture) Adamawa State University, Mubi, May, 2012
- Member, Ad-Hoc Accreditation Panel, (Agriculture) Ambrose Alli University, Ekpoma, November, 2012
- Member, Agriculture Discipline Benchmarking Group, 2013
- Member, Ad-Hoc Accreditation Panel, (Agriculture) Federal University, Oye-Ekiti, August 2015

#### **XIX. Participation in NUC Moderation of National PhD Thesis Competitions**

- Assessor, Nigerian Universities Doctoral Theses Award Scheme (NUDTAS) for the Agriculture discipline, 2006 and 2007
- Assessor, Nigerian Universities Doctoral Theses Award Scheme (NUDTAS) for the Agriculture discipline, 2010, 2011 and 2012

## XX. Academic Research Group Leadership

- a. Leader, National Research Group on *Sawah* Rice farming systems
- b. Leader, University of Nigeria Soil Fertility Research Group
- c. Member, National Committee on Development of Soil Fertility Strategy Document for West Africa Countries.

## XXI. National and International Conferences/Workshops attended with dates/Papers Read

- Igwe, C.A. 1989. Sustainability of some tropical soils to intense soil degradation in southeastern Nigeria. Paper presented at the Symposium on the Sustainability of Agricultural Production Systems in sub-Saharan Africa, September 4-7, 1989, **Ås, Norway**,
- Igwe, C.A. 1990. Soil Classification as against land evaluation in secondary school agric science. Symposium on the teaching of Agricultural Science in Secondary Schools in Nsukka Zone, September 11, 1990
- Igwe, C.A. 1993. The Application of SLEMSA and USLE Erosion Models for potential Erosion Hazard Mapping in Southeastern Nigeria. Paper presented at the College on Soil Physics, International Centre for Theoretical Physics, **Trieste, Italy** September 6-24, 1993.
- Igwe, C.A. 1995. Soil moisture retention characteristics in relation to erodibility and texture of some soils of southeastern Nigeria. Paper presented at the 3<sup>rd</sup> All African Soil Science Conference, Ibadan, Nigeria, August 19-2 1995.
- Igwe, C.A. 1997. Soil sealing and crusting in relation to soil organic matter and mineralogy. Presented at the 14<sup>th</sup> ISTRO-International Conference on Soil Tillage Research, **Pulawy, Poland**, 6-10 April 1997.
- Igwe, C.A. 2000. Chemical properties of Niger floodplain soils, Eastern Nigeria, in relation to mineralogy British Society of Soil Science-**EUROSOIL 2000 Conference, University of Reading, UK**, 4-6 September, 2000.
- Igwe, C.A. 2001. Free oxide distribution of Niger floodplain soils in relation to their total and available phosphorus. Paper presented at the 27<sup>th</sup> Annual Conference of Soil Science Society of Nigeria, University of Calabar, November 5-9, 2001.
- Igwe, C.A. 2003. Soil degradation response to soil factors in central eastern Nigeria. Presented at the 28<sup>th</sup> Annual Conference of Soil Science Society of Nigeria, Umuahia, March 20-24, 2003.
- Igwe, C.A. 2004. Predicting El-Nino in the West African Sub-region. Presented at the Workshop on Climate Variability in the 20<sup>th</sup> Century (C20C). Abdus Salam International Centre for Theoretical Physics, **Trieste**,

**Italy**, 19-30 April, 2004.

- Igwe, C.A. 2005. Soil response to delayed rainfall and climate change in Southeastern Nigeria. Presented at the Spring Colloquim on the Physics of Weather and Climate: Regional Weather Predictability and Modelling. Abdus Salam International Centre for Theoretical Physics, **Trieste, Italy**, 11-22 April, 2005.
- Igwe, C.A. 2005. Workshop on Genes, Development and the Emergence of Behaviour. Abdus Salam International Centre for Theoretical Physics, **Trieste, Italy**, 25 April - 13 May 2005
- Igwe, C.A. 2005. Mineralogy of soils of southeastern Nigeria. Presented at the 29<sup>th</sup> Annual Conference of Soil Science Society of Nigeria, Makurdi, December 6-9, 2005.
- Igwe, C.A. 2008. X-ray diffraction & fluorescence as tools in soil characterization. Winter College on Micro and Nano Photonics for Life Sciences. Abdus Salam International Centre for Theoretical Physics, **Trieste, Italy**, 11-22 February, 2008.
- Igwe, C.A. 2008. Skill acquisition as it affects earth and life Scientists. Paper presented at the Entrepreneurship for Physicists and Engineers from Developing Countries. Abdus Salam International Centre for Theoretical Physics, **Trieste, Italy**, 17-21 March, 2008
- Igwe, C.A. 2009. Value chain addition of rice-mill waste in agronomical production in southeastern Nigeria. Paper presented at the Workshop on "Sustainable Value Chains – Integrated Technologies for a Sustainable Resource Utilisation in Africa" **Lusaka, Zambia** 14 March – 18 March, 2009
- Igwe, C.A. 2009. Development of strategies for scientific research groups at the Faculty of Agriculture, University of Nigeria, Nsukka, Nigeria. Paper presented at the 3<sup>rd</sup> International DIES/DAAD Deans' Course for Africa, **Osnabrück, Germany** May 4-14, 2009.
- Igwe, C.A. 2009. Soil organic carbon sequestration in soils of southeastern Nigeria. Presented to the Academy of Sciences for the Developing World (TWAS) 11th General Conference & 20th General Meeting, 20-23 October, 2009, **Durban, South Africa**.
- Igwe, C.A. 2009. The problem of food security in Sub-Saharan Africa. Presented at the 6<sup>th</sup> Global Conference on Global Consortium of Higher Education & Research for Agriculture, 23-27 November, 2009, **Nairobi, Kenya**.
- Igwe, C.A. & Wakatsuki Y. 2011. *Multi-functionality of sawah eco-technology: Role in combating soil degradation and pedological implication'* at the Annual Conference of Japanese Society of Soil Science and Plant Nutrition at **Tsukuba, Japan** 7-10 August, 2011.
- Igwe, C.A. & Wakatsuki T. 2011. *Multifunctionality of Sawah Eco-Technology: Why Sawah-Based Rice Farming Is Critical for Africa's*

