

**Akinbode A. Adedeji**

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**CAREER OBJECTIVES and SUMMARY**

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To utilize my training and experience as a research engineer, instructor and manager of resources to develop cutting edge research in the area of lipids application for industrial and food uses, and to create an excellent teaching program in the field of Food Process Engineering.

I am a highly motivated individual, with distinct leadership qualities and a strong team player, looking to pursuing a career in human and resource management, and development in the area of Food Process Engineering. I have over 10 years experience in research and teaching, with proven administrative capabilities.

**EDUCATION**

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Doctor of Philosophy in Bioresource (Food Process) Engineering                      Sept 2005 to March 2010  
McGill University, Montreal, Canada. **CGPA: 3.5/4.0**

Master of Science in Bioresource Engineering    Jan to Aug 2005  
McGill University, Montreal, Canada. **CGPA: 3.92/4.0**    Fast-tracked to Ph.D

Master of Science in Food Technology    Aug.1999 to Sept 2000  
University of Ibadan, Oyo State, Nigeria. **PhD grade (CGPA: 3.3/4.0)**

Bachelor of Technology (**Hon**) Food Engineering    Sept 1990 to April 1997  
Ladoke Akintola University of Technology, Ogbomoso, Nigeria. **CGPA: 4.24/5.0** (last 4 terms)

**THESIS**

- Microstructural characterization of deep-fat fried foods (PhD thesis)
- Effect of Soybean Substitution in Cowpea on Physico-chemical, Sensory and Sorption Properties of *Akara Ogbomoso* (Indigenous snack) (MSc. Thesis).
- Design of a Controlled Atmosphere Germination Chamber for malt Production (B. Tech. Thesis, **Hon.**)

**CAREER RELATED EXPERIENCE**

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**SESSIONAL INSTRUCTOR**

Bioresource Engineering Department, McGill University, Canada.                      Fall 2008

- Taught two under graduate courses (Element of Food Engineering and Food Process Engineering) to students from two departments.
- Instructed Lab sessions.
- Taught tutorials, organized course project and moderated seminar presentation.

- Organized plant visit to Encore Gourmet Food Corp and Rapid Snacks Inc., both in Montreal.

### TEACHING ASSISTANT

Bioresource Engineering Department, McGill University, Canada.

- Was a Teaching Assistant for the following courses:
  - Biothermodynamics Winter 2009
  - Building Maintenance Winter 2008
  - Introductory Physics 2 Winter 2006
  - Food Process Engineering Fall 2005, 2006, 2007
  - Elements of Food Engineering Fall 2005, 2006, 2007
- Responsibilities: Lab instructions; Lab demonstrations; Teaching of several classes and grading of assignments, midterm and final exams.

### FACULTY LECTURER

1998 – 2004

Department of Food Science and Engineering,

Ladoke Akintola University of Technology, Ogbomoso, Nigeria.

- Taught undergraduate courses (Unit Operations in Food Processing; Advanced Food Technology, Elements of Food Science and Engineering, Food Biotechnology).
- Supervised undergraduate student project/research.
- Research into physical and engineering properties of Foods.
- Student Advisorship and result processing.

### RESEARCH EXPERIENCE

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#### GRADUATE RESEARCH

##### Ph.D Research

Jan. 2005 to Date

- Engaged in the process of conceptualization, objective definition, experimental design and planning, execution of the experiment, writing for conference and peer-reviewed publications
- Executed study on microstructural characterization of deep-fat fried coated foods, developed protocols for some of the techniques used and acquired skill in image processing
- Six conference papers have been presented on various aspect of the study; we have 3 papers accepted and submitted 3 for publication in peer-reviewed journals.

##### MSc Research

Aug. 1999 – Sept. 2000

- Conducted experiment on improving textural and nutrient qualities of a local snack called *Akara Ogbomoso*.
- The work was published in an international peer-reviewed journal.

#### RESEARCH ASSISTANT

May 2005 to present

Bioresource Engineering Department, McGill University, Canada

- Conducted studies on mass transfer kinetics in deep-fat fried breaded foods and use of non-thermal methods (PEF) to enhance food processing
- Preparing to collaborate to conduct experiment into determining the effect of processing methods and variety on vitamin E content of palm oil.
- Supervision of lab activities – I have routinely supervised undergraduate and graduate research.

- Update lab inventory and make lab requisitions
- Prepare the lab every year for safety inspection ensuring Material Safety Data Sheet is updated, proper arrangement of chemicals and general hygiene of the lab.

## **OTHER WORK EXPERIENCE**

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### **NATIONAL YOUTH SERVICE, NIGERIA (NYSC)**

Engineer/Production Assistant

Sept. 1997 to May 1998

Nigerian Bottling Company, Nigeria, Bottler of Coca-cola.

