

Abiodun Adeniyi  
1647 Greenspring Court  
Hoschton, GA, 30548

E-mail: [biodundeniyi25dn@yahoo.com](mailto:biodundeniyi25dn@yahoo.com)

Phone: 770-369-2393

# Abiodun (Abi) Adeniyi

---

## Education

- 2013 **M.S., Nuclear Engineering**  
*Georgia Institute of Technology, Atlanta, GA*  
Thesis: "Impact of Separation Capacity on Transition to Advanced Nuclear Fuel Cycles"
- 2007 **M.S., Systems Engineering**  
*Kennesaw State University, Marietta Campus, GA*
- 2002 **M.S., Mechanical Engineering**  
*University of Ibadan, Ibadan, Nigeria*  
Thesis: "Computer-Assisted Design of Four Stroke Engines"
- 1998 **B.S., Mechanical Engineering**  
*Lagos State University (LASU), Lagos, Nigeria*  
Senior Project: "Investigation of the Effects of Quenching on Mechanical Properties of Hot Worked Aluminum"

---

## Professional Experience

### **Oak Ridge National Laboratory, UT-Battelle, Oak Ridge, TN**

*Postmaster Research, Used Fuel Systems Group*                      2014 - present

### **Roles and Responsibilities**

2015 – present *DOE-NE Fuel Cycle Options Campaign Systems Analysis*

Developing models for tracking nuclear fuel materials in nuclear fuel cycles using multi-platform simulation technology – AnyLogic (Agent Based, Discrete Event, System Dynamic), VISION, ORION, IAEA's MESSAGE & NFCSS

2014 – present *DOE-NE Used Fuel Disposition Campaign & Integrated Waste Management Standardization and Integration Systems Analysis*

Providing systems analysis (modeling and simulation) and engineering design (CREO, Solidworks, AutoCAD, and Microstation) support within teams evaluating integration of standardized waste management systems (hardware and software) in the back-end of the nuclear fuel cycle.

Providing CAD/CAE analysis for special nuclear material package design, fabrication, thermal & structural testing in support of regulatory requirement.

### **University System of Georgia, Atlanta, GA**

*Adjunct Instructor*

2010 – 2014

## **Roles and Responsibilities**

2012 – 2014 *Physics, School of Science and Technology, Georgia Gwinnett College, Lawrenceville, GA*  
Developed laboratory instruction and teaching materials, for teaching undergraduate physics classes

2009 – 2011 *Engineering, Division of Engineering, Kennesaw State University, Marietta, GA*  
Developed laboratory instruction and teaching materials, for teaching undergraduate classes in Engineering Materials and Engineering Statics

## **Exxon Mobil Oil Facilities, QIT-Eket, Akwa-Ibom, Nigeria**

*Maintenance Engineer*

*1999 - 2000*

## **Roles and Responsibilities**

Assisted in maintenance support planning using electronic warehousing systems: ORACLE, MS Access, and MS Excel software. Worked within a team that reduced maintenance over-head cost by over \$30 million, and reduced equipment downtime using the developed eWarehousing. Developed 2D representation of oil processing equipment part using AutoCAD software for eWarehousing system.

## **Volkswagen of Nigeria Automobile Plant, Lagos, Nigeria**

*Manufacturing Technician (Machinist)*

*1990 - 1993*

## **Roles and Responsibilities**

Designed and fabricated automobile parts using manufacturing processes such as: milling, turning (lathe), casting, molding, forging, certified welder (Oxyfuel & Electric)

---

## **Internships and Research**

2011

### **Research Aide**

Engineering Department, Argonne National Laboratory, IL

Performed transition analysis in advanced nuclear fuel cycle in support of nuclear fuel option development using VISION nuclear fuel cycle code

2010 – 2012

### **Graduate Research Assistant**

Nuclear & Radiological Engineering Department, GaTech, Atlanta, GA

Performed transition analysis in advanced nuclear fuel cycle in support of Nuclear Waste Management using nuclear fuel cycle simulation codes such as: VISTA/NFCSS, VISION, MESSAGE, ENPEP-BALANCE, SCALE, and ORIGIN.

Participated in Comprehensive Training on Nondestructive Assay Applications for International Safeguard, at Safeguard Laboratory- ORNL, TN. (March 21 -25, 2011)

- Uranium Enrichment Measurements
- Special Nuclear Material Detection & Measurements
- Holdup Measurements

Participated in VISION NFC Simulation Code Training, at George Westinghouse Research and Technology Park. PA (January 06 - 07, 2011)

2007 - 2010

### **Research Associate**

Center for Nuclear Studies (CNS), Kennesaw State University, Marietta, GA

Developed training curriculum for courses in Nuclear Power Generation, Nuclear plant construction and Start-up.