*Green Revolution*'. Presented at the Annual Conference of combined Agronomy Society of America (ASA), Soil Science Society of America (SSSA) and Crop Science Society of America (CSSA) at **San Antonio, Texas, USA** 16-19 October, 2011.

- Igwe, C.A. 2012. Predicting Rainfall harvest in a small catchment at Nsukka, eastern, Nigeria. Presented at the UNESCO/DAAD Conference on Sustainable Water Management in African Countries, 1-3 October, 2012, **Kisumu, Kenya**.
- Igwe, C.A. 2013. *Repositioning Root and Tuber Crops Research and Extension for the Achievement of Agricultural Transformation in Nigeria*. Presented at the Annual Review and Research Planning Workshop" of the National Root Crops Research Institute, Umudike, 29-31 July, 2013
- Igwe, C.A. 2013. *Rainwater Harvesting for Agriculture and Rural Development*. Presented at the 5<sup>th</sup> National Conference of Nigerian Association of Hydrological Sciences at the University of Nigeria, Nsukka from 21- 24 October, 2013.

## **XXII. Invited Key Note Speeches in Workshops/Conferences**

1. Annual Conference of Japanese Society of Soil Science and Plant Nutrition at Tsukuba (7-10 August, 2011).

Papers Presented: (a). ***Multi-functionality of sawah eco-technology: Role in combating soil degradation and pedological implication***

2. Annual Conference of combined Agronomy Society of America (ASA), Soil Science Society of America (SSSA) and Crop Science Society of America (CSSA) at San Antonio, Texas, USA (16-19 October, 2011).

Paper Presented: ***Multifunctionality of Sawah Eco-Technology: Why Sawah-Based Rice Farming Is Critical for Africa's Green Revolution***

3. Annual Review and Research Planning Workshop of the National Root Crops Research Institute, Umudike, Umuahia 29-31 July, 2013.

Paper Presented: ***Repositioning Root and Tuber Crops Research and Extension for the Achievement of Agricultural Transformation in Nigeria***

4. Nigerian Association of Hydrological Sciences 5<sup>th</sup> National Conference at the University of Nigeria, Nsukka (21-24 October, 2013)

Paper Presented: ***Rainwater Harvesting for Agriculture and Rural Development***

## **XXIII. Inaugural Lecture**

1. 135<sup>th</sup> Inaugural Lecture, University of Nigeria, Nsukka. May 24, 2018

Title: **Unfolding Soil Erosion in Southeastern Nigeria: From Models to Aggregation and Colloidal Materials**

## List of Publications of Professor Charles Arizechukwu IGWE

### A. Thesis

1. **Igwe, C.A.** 1984. Identification of the catenary association of Uvuru, Nsukka and Nkpologu soil series in selected lithosequences and their differentiating criteria. *B.Agric. (Soil Science) Thesis, University of Nigeria, Nsukka.*
2. **Igwe, C.A.** 1988. Pedogenic investigations on gullied soils of two rainfall regime belts of Anambra State, Nigeria. *M.Sc. Dissertation, Department of Soil Science, University of Nigeria, Nsukka, Nigeria.*
3. **Igwe, C.A.** 1994. The Applicability of **SLEMSA** and **USLE** erosion models on soils of Southeastern Nigeria. *Ph.D Thesis, Department of Soil Science, University of Nigeria, Nsukka, Nigeria.*