- Participated in routine repairs and maintenance of plant equipment such as bottle washers and lines, crowner etc.
- Trained retailers in new sales technique (Merchandizing of products)

### **STUDENT INTERN**

Nigerian Breweries Plc, Nigeria.

May to Sept. 1995

- Training in Brewing Technology
- Panel operation and online sampling of products (Quality Assurance).
- **Special project** - Contracted grain storage facilities inspection for possible source of extraneous materials (contaminants).

## **EXTRA-CURRICULAR ACTIVITIES**

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### **VOLUNTEER EXPERIENCE**

McGill University International Student Buddy Program

Jan 2005 to Jan 2009

- Helped intending, new and international students with information related to travel visa, housing, cost of living etc.
- Met with new students after arrival to help them settle quickly and easily.

### **REDEMPTION BIBLE CHURCH**

Montreal, Canada.

**Church Assistant Administrator and Sunday School Teacher**

April 2005 to date

- Office keeping, janitorial work, liaise with different service providers to the church, represented the church at various city meetings, teach bible in the Sunday school etc.

**Youth Pastor**

April 2008 to date

- Organizes regular youth events and outreach activities where I teach and inspire young Christians.
- Oversees the welfare of the youth in the church
- I have facilitated and led several group discussions on topical issues related to Christian youth.

### **COMMUNICATION AND ORGANIZING SKILLS**

- **Taught** several undergraduate courses in Food Engineering at McGill University for a whole semester and for six years in a Nigerian University. Supervised class projects and organized industrial visits.

- **Student representative** member during undergrad and graduate years.
- **Chaired and organized election campaign** at my campus for two sessions (grad. year). Once, as a chief returning officer.

**LAB SKILLS:** Proficient in the use of lab equipment for studying physical and chemical properties of foods such as Differential Scanning Calorimeter (DSC), Rheometer, Porosimeter, Colorimeter, Refractometer, Data acquisition systems.

**COMPUTER SKILLS:** Microsoft Office (Word, Excel, PowerPoint), Image Processing and Computational softwares (SAS, MATLAB, ImageJ, CorelDraw, CTAnalyzer), Reference Manager Softwares (Endnote, Reference Manager).

### HOBBIES

- Love music – writing, singing and listening; enjoy travelling and visiting places of interest; reading inspirational novels and educational books.

### HONOURS and AWARDS

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|--|-----------------------------|
| • Differential fee waiver/Award (\$4000)                 | Fall 2006                   |
| • Graduate Student Award (\$7200/year)                   | Jan 2007 to date            |
| • Alma Mater Travel Award                                | Summer 2007 and 2009        |
| • Runner up, Food Engineering Division paper competition | IFT 2009                    |
| • Hugh Baily Award for graduating student                | McGill University 2009/2010 |

### PROFESSIONAL ASSOCIATION

Member, Canadian Institute of Food Science and Technology (CIFST)	Sept 2009 to date
Member, Institute of Food Technology (IFT)	Dec 2008 to date
Member, American Society of Agricultural and Biological Engineers	Dec 2006 to date
Member, Nigerian Society of Engineers (NSE)	Jan 2004 to date
Member, Nigerian Institute of Food Science and Tech. (NIFST)	Dec 1995 to date
Member, International Society of Food Engineering	Oct 2009 to date

### PROFESSIONAL CONTRIBUTIONS

Peer reviewer for the Journal of Food Process Engineering	March 2009 to date
Peer reviewer for Experimental Thermal and Fluid Science	October 2009 to date

### PUBLICATIONS

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#### Articles in Refereed Journals

1. **Adedeji, A. A.**, and Ngadi, M. O. Microstructural characterization of deep-fat fried breaded chicken nuggets using X-ray micro-computed tomography. *Journal of Food Process Engineering. Accepted for publication. (From Ph.D dissertation)*
2. **Adedeji, A. A.**, and Ngadi, M.O. (2010). Microstructural properties of deep-fat fried chicken nuggets coated with different batter formulation. *International Journal of Food Properties. In press. (From Ph.D dissertation)*