Developed Nuclear Codes & Standards Library for the CNS.

---

### **Awards**

- 2015 Appreciation Award for participation in RSND Technical Seminar Presentation on spent fuel storage regulation
- 2010 - 2012 FACES Fellowship (Awarded by FACES center @ Georgia Tech)
- 2010 NRC Nuclear Power Career Scholarship (Awarded by Center for Nuclear Power Generation, SPSU/Kennesaw State University)
- 1998 Best Graduating Student Award (Department of Mechanical Engineering LASU)

---

### **Technical Skills and Training**

Experienced

AnyLogic, Powersim, Stella/iThink, MicroStation, CreoParametric suite, SolidWorks, 3DS Max Visualization and Animation, Advanced Microsoft Excel Programing, ANSYS suites, Fortran, MCNP, and SCALE

- 2010 **Nuclear Quality Assurance / Quality Control Academic Endorsement (Certification)**  
*Kennesaw State University Center for Nuclear Studies, Marietta, GA*  
Completed a 32-hour specialty workshop which provided an introduction to nuclear QA/QC program objectives and requirements, understanding the 18 program criteria, development and implementation of QA procedures, NQA-1 compliance, ITAAC requirements.
- 2009 **Nuclear Construction & Startup Academic Endorsement (Certification)**  
*Kennesaw State University Center for Nuclear Studies, Marietta, GA*  
Completed a 64-hour workshop which includes an introduction to the nuclear industry, legal and regulatory requirements, and engineering codes and standards as they apply to nuclear power plant construction and startup.

---

### **Publications**

J.M. Scaglione, S. Chatzidakis, **A. I. Adeniyi**, T. F. Severynse, R. H. Jones, J. J. Jarrell, "Mobile Examination and Remediation Facility". *NEI Used Fuel Management Conference, May 2018, Savannah, GA, USA.*

S. Chatzidakis, **A. I. Adeniyi**, J.M. Scaglione, T. F. Severynse, R. H. Jones, J. J. Jarrell, "A Novel Mobile Examination and Remediation Facility for On-Site Remediation of Dry Storage Systems". *WM2018 Conference, March 2018, Phoenix, Arizona, USA*.

**A. I. Adeniyi**, B. Akker, Alsaed Abdelhalim, B. James, J. Carter, T. Severynse, R. Jones et al., "Spent Nuclear Fuel Dry Packaging Facility – Modular Design, Dry Transfer Concept and Cost Estimate". *International High-Level Radioactive Waste Management, April 9 – 13, 2017, Charlotte, NC, USA*.

B. Akker, **A. I. Adeniyi**, Alsaed Abdelhalim, B. James, J. Carter, T. Severynse, R. Jones, "Wet Repackaging Facility Design Concept and Cost and Throughput Analysis". *International High-Level Radioactive Waste Management, April 9 – 13, 2017, Charlotte, NC, USA*.

F. Peretz, **A. I. Adeniyi**, E. Hardin, P. Nogradi, "Conceptual Design of the Package Handling System for the Deep Borehole Engineering Demonstration". *WM2017 Conference, March 5-9, 2017, Phoenix, Arizona, USA*.

R. Cumberland, **A. I. Adeniyi**, R. Howard, R. Joseph, J. Jarrell, M. Nutt, "Preliminary Concept of Operations for the Spent Fuel Management Systems". *WM2017 Conference, March 5-9, 2017, Phoenix, Arizona, USA*.

J. Jarrell, **A. I. Adeniyi**, M. Oscar, G. Radulescu, K. Robb, J. Scaglione, "Design of a Universal Canister System for US High-Level Waste". *ASME Pressure Vessels and Piping Conference, September 18 – 23, 2016, Kobe, Japan*.

**A. I. Adeniyi**, B. Petrovic, "Nuclear Resources Utilization in Full Recycling Nuclear Fuel Cycle with Limited Separation Capacity". *Trans. Am. Nucl. Soc.*, **108**, 134 - 136 (2013).

**A. I. Adeniyi**, B. Petrovic, B. Feng, T.K. Kim, "Impact of Limited Reprocessing Capacity on Nuclear Material Utilization in Advanced Fuel Cycle". *9th International Conference on Nuclear Option in Countries with Small and Medium Electricity Grids*. June 2012. Presented by Prof. Petrovic.