### B. Book Chapters

1. **Igwe, C.A.** 2009. Environmental and soil factors in relation to Agriculture in the tropics. In: *General Agriculture: Principles and Practices*, pp 116-120. University of Nigeria Press Ltd. Nigeria.
2. **Igwe, C.A.** 2011. Development of strategies for scientific research groups at the Faculty of Agriculture, University of Nigeria, Nsukka, Nigeria. In: *Challenges for Faculty Management at African Higher Education Institutions* pp 65- 72 (eds) Mayer P., Wilde M., Dunku A., Fedrowitz J., Shitemi N.L., Wahlers, M. and Ziegele, F.
3. **Igwe, C.A.** 2011. Tropical soils, physical properties In: *Encyclopedia of Agrophysics*, pp 934-937 (Glinski J. et al. eds.). Springer publishers
4. **Igwe, C.A.** 2012. Soil organic carbon sequestration in relation to global climate change (GCC). In: Machebe N.S. (Ed) *Faculty of Agriculture Lecture Series (2010-2012) and Research Output*, pp 55-68. Faculty of Agriculture, University of Nigeria Nsukka, Nigeria.
5. **Igwe C.A.** 2012. Gully Erosion in Southeastern Nigeria: Role of Soil Properties and Environmental Factors In: *Research on Soil Erosion*, Dr. Danilo Godone (Ed.), ISBN: 978-953-51-0839-9, InTech, DOI: 10.5772/51020. Available from: <http://www.intechopen.com/books/research-on-soil-erosion/gully-erosion-in-southeastern-nigeria-role-of-soil-properties-and-environmental-factors>
6. **Igwe C.A.** and S.E. Obalum. 2013. Microaggregate Stability of Tropical Soils and its Roles on Soil Erosion Hazard Prediction. *Advances in Agrophysics*. InTech, DOI: 10.5772/52473.
7. **Igwe C.A.** 2014. Climate change and agriculture. Page 179-186 In: Nicholas Ozor (ed), *Climate change, agriculture and higher education; Multidisciplinary issues & perspectives*. Grand-Heritage Global Communication, Nsukka, Enugu State, Nigeria

### C. Journal Articles

8. Akamigbo, F.O.R. and **C. A. Igwe**. 1989. Micromorphology and mineralogy of gullied soils in Anambra State, Nigeria. *GeoJournal* **19**, 135 - 143.
9. Akamigbo, F.O.R. and **C. A. Igwe**. 1990. Morphology, geography, genesis and taxonomy of three soil series in Eastern Nigeria. *Samaru J. Agric. Research* **7**, 33 - 48.
10. Akamigbo, F.O.R. and **C. A. Igwe**. 1990. Physical and chemical characteristics of four gullied soils locations in Anambra State, Nigeria. *Niger. Agric. Journal* **25**, 29 - 48.
11. Akamigbo, F.O.R., **C. A. Igwe** and Oranekwulu, S.C. 1994. Soil variability in map units delineated by aerial photo interpretation: a case study in Anambra State, Nigeria. *Soil Use and Management*. **10**, 6 - 9. **(IF 1.82)**
12. **Igwe, C. A.**, Akamigbo, F.O.R. and Mbagwu, J.S.C. 1995. The use of some soil aggregate indices to assess potential soil loss in soils of Southeastern Nigeria. *International Agrophysics*. **9**, 95 - 100. **(IF 1.06)**
13. **Igwe, C. A.** Akamigbo, F.O.R. and Mbagwu, J.S.C. 1995. Physical properties of soils of Southeastern Nigeria and the role of some aggregating agents in their stability. *Soil Science* **160**, 341 - 441. **(IF 0.71)**
14. **Igwe, C. A.**, Akamigbo, F.O.R. and Mbagwu J.S.C. 1999. The Application of SLEMSA and USLE erosion models for potential Erosion hazard mapping in Southeastern Nigeria. *International Agrophysics* **13**, 41-48. **(IF 1.06)**
15. **Igwe, C. A.**, Akamigbo, F. O. R. and Mbagwu, J. S. C. 1999 Chemical and mineralogical properties of soils in southeastern Nigeria in relation to aggregate stability. *Geoderma* **92**, 111-123. **(IF 2.90)**
16. **Igwe, C. A.** 1999. Land use and soil conservation strategies for potentially highly erodible soils of central-eastern Nigeria. *Land Degradation Development* **10**, 425-434. **(IF 8.14)**
17. **Igwe, C. A.** 2000. Runoff, sediment yield and erodibility characteristics of some soils of central eastern Nigeria *International Agrophysics*. **14**; 57-65. **(IF 1.06)**
18. **Igwe, C. A.** 2000. Nutrient losses in runoff and eroded sediments from soils of central eastern Nigeria. *Polish Journal of Soil Science* **33**, 67-75.
19. **Igwe, C. A.** 2001. Clay-dispersion of selected aeolian soils of northern Nigeria in relation to sodicity and organic carbon content. *Arid Land Research and Manag.* **15**, 147-155. **(IF 0.75)**
20. Spaccini, R., Zena, A., **Igwe, C.A.**, Mbagwu, J.S.C., and Piccolo, A. 2001. Carbohydrates in water-stable aggregates and particle size fractions of forested and cultivated soils in two contrasting tropical ecosystems. *Biogeochemistry* **53**, 1-22. **(IF 3.41)**
21. **Igwe, C.A.** 2001. The effects of land use on some structural properties of an

