

Date Submitted: 2021-01-02 14:14:22

Confirmation Number: 1261721

Template: Full CV

Mr. Adekunle Aina

Correspondence language: English

Sex: Male

Date of Birth: 5/26

Canadian Residency Status: Study Permit

Applied for Permanent Residency?: No

Country of Citizenship: Nigeria

Contact Information

The primary information is denoted by (*)

Address

Mailing (*)

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Mr. Adekunle Aina

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes

Degrees

- 2018/9 (2023/4) Doctorate, Doctor of Philosophy, Physics, University of British Columbia
 Degree Status: In Progress
 Thesis Title: Computational predictions of epitopes in neurodegenerative diseases
 Transferred to PhD without completing Masters?: No
 Supervisors: Steven Plotkin, 2018/9 - 2023/4
 Research Disciplines: Biology and Related Sciences, Physics
 Areas of Research: Bioinformatics, Biotechnology, Organic Molecules and Biomolecules
 Fields of Application: Biomedical Aspects of Human Health, Pathogenesis and Treatment of Diseases
- 2016/9 - 2018/8 Master's Thesis, Master of Science, Physics, Memorial University of Newfoundland
 Degree Status: Completed
 Thesis Title: Computational Study of the Biophysics of Protein Conformational Switching
 Supervisors: Stefan Wallin, 2016/9 - 2018/8
 Research Disciplines: Physics
 Areas of Research: Biomaterials
 Fields of Application: Pathogenesis and Treatment of Diseases
- 2009/12 - 2014/4 Bachelor's Honours, Bachelor of Science, Physics, University of Lagos
 Degree Status: Completed
 Thesis Title: Diurnal and Seasonal Variations of Total Electron Content Over Mid-latitude Ionosphere During High Solar Activity
 Supervisors: Busola Olugbon, 2012/12 - 2013/11
 Research Disciplines: Physics

Credentials

- 2017/11 Certificate of Completion, Memorial University of Newfoundland
 A certificate for successfully completing the requirements for the Professional Skills Development Program.
- 2017/10 Certificate of Completion, Memorial University of Newfoundland
 A certificate for the successful completion of the Teaching Assistant Training Program.

- 2016/10 Certificate of Completion, Atlantic Computational Excellence Network (ACENET)
A certificate of completion of the Atlantic Computational Excellence Network (ACENET) training program in Introduction to Advanced Computing
Research Disciplines: Computer Science
- 2016/4 Certificate of Participation, International Centre for Theoretical Physics
A certificate for actively participating in the workshop "Active Learning in Optics and Photonics"
Research Disciplines: Physics

Recognitions

- 2020/9 - 2020/12 MITACS Accelerate Award - 10,000 (Canadian dollar)
MITACS
Award for COVID-19 research
Research Disciplines: Biology and Related Sciences
Areas of Research: Biotechnology
Fields of Application: Pathogenesis and Treatment of Diseases
- 2019/5 - 2023/4 Four-Year Fellowship (4YF) - 72,800 (Canadian dollar)
University of British Columbia
Prize / Award
Four-year fellowship for Doctoral studies.
Research Disciplines: Physics
Areas of Research: Biotechnology
Fields of Application: Biomedical Aspects of Human Health, Pathogenesis and Treatment of Diseases
- 2018/10 Fellow of the School of Graduate Studies
Memorial University of Newfoundland
Honor
Award in recognition of academic and research excellence during masters program.
Research Disciplines: Physics
Areas of Research: Biological and Biochemical Mechanisms
Fields of Application: Biomedical Aspects of Human Health
- 2018/3 Certificate of Excellence in Research - 250 (Canadian dollar)
Memorial University of Newfoundland
Prize / Award
Recognition of excellence in research as a master's student.
Research Disciplines: Physics
- 2017/8 Soft Matter Poster Prize
Royal Society of Chemistry, United Kingdom
Prize / Award
Award for the best conference poster at Association in Solution IV Conference, St. John's, Canada from 31 July 31 - August 4, 2017
Research Disciplines: Physics

2014/4	Best Graduating Student in Physics University of Lagos Distinction Research Disciplines: Physics
2013/4	Student Scholar University of Lagos Honor Research Disciplines: Physics
2010/12 - 2014/4	University of Lagos Endowment Scholarship - 200,000 (Nigerian naira) University of Lagos Prize / Award Research Disciplines: Physics

User Profile

Researcher Status: Doctoral Student
Research Career Start Date: 2016/09/01
Engaged in Clinical Research?: No

Research Specialization Keywords: Alzheimer's disease, Dementia, Protein misfolding, Neurodegeneration