3. Ngadi, M. O., Wang, Y., **Adedeji, A. A** and Raghavan, G. S. V. (2010). Shrinkage of chicken nuggets during deep-fat frying. *International Journal of Food Properties*. (In Press).
4. **Adedeji, A. A.** and Michael O. Ngadi (2009). 3-D Imaging of deep-fat fried chicken nuggets breaching coating using X-ray micro-CT. *International Journal of Food Engineering*, 5(4), Art. 11. (From Ph.D dissertation)
5. **Adedeji, A. A.**, Ngadi, M. O and Raghavan, G. S. V. (2009). Kinetics of mass transfer in microwave precooked and deep-fat fried chicken nuggets. *Journal of Food Engineering* 91(1): 146-153.
6. Gachovska, T. K., **Adedeji, A. A.** and Ngadi, M. O. (2009) Influence of pulsed electric field energy on the damage degree in alfalfa tissue. *Journal of Food Engineering*. 95(4) 558 – 563.
7. Ngadi, M. O., Wang, Y., **Adedeji, A. A** and Raghavan, G. S. V. (2009). Effect of microwave pretreatment on mass transfer during deep-fat frying of chicken nugget. *LWT*. 42: 438-440. Research note.
8. **Adedeji, A. A.**, Gachovska, T. K., Ngadi M. O and Raghavan, G. S. V. (2008). Effect of Pretreatments on Drying Characteristics of Okra. *Drying Technology*. 26(10): 1251 – 1256.
9. Gachovska, T. K., **Adedeji, A. A.**, Ngadi, M and Raghavan, G.V. S. (2008). Drying Characteristics of Pulsed Electric Field Treated Carrot. *Drying technology* 26(10): 1244 – 1250.
10. Dev, R. S. S., Padmini, T., **Adedeji, A. A.**, Raghavan, G. S. V and Garipey. Y. (2008). Effects of chemical, microwave and pulsed electric pre-treatments on convective drying of grapes. *Drying Technology* 26:10, 1238 – 1243.
11. Olajide, J.O., **A. A. Adedeji**, B.I.O. Ade-Omowaye, E.T. Otunola and J.A. Adejuyitan. (2006). Potentials of high intensity electric field pulses (HELP) to food processors in developing countries. *Nutrition and Food Science*. 36 (4): 248 - 258
12. Oyelade, O. J., **Adedeji, A. A.**, Owonikoko, A and Akande, E. A. (2003). Design and construction of a manually operated double face meat mincer. *Journal of Science, Engineering and Technology*. 11(3): 5792-5804.
13. Falade, K. O., **Adedeji, A. A.** and Akingbala, J. O. (2003). Effect of soybean substitution for cowpea on physical, compositional, sensory and sorption properties of *Akara* Ogbomoso. *European Food Research and Technology*. Vol. 217. No. 6. (From MSc. Thesis).

#### Conference Papers

1. **Adedeji A.A.**, Lui, L, and Ngadi M. O. (2010). Confocal laser scanning microscopy imaging of deep-fat fried batter coating. 17th World Congress of CIGR, Quebec City, Canada, June 13-17, 2010. Paper No. 1207. *Accepted*.
2. Abdel-Nour, N., Ngadi M. O., and **Adedeji A. A.** (2010). Effect of thermal pre-treatment and batter composition on fat absorption in deep-fat fried batter. 17th World Congress of CIGR, Quebec City, Canada, June 13-17, 2010. Paper No. 1218. *Accepted*.
3. **Adedeji, A. A.** and Ngadi, M. (2009). Influence of batter formulation on physical and microstructural properties of deep-fat fried chicken nugget coatings. Presented at annual international meeting of Institute of Food Technology (IFT) at Anaheim, California USA. June 6 – 10, 2009. Paper No. 255-02. Poster Presentation.
4. Lui, L, Ngadi M. O., **Adedeji A. A.**, Prasher, S. O. and Garipey, C. (2009). Presented at annual international meeting of Institute of Food Technology (IFT) at Anaheim, California USA. June 6 – 10, 2009. Paper No. 254-02. Poster Presentation.
5. **Adedeji, A. A** and Ngadi, M. O. (2008). Microstructural characterization of deep-fried breaded products using X-ray micro-computed tomography. A presented at International Congress of Engineering and Food held at Vina Del Mar, Chile from April 20 – 24, 2008. Paper number M06.