- ultisol in southeastern Nigeria. *International Agrophysics* **15**, 237-241. **(IF 1.06)**
22. **Igwe, C. A.**, Akamigbo, F. O. R. and Mbagwu, J. S. C. 2002. Soil moisture retention characteristics in relation to erodibility and texture of some soils of southeastern Nigeria. *East African Agriculture and Forestry J.* **68**, 17-22
  23. **Igwe, C.A.** 2001. Water-stable aggregates of Niger floodplain soils of southeastern Nigeria and their organic carbon, nitrogen and phosphorus distribution. *Agro-Science* **2**, 52-61
  24. Spaccini, R., Piccolo, A, Mbagwu, J.S.C., Zena, T.A., **Igwe, C.A.** 2002. Influence of the addition of organic residues on carbohydrate contents and structural stability of some highland soils in Ethiopia. *Soil Use & Management* **18**, 404-411. **(IF 1.82)**
  25. **Igwe, C.A.** 2002. Evaluation of soil properties related to landscape position in a cuesta in eastern Nigeria, *Journal of Agro-Technology & Extension* **2**, 1-7.
  26. **Igwe, C.A.** 2002. Changes in water-dispersible clay and erosion of stony slope soil under tillage in Nigeria. *Polish Journal of Soil Science* **35**, 31-36.
  27. **Igwe, C.A.** 2003. Erodibility of soils of the upper rainforest zone, southeastern Nigeria. *Land Degradation & Development* **14**, 323-334. **(IF 8.14)**
  28. **Igwe, C.A.** 2003. Shrink-swell potential of a floodplain soil in Nigeria in relation to moisture content and mineralogy. *International Agrophysics* **17**, 47-55. **(IF 1.06)**
  29. Spaccini, R., Mbagwu, J.S.C., **Igwe, C.A.**, P. Conte, Piccolo, A. 2004. Carbohydrates and aggregation in lowland soils of Nigeria as influenced by organic inputs. *Soil & Tillage Research* **75**, 161-172 **(IF 2.70)**
  30. **Igwe, C.A.** 2004. Soil Properties Influencing Stability of Structure of B-horizons of Ultisols in Semiarid Nsukka, Eastern Nigeria. *Arid Land Research and Management* **18**, 185-195. **(IF 0.75)**
  31. **Igwe, C.A.** and Stahr, K. 2004. Water-stable aggregates of flooded inceptisols from southeastern Nigeria in relation to mineralogy and chemical properties. *Australian Journal of Soil Research* **42**, 171-179. **(IF 1.61)**
  32. **Igwe, C.A.**, Zarei, M and Stahr, K. 2004. Chemical properties of Niger floodplain soils, Eastern Nigeria, in relation to mineralogy. *Paddy and Water Environment* **2**, 51-58. **(IF 0.87)**
  33. **Igwe, C.A.** 2005. Erodibility in relation to water-dispersible clay for some soils of Eastern Nigeria. *Land Degradation & Development* **16**, 87-96. **(IF 8.14)**
  34. **Igwe, C.A.**, Zarei, M and Stahr, K. 2005. Mineral and elemental distribution in soils formed on the river Niger floodplain Eastern Nigeria. *Australian Journal of Soil Research* **43**, 147-158. **(IF 1.61)**
  35. **Igwe, C.A.** and Nwokocho, D. 2005. Influence of soil properties on the aggregate stability of a highly degraded tropical soil in eastern Nigeria.



*International Agrophysics* **19**, 131-139 (**IF 1.06**)

36. **Igwe, C.A.** and Ejiofor, N. 2005. Structural stability of exposed gully wall in central eastern Nigeria as affected by soil properties. *International Agrophysics* **19**, 215-222 (**IF 1.06**)
37. **Igwe, C.A.** 2005. Soil physical properties under different management systems and organic matter effects on soil moisture along soil catena in southeastern Nigeria. *Tropical and Subtropical Agroecosystems* **5**, 57-66
38. **Igwe, C.A.**, Zarei, M and Stahr, K. 2006. Clay dispersion of hardsetting Inceptisols in southeastern Nigeria as influenced by soil components. *Communications in Soil Science and Plant Analysis* **37**, 751-766. (**IF 1.06**)
39. **Igwe, C.A.** and Okebalama, C.B. 2006 Soil strength of some central eastern Nigeria soils and effect of potassium and sodium on their dispersion. *International Agrophysics* **20**, 107-112. (**IF 1.06**)
40. Igwe, C.A. and Nwokocha, D. 2006. Soil organic matter fractions and microaggregation in a Ultisol under cultivation and secondary forest in southeastern Nigeria. *Australian Journal of Soil Research* **44**, 627-635. (**IF 1.61**)
41. **Igwe, C.A.**, Zarei, M and Stahr, K. 2006 Estimating total elements in floodplain soils in Nigeria from their exchangeable/extractable forms *Discovery & Innovation* **18**, 288-294.
42. **Igwe, C.A.**, and Nkemakosi, J.T. 2007. Nutrient element contents and cation exchange capacity in fine fractions of southeastern Nigeria soils in relation to their stability. *Communications in Soil Science and Plant Analysis* **38**, 1221-1242 (**IF 1.06**)
43. Onweremadu, E.U., F.O.R. Akamigbo and **C.A. Igwe** 2007. Physical shrinkage relationship in soils of dissimilar lithologies in Central Southeastern Nigeria. *Journal of Applied Science*, **7**, 2495-2499
44. Onweremadu, E.U., F.O.R. Akamigbo, **C.A. Igwe**, E.C. Matthews-Njoku and P.C. Obasi. 2007. Constraints to adoption of Soil Survey information by owner-managed arable farmers of the humid tropics. *International Journal of Agricultural Research* **2**, 712-718
45. **Igwe C.A.**, Ekebosi, G.O, Zarei, M and Stahr, K 2007. Mineralogy and pedogenesis in a soil chronosequence on a floodplain, eastern Nigeria. *AgroScience* **6**, 1-15
46. Onweremadu, E.U., F.O.R. Akamigbo and **C.A. Igwe** 2007. Soil quality morphological index in relation to organic carbon content of soils in southeastern Nigeria. *Trends in Applied Sciences Research* **3**, 76-82.
47. Onweremadu, E.U., F.O.R. Akamigbo and **C.A. Igwe** 2007. Chemical factors in erosion-induced soil degradation in owner-managed farms in central southeastern Nigeria. *Nature and Science* **5**, 22-29.