Disciplines Trained In: Physics

Research Disciplines: Biology and Related Sciences, Physics

Areas of Research: Alzheimer's Disease, Biomaterials, Dementia, Neurodegenerative Diseases, Proteins

Fields of Application: Biomedical Aspects of Human Health, Pathogenesis and Treatment of Diseases, Public Health

Employment

2015/10	Graduate Assistant Physics, Science, University of Lagos Full-time, Lecturer Tenure Status: Tenure, 2015/10 - Teaching and Research in the field of Biophysics Research Disciplines: Biology and Related Sciences Areas of Research: Bioinformatics, Biotechnology Fields of Application: Pathogenesis and Treatment of Diseases
2018/9 - 2023/4	Graduate Research Assistant Physics and Astronomy, Science, Univeristy of British Columbia Full-time Tenure Status: Non Tenure Track Research in the field of protein misfolding and neurodegenerative diseases. Research Disciplines: Physics

2018/9 - 2020/12	Consultant Part-time Consultancy in the area of Biophysics and Biotechnology Research Disciplines: Biology and Related Sciences Areas of Research: Biotechnology Fields of Application: Pathogenesis and Treatment of Diseases
2016/9 - 2018/8	Teaching Assistant Physics and Physical Oceanography, Science, Memorial University of Newfoundland Tenure Status: Non Tenure Track
2016/9 - 2018/8	Research Assistant Physics and Physical Oceanography, Science, Memorial University of Newfoundland Tenure Status: Non Tenure Track
2014/8 - 2015/7	Youth Corper National Youth Service Corps, Nigeria
2012/4 - 2012/9	Industrial Trainee Power Holding Company of Nigeria

Affiliations

The primary affiliation is denoted by (*)

(*) 2018/7	Research Assistant, Physics and Astronomy, University of British Columbia
2016/9 - 2018/8	Graduate Research/Teaching Assistant, Physics and Physical Oceanography, Memorial University of Newfoundland

Research Funding History

Awarded [n=1]

2016/9 - 2018/8	Graduate Student Funding
Collaborator	Funding Sources:
	2016/9 - 2018/8 Memorial University of Newfoundland Graduate Funding Total Funding - 38,000 (Canadian dollar) Funding Competitive?: Yes
	Principal Applicant : Wallin, Stefan

Courses Taught

2018/01/03 - 2018/04/20	Graduate Teaching Assistant, Memorial University of Newfoundland Course Title: Oscillations, Waves, Electromagnetism Course Topic: Oscillations, Waves and Electromagnetism Course Level: Undergraduate Number of Students: 50 Guest Lecture?: No
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2017/09/06 - 2017/12/15	Graduate Teaching Assistant, Memorial University of Newfoundland Course Title: Mechanics Course Topic: Mechanics Course Level: Undergraduate Number of Students: 50 Guest Lecture?: No
2017/01/04 - 2017/04/14	Graduate Teaching Assistant, Memorial University of Newfoundland Course Title: Introductory Physics II Course Topic: Oscillations and Waves Course Level: Undergraduate Number of Students: 150 Guest Lecture?: No
2016/09/07 - 2016/12/16	Graduate Teaching Assistant, Memorial University of Newfoundland Course Title: Introductory Physics I Course Topic: Newtonian mechanics Course Level: Undergraduate Number of Students: 150 Guest Lecture?: No
2016/05/02 - 2016/08/26	Graduate Teaching Assistant, University of Lagos Course Title: Introductory Physics III Course Topic: Electricity and Magnetism Course Level: Undergraduate Number of Students: 2000 Guest Lecture?: No
2016/05/02 - 2016/08/26	Graduate Teaching Assistant, University of Lagos Course Title: Introductory Physics II Course Topic: Optics Course Level: Undergraduate Number of Students: 2000 Guest Lecture?: No
2015/12/01 - 2016/08/26	Graduate Teaching Assistant, University of Lagos Course Title: Introductory Physics I Course Topic: Mechanics and Thermal Physics Course Level: Undergraduate Number of Students: 2000 Guest Lecture?: No

Event Participation

Participant, 2017 Reddy Memorial Lecture, Seminar, 2017/10 -
Active participant at the *2017 Reddy Memorial Lecture organised by the Department of Physics and Physical Oceanography, Memorial University.*

Participant, 2016 Reddy Memorial Lecture, Seminar, 2016/10 -
Active participant at the *2016 Reddy Memorial Lecture organised by the Department of Physics and Physical Oceanography, Memorial University.*

Speaker, Department of Physics and Physical Oceanography Master's Thesis Seminar, Seminar, 2018/5 -
I presented my MSc. Thesis at the Department of Physics and Physical Oceanography, Memorial University.