6. **Adedeji, A. A.** and Ngadi, M. O. (2008). The Use X-ray micro-CT for Characterization of Microstructural Properties of deep-fat fried breaded chicken nuggets. A paper (072323) presented at American Society of Biological and Agricultural Engineering (ASABE) annual conference Held at Providence, Rhode Island, USA between June 29<sup>th</sup> – July 2<sup>nd</sup>, 2008. Oral presentation.
7. **Adedeji, A. A.** and Ngadi, M. O. (2008). Use of confocal laser scanning microscopy in the study of breaded food microstructures. A paper (08-040) presented at Northeast Agricultural and Biological Engineering Conference (NABEC). Held at Aberdeen, Maryland, USA between 27<sup>th</sup> - 30<sup>th</sup> July, 2008. Oral Presentation.
8. **Adedeji, A. A.** and Ngadi, M. (2007). 3-D Imaging of breaded deep-fat fried foods using X-ray micro-CT. A paper presented at 3<sup>rd</sup> CIGR conference held at Naples, Italy between September 24-26, 2007. Oral presentation.
9. Michael O. Ngadi, T.K. Gachovska, **A. Adedeji**, and G.S.V. Raghavan. (2007). Drying kinetics of pulsed electric field treated carrot pieces Paper # 076009, presented at the Annual International meeting of American Society of Agricultural and Biological Engineers at Minneapolis, USA from 17-20 June, 2007. Oral presentation.
10. Satyanarayandev Raja Lakshmi Sivaramakrishnan, Thumula, P., **Adedeji, A.**, Raghavan, G.S.V. Garipey, Y.. (2007). Effects of chemical, microwave and pulsed electric pre-treatments on convective drying of grapes. Paper # 076001 at the Annual International meeting of American Society of Agricultural and Biological Engineers at Minneapolis, USA from 17-20 June, 2007.
11. **Adedeji, A. A.** and Ngadi, M. (2007). Pore characteristics of chicken nuggets breading coating. A paper presented at NABEC conference held at Wooster, Ohio, USA July 29<sup>th</sup> - August 1<sup>st</sup> 2007. Paper number 07-013. Oral presentation.
12. **Adedeji, A. A.**, M. Ngadi, M. and. Raghavan, G.S.V. (2006). Effect of Microwave Precooking on Mass Transfer of Deep Fat Fried Chicken Nuggets. A paper presented at NABEC conference held at Montreal, QC, Canada. July 30<sup>th</sup> - August 2<sup>nd</sup> 2006. Paper number 06-023. Oral presentation.
13. Gachvoska, T., **Adedeji, A. A.**, Ngadi, M. and. Raghavan, G.S.V. (2006). Drying Characteristics of Pulsed Electric Field Treated Carrot. A paper presented at NABEC conference held at Montreal, QC, Canada. July 30<sup>th</sup> - August 2<sup>nd</sup> 2006. Paper number 06-049. Oral presentation.
14. **Adedeji, A. A.**, Adelegan, H. A., Odugbenro, P. O., Oyelade, O. J., Olajide, J. O. and Abioye, A. O. (2004). Effect of particle size distribution on physical and sensory properties of soy-substituted akara Ogbomoso. A Paper in the Proceedings of the 28<sup>th</sup> Annual Conference / Annual General Meeting of the Nigerian Institute of Food Science and Technology, Held at Conference Centre, University of Ibadan, Ibadan, Oyo State Nigeria, from 12<sup>th</sup> – 14<sup>th</sup> October, 2004. Pp. 178 – 179. Oral presentation.
15. Abioye, A.O., **Adedeji, A. A.**, Odugbenro, P.O. and Adedibu, A.O. (2004). Application of Peleg's equation to water absorption during soaking of Jack bean in "kaun" solutions. A Paper in the Proceedings of the 28<sup>th</sup> Annual Conference / Annual General Meeting of the Nigerian Institute of Food Science and Technology, Held at Conference Centre, University of Ibadan, Ibadan, Oyo State Nigeria, from 12<sup>th</sup> – 14<sup>th</sup> October, 2004. Pp. 186 – 187. Oral presentation.
16. Oyelade, O. J., **Adedeji, A. A.** and Adigun, O. J. (2003). Computer-Aided Model Design of Storage Microclimate for Agricultural Produce. A Paper presented at the 22<sup>nd</sup> annual conference of Nigerian Mathematical Society (NMS), held at Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria, from 10<sup>th</sup>-13<sup>th</sup> June, 2003. Oral presentation.
17. Ade-Omowaye, B.I.O, Olajide, J.O., Abioye, A.O. and **Adedeji, A. A.** (2003). Potential Applications of Osmotic Dehydration in Nigerian Food Processing. A Paper Presented at the First National Drying Symposium, held at Crab Park Hall, University of Port-Harcourt, Port-Harcourt, Rivers State, Nigeria. 21st- 23rd October 2003. Oral presentation.

### Contribution to Book Chapter

- i. Ngadi, M. O., **Adedeji, A. A.** and Kassama, L. (2009). Microstructural characterization of deep-fat fried breaded foods. In *Advances in Deep Fat Frying of Foods* (Sahin, S Eds.) Published by Taylor & Francis Group. Chapter 8. Pp 169 – 200.
- ii. **Adedeji, A. A.** and Ngadi, M. O. Physico-chemical properties of fried foods. (Devahastin, S. eds.). To be published by Taylor & Francis group. *Under review.*

### REFEREES

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