48. Onweremadu, E.U., F.O.R. Akamigbo and **C.A. Igwe** 2007. Pedality and soil moisture retention characteristics in relation to erodibility of selected soils. *Nature and Science* **5**, 1-7.
49. Onweremadu, E.U., F.O.R. Akamigbo and **C.A. Igwe** 2007. Lithosequential variability and relationship between erodibility and sodium concentration in soils of a rainforest. *Research Journal of Forestry* **1**, 73-79.
50. **Igwe, C.A.** and Agbatah, C. 2008. Clay and silt dispersion in relation to some physicochemical properties of derived savanna soils under two management practices in southeastern Nigeria. *Acta Agriculturae Scandinavica B* **58**, 17-26 (*IF 0.65*)
51. **Igwe, C.A.**, Zarei, M and Stahr, K. 2008 Factors affecting potassium status of floodplain soils, eastern Nigeria. *Archives of Agronomy and Soil Science* **54**, 309-319 (*IF 1.53*)
52. Nwite J.C., **Igwe, C.A.** and Wakatsuki, T. 2008. Evaluation of Sawah Rice Management System in an Inland Valley in Southeastern Nigeria. I: Soil Chemical Properties and Rice Yield. *Paddy & Water Environment* **6**, 299-307 (*IF 0.87*)
53. **Igwe, C.A.**, and Udegbonam, N.O. 2008. Soil Properties Influencing Water-Dispersible Clay and Silt in an Ultisol in Southern Nigeria. *International Agrophysics* **22**, 319-325 (*IF 1.06*)
54. **Igwe, C.A.**, Zarei, M. and Stahr, K 2009. Mineralogy and geochemical properties of some upland soils from different sedimentary formations in Southeastern Nigeria. *Australian Journal of Soil Research* **47**, 423-432. (*IF1.61*)
55. **Igwe, C.A.**, Zarei, M. and Stahr, K. 2009. Colloidal stability in some tropical soils of southeastern Nigeria as affected by iron and aluminium oxides. *Catena* **77**, 232-237 (*IF 2.61*)
56. Nwite, J.C., Essien, B.A., Eke K.A., Essien, J.B. and **Igwe, C.A.** 2009. Maize production and chemical properties of an ultisol amended with different ash sources in southeastern Nigeria. *Nigeria Agricultural Journal* **40**, 65-72.
57. **Igwe, C.A.**, Zarei, M. and Stahr, K 2010. Fe and Al oxides distribution in some ultisols and inceptisols of southeastern Nigeria in relation to soil total phosphorus. *Environmental Earth Science* **60**, 1103-1111. (*IF 1.77*)
58. Nwite J.C., **Igwe, C.A.** and Wakatsuki, T. 2010. Evaluation of Sawah Rice Management System in an Inland Valley in Southeastern Nigeria. II: Changes in Soil Physical Properties. *Journal of Water Resources & Protection* **2**, 609-618.
59. Obalum, S.E., **C.A. Igwe** and M.E. Obi. 2010. Moisture Dynamics in Selected Layers of a Coarse-Textured Mineral Soil as Induced by Tillage-Mulch Practices under Sorghum and Soybean at Nsukka, Southeastern Nigeria. *Research Journal of Soil and Water Management* **1**, 45-60
60. Obalum, S.E., J.C. Nwite, J. Oppong, **C.A. Igwe** and T. Wakatsuki. 2011 Comparative topsoil characterization of sawah rice fields in selected inland