Participant, Aldrich Conference, Conference, 2018/3 - 2018/3

Active participant at Aldrich conference 2018 organised by the Graduate Student Union and School of Graduate Studies, Memorial University.

Presenter, Biophysics Journal Club, Club, 2016/9 - 2018/8

I was a presenter at the Biophysics Journal Club, Memorial University.

Community and Volunteer Activities

- 2018/4 Judge, Eastern Newfoundland
I was one of the special Judges for Eastern Newfoundland Science Fair 2018
- 2018/2 Presenter, Department of Physics and Physical Oceanography, Memorial University
I made a presentation at "Let's talk Science tours" organised to get high school student aware of scientific research and opportunities.
- 2017/10 Sales person, Farmers Market
I volunteered as a coffee sales person at Farmers market, St. John's, Newfoundland.
- 2017/10 Demonstrator, Memorial University of Newfoundland
I volunteered for Science Rendezvous 2017 as demonstrator of experiments in Physics to children and general public.
- 2017/9 Demonstrator, Department of Physics and Physical Oceanography, Memorial University
I volunteered as a demonstrator at the Science Literacy Week-Event 2017
- 2017/8 - 2017/9 Organizer, Memorial University of Newfoundland
I volunteered with the School of Graduate Studies and the Graduate Student Union, Memorial University as one of the organizers during the welcoming events organised for new graduate students in the fall of 2017.

Committee Memberships

- 2017/8 - 2018/8 Committee Member, Academics Committee, Graduate Student Union, Memorial University
I was a member of the Academics Committee of the Graduate Student Union of Memorial University.
- 2016/9 - 2018/8 Chair, Constitution Review Committee, Graduate Physics Society, Memorial University
I was a member and then the chair of the constitution review committee of the Graduate Physics Society for 2 years.

Other Memberships

- 2018/1 Member, Canadian Association of Physicists
I am a graduate student member of the Canadian Association of Physicists.
- 2017/10 - 2018/8 President, Graduate Physics Society, Memorial University
I was the president of Graduate Physics Society for one year.
- 2017/9 - 2018/8 Graduate Studies Representative, Faculty of Science Faculty Council, Memorial University
I was the Representative of graduate students on the Faculty Council of the Faculty of Science, Memorial University.
- 2017/8 - 2018/8 Academic Director (Physics), Graduate Student Union, Memorial University
I was the elected Academic Director representing the graduate students in physics at the Graduate Student Union, Memorial University.

2012/12 - 2013/11 President, National Association of Physics Student
I was the President of National Association of Physics Student, University of Lagos.

Presentations

1. (2018). Poster Presentation: Multisequence algorithm for coarse-grained biomolecular simulations: exploring the sequence-structure relationship of proteins. Canadian Association of Physicists (CAP) Congress, Halifax, Canada
Main Audience: General Public
Invited?: No, Keynote?: No, Competitive?: Yes
Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)
2. (2018). Oral Presentation: Escherichia coli's RfaH studied by all-atom Monte Carlo simulation. 2018 Canadian Association of Physicists (CAP) Congress, Halifax, Canada
Main Audience: General Public
Invited?: No, Keynote?: No, Competitive?: Yes
Funding Sources: Memorial University of Newfoundland; Natural Sciences and Engineering Research Council of Canada (NSERC)
3. (2018). Poster Presentation: Multisequence algorithm for coarse-grained biomolecular simulations: exploring the sequence-structure relationship of proteins. Soft Matter Canada 2018, Halifax, Canada
Main Audience: General Public
Invited?: No, Keynote?: No, Competitive?: Yes
Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)
4. (2017). Understanding Protein Dynamics by Single-molecule FRET. Course Project Presentation, St. John's, Canada
Main Audience: Knowledge User
Invited?: No, Keynote?: No, Competitive?: No
5. (2017). Poster Presentation: Multisequence algorithm for coarse-grained biomolecular simulations: exploring the sequence-structure relationship of proteins. Engineering Conference International (ECI) Association in Solution IV Conference, St. John's, Canada
Main Audience: General Public
Invited?: No, Keynote?: No, Competitive?: Yes
Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)
6. (2017). Imaging proteins at the single-molecule level. Biophysics Journal Meeting, Canada
Main Audience: General Public
Invited?: No, Keynote?: No, Competitive?: No

Publications

Journal Articles

1. Steven S. Plotkin, Shawn Ching-Chung Hsueh, Aina