- valleys around Bida, north central Nigeria: Textural, structural and hydrophysical properties. *Paddy & Water Environment* **9**, 291-299. (IF 0.87)
61. Obalum, S.E., **C.A. Igwe**, M.E. Obi and T. Wakatsuki. 2011. Water-use and grain yield response of rainfed soybean to tillage-mulch practices in southeastern Nigeria. *Scientia Agricola* **68**, 554-561. (IF 0.95)
  62. Obalum, S.E., J.C. Nwite, J. Oppong, **C.A. Igwe** and T. Wakatsuki. 2011. Variation in selected soil physical properties with landforms and toposequence within an inland valley ecosystem in Ashanti region of Ghana. *Soil & Water Research* **6**, 73-82. (IF 0.58)
  63. Nwite, J.C., Obalum S.E., **Igwe, C.A.**, and T. Wakatsuki. 2011. Properties and potential of selected ash sources for improving soil condition and *sawah* rice yields in a degraded inland valley in southeastern Nigeria. *World Journal of Agricultural Science* **7**, 304-310.
  64. Obalum, S.E., Oppong, J., Nwite, J.C., Watanabe, Y., Buri, M.M., **Igwe, C.A.** and T. Wakatsuki. 2012. Long-term effects of lowland *sawah* system on soil physicochemical properties and rice yield in Ashanti region of Ghana. *Spanish Journal of Agricultural Research* **10**, 838-848. (IF 0.76)
  65. Nwite, J.C., **Igwe, C.A.**, and Obalum S.E. 2011. The contributions of different ash sources to the improvement in properties of a degraded ultisol and maize production in southeastern Nigeria. *American-Eurasian Journal of Sustainable Agriculture* **5**, 34-42.
  66. Obalum, S.E., **C.A. Igwe** Hermansah, M.E. Obi and T. Wakatsuki. 2011. Using selected indices to pinpoint the field moisture capacity of some coarse-textured agricultural soils in southeastern Nigeria. *Journal of Tropical Soils* **16**, 151-159.
  67. Obalum, S.E., **C.A. Igwe** and M.E. Obi. 2012. Soil Moisture Dynamics under rainfed Sorghum and Soybean on contrasting tillage-mulch seedbeds in a mineral sandy loam at derived savanna of Southeastern Nigeria. *Archives of Agronomy and Soil Science* **58**, 1205-1227. (IF 1.53)
  68. Obalum S.E., M.M. Buri, J.C. Nwite, Hermansah, Y. Watanabe, **C.A. Igwe**, T. Wakatsuki 2012. Soil degradation-induced decline in productivity of sub-saharan African soils: the prospects of looking downwards the lowlands with the *sawah* eco-technology. *Applied & Environmental Soil Science*. Vol. 2012.
  69. Obalum, S.E., J.C. Nwite, J. Y. Watanabe, **C.A. Igwe** and T. Wakatsuki. 2012. Comparative topsoil characterization of *sawah* rice fields in selected inland valleys around Bida, north central Nigeria: Granulochemical properties and fertility status. *Tropical Agriculture and Development* **56**, 39-48.
  70. Echezona, B.C., **Igwe, C.A.** and Attama, L.A. 2012. Properties of Arboreal ant, ground-termite nests in relation to their nesting sites and location in a tropical derived savanna. *Psyche* 2012, 1-11, doi:10.1155/2012/235840.
  71. Echezona, B.C. and **C.A. Igwe**. 2012. Stabilities of ant nests and their adjacent soils. *International Agrophysics* **26**, 355-363. (IF 1.06)

72. **Igwe, C.A.** J.C. Nwite, K.U. Agharanya, Y. Watanabe, S.E. Obalum, C.B. Okebalama, T. Wakatsuki. 2013. Aggregate-associated soil organic carbon and total nitrogen following amendment of puddled and *sawah*-managed rice soils in southeastern Nigeria. *Archives of Agronomy and Soil Science* **59**, 859-874. **(IF 1.53)**
73. Obalum, S.E., Y. Watanabe, **C. A. Igwe**, M. E. Obi and T. Wakatsuki. 2012. Carbon stock in the solum of some coarse-textured soils under secondary forest, grassland fallow, and bare footpath in the derived savanna of south-eastern Nigeria. *Soil Research* **50**, 157-166. doi.org/10.1071/SR11096 **(IF 1.61)**
74. **C.A. Igwe** and T. Wakatsuki. 2012. Multi-functionality of *Sawah* Eco-Technology: Role in combating Soil Degradation and Pedological Implications. *Pedologist* **55**, 178-186.
75. Echezona, B.C. and **C.A. Igwe**, 2012. Evaluation of different ant nest media for growth and yield of soybean. *Journal of Plant Nutrition* **35**, 1-17. **(IF 051)**
76. Nwite, J.C., S. E . Obalum, **C A. Igwe**, E. N. Ogbodo, C.I. Keke, B.A. Essien, T. Wakatsuki. 2012. *Sawah* rice system, a technology for sustainable rice production and soil chemical properties improvement in Ebonyi state of southeastern Nigeria. *World Journal of Agricultural Science* **8 (4)**, 351-358
77. Nwite J.C, Ogbodo, E.N., Obalum, S.E., Igbo, V.C. and **C.A Igwe**. 2012. Short-term response of Soil Physical properties of an Ultisol, and Nutrient composition of Fluted Pumpkin to Organic and Inorganic Fertilizer mixtures. *Journal of Biology, Agriculture and Healthcare* **2(10)**, 195-204.
78. Nwite, J.C., B.A. Essien, M.U. Anaele, S.E. Obalum, C.I. Keke and **C.A Igwe**. 2012. Supplementary Use of Poultry Droppings and Rice-Husk Waste as Organic Amendments in Southeastern Nigeria. 1: Soil Chemical Properties and Maize Yield. *Libyan Agriculture Research Centre Journal International* **3**, 90-97.
79. Tsado P.A., Osunde O.A., **Igwe C.A.**, Adeboye M.K.A. and Lawal B.A. 2012. Phosphorus sorption characteristics of some selected soils of the Nigerian Guinea Savannah. *International Journal of Agric Science* **2**, 613-618.
80. Tsado P.A., Osunde O.A., **Igwe C.A.**, Eze P.C. and Daniya E. 2012. Influence of organic acids on phosphate sorption and availability in an alfisol of Nigeria Guinea savannah. *Journal of Agric and Science and Rural Development* **15**, 1142-1146.
81. **Igwe, C.A.**, Zarei, M. and Stahr, K. 2013. Soil hydraulic and physico-chemical properties of Ultisols and Inceptisols in Southeastern Nigeria. *Archives of Agronomy & Soil Science* **59**, 491-504 **(IF 1.53)**
82. Tsado P.A., Lawal B.A, **Igwe C.A.**, Adeboye M.K.A., Odofin A.J. and Adekambi A.A. 2013. Effects of sources and levels of phosphorus on yield and quality of sugarcane in southern Guinea savannah zone of Nigeria. *Agricultural Science Developments* **2**, 25-27.

83. Nwite, J.C., B.A. Essien, C.I. Keke, **C.A Igwe** and T. Wakatsuki. 2013. Evaluation of water sources of sawah management in the restoration of degraded lowlands and sustainable rice production in southeastern Nigeria. *Asian Journal of Agric & Food Sciences* **01**, 55-65.
84. Obalum S.E., Nwite, J.C., Watanabe Y., **C.A Igwe** and T. Wakatsuki. 2013. Improving on the prediction of cation exchange capacity for highly weathered and structurally contrasting tropical soils from their fine-earth fractions. *Communications in Soil Science & Plant Analysis* **44**, 1831-1848. **(IF 1.06)**
85. **Igwe, C.A.**, Zarei, M. and Stahr, K 2013. Stability of aggregates of some well drained upland soils in south-eastern Nigeria in relation to their geochemical properties. *Journal of Earth System Science* **122**, 1283-1294. **(IF 0.86)**
86. Obalum, S.E., J. Oppong, **C. A. Igwe**, Y. Watanabe and M. E. Obi 2013. Spatial variability of uncultivated soils in derived savanna. *International Agrophysics* **27**, 57-67. **(IF 1.06)**
87. Osakwe U.C. and **Igwe C.A.** 2013. Conversion of forests to arable land and its effect on soil physical properties in Enugu state, southeastern Nigeria. *Nig. Journ. of Biotech.* **26**, 33-40.
88. Nwite J.C., Essien B.A., Keke C.I., **Igwe C.A.** and Wakatsuki T. 2014. Sustainable management and improvement of soil physical properties and rice grain yield in degraded inland valleys of southeastern Nigeria. *International Journal of Plant & Soil Science* **3**, 863-878
89. Azuka C.V., Obi M.E. and **Igwe C.A.** 2014. Microaggregate stability and sesquioxides content of degraded ultisol under different soil and crop management practices in Nsukka, southeastern Nigeria. *International Journal of Current Research* **6**, 5576-5581.
90. Nwite J.C., Agunannah M.U., Iwuanyanwu U.P., **Igwe C.A.** and Wakatsuki T. 2014. Physicochemical characteristics and lead concentrations in the inland valleys of Ishiagu, southeastern Nigeria. *International Journal of Plant & Soil Science* **3**, 99-112.
91. Obalum, S.E., Y. Watanabe, **C. A. Igwe**, M. E. Obi and T. Wakatsuki. 2014. Puddling intensity for late-season sawah systems based on soil hydrophysical conditions and rice performance. *International Agrophysics* **28**, 331-340. **(IF 1.06)**
92. Nwokocho C.C., Ano A.O. and **C.A. Igwe**. 2014. Sorption kinetics of lead as influenced by soil aggregates of two benchmark soils of southeastern Nigeria. *International Journal of Agriculture & Rural Development* **17**. 1768-1775.
93. Azuka C.V., Igue A.M., Diekkrüger B. and **C.A. Igwe**. 2015. Soil Survey and classification of the Koupendri catchment in Benin, West Africa. *African Journal of Agricultural Research* **10** (42), 3938-3951.
94. Agim L.C., Osuji G.E., **Igwe C.A.**, Ekpe I.I. and S. Ikeh. 2015. Seasonal variability and land use effects on aggregate stability, shear strength and organic matter content of an ultisol. *Malaysian Journal of Soil Science* **19**, 1-5

95. Nwite J.C., Onunwa A.O., **Igwe C.A.** and Wakatsuki T. 2016. *Sawah* rice farming eco-technology options for enhancing sustainable nutrient management and rice production in degraded inland valleys of southeastern Nigeria. *International Journal of Plant & Soil Science* **9** (4), 1-19.
96. Nwite J.C., Essien, B.A., Keke, C.I., **Igwe C.A.** and Wakatsuki T. 2016. Effect of different land preparation methods for *sawah* system development on soil productivity improvement and rice grain yield in inland valleys of southeastern Nigeria. *Advances in Research* **6** (2), 1-17.
97. Nwite J.C., Obalum S.E., **Igwe C.A.** and Wakatsuki T. 2016. Soil physical properties and grain yields of lowland rice in response to sawah preparation intensities and soil amendment types. *Biological Agriculture & Horticulture (In Press doi:10.1080/01448765.2016.1152507)*
98. Nwite J.C., Obalum S.E., **Igwe C.A.** and Wakatsuki T. 2017. Interaction of small-scale supplemental irrigation, sawah preparation intensity and soil amendment type on productivity of lowland sawah-rice system. *South African Journal of Plant & Soil* **34**, 301-310(*doi:10.1080/02571862.2017.11309468*)
99. Obalum S.E., Edeh I.G., Imoh O. N., Njoku O.M., Uzoh I.M., Onyia V.N., **Igwe C.A.** and Reichert J.M. 2017. Agronomic evaluation of seedbed and mulching alternatives with plant spacing for dry-season fluted pumpkin in coarse-textured tropical soil. *Food & Energy Security (doi:10.1002/fes3.111)*
100. Uzo I.M., Obalum S.E., **Igwe C.A.** and R.C. Abaidoo. 2017. Quantitative separation of nitrogen and non-nitrogen rotation benefits for maize following velvet bean under selected soil management practices. *Agricultural Research* **6**, 378-388.
101. Osakwe U.C., **Igwe C.A.** and Oluleye A. K. 2017. Soil organic carbon and water retention capacities of water-stable aggregates as affected by land use in Enugu State, Southeastern Nigeria. *International Journal of Agric & Rural Development* **20**, 3080-3088.
102. Okebalama C.B., **Igwe, C.A.** and Okolo C.C. 2017. Soil organic carbon levels in soils of contrasting land uses in southeastern Nigeria. *Tropical and Subtropical Agroecosystems* **20**, 493-504

### Refereed Conference Proceedings

103. **Igwe, C.A.** 2001. Free oxide distribution of Niger floodplain soils in relation to their total and available phosphorus. In: *Proceedings of 27<sup>th</sup> Annual Conference of Soil Science Society of Nigeria*, pp 196-201.
104. Akamigbo, F.O.R., Ezedinma, F.O.C. and **C.A. Igwe**. 2001. Properties and classification of some Fadama soils of Bauchi state, Nigeria. In: *Proceedings of 27<sup>th</sup> Annual Conference of Soil Science Society of Nigeria*, pp 45-51.
105. **Igwe, C. A.** and Akamigbo, F.O.R. 2001. Application of topomap and aerial photointerpretation in a derived savanna zone of southeastern Nigeria. In: *Proceedings of 27<sup>th</sup> Annual Conference of Soil Science Society of Nigeria*, pp 18-28.

106. **Igwe, C.A.** 2003. Soil degradation response to soil factors in central eastern Nigeria. In: *Proceedings of 28<sup>th</sup> Annual Conference of Soil Science Society of Nigeria*, pp. 228-234.
107. Nwite, J.C., Eke, K.A., Essien, J.B., **Igwe, C.A.** and Wakatsuki, T. 2008. Sustainable food production and the restoration of degraded watersheds through sawah rice farming technology in southeastern Nigeria. *Proceedings of 42<sup>nd</sup> Annual Conference of Agricultural Society of Nigeria*, October 19<sup>th</sup>-23, 2008, pp 473-478.
108. Onweremadu, E.U., Eshett, E.T., Unamba-Oparah, I., Ndukwu, B.N. Osuji, G.E., Akamigbo, F.O.R. and **Igwe, C.A.** 2008. Erodibility and characteristics of slope soils of a farmland at Mbise, Southeastern Nigeria. *Proceedings of 42<sup>nd</sup> Annual Conference of Agricultural Society of Nigeria*, October 19<sup>th</sup>-23, 2008, pp 473-478.
109. Nwite J.C., **Igwe, C.A.** and Wakatsuki, T. 2008. Rice yield and changes in some soil properties following sawah rice management system in an Inland Valley in Southeastern Nigeria. In: *Proceedings of the International Conference on Sustainable Agriculture for Food, Energy and Industry 2008 (ICSA 2008)* July 2-6, 2008, Hokkaido University, Sapporo, Japan. pp 63-69.
110. Echezona, B.C. and **Igwe, C.A.** 2010. Evaluation of ant (*Camponotus acvapimensis* Mayr) and termite (*Odontotermes sudanensis* Sjost) nests and their adjacent surface soils for the growth and yield of soybean (*Glycine max* L. Merrill). *Proceeding of the 44<sup>th</sup> Annual Conference of Agricultural Society of Nigeria*, pp 1090-1098.
111. Echezona, B.C. and **Igwe, C.A.** 2010. Structural stabilities of arboreal-and and epigeous ground-termite nests and their adjacent surface soils in a west African derived savanna. *Proceeding of the 44<sup>th</sup> Annual Conference of Agricultural Society of Nigeria*, pp 1143-1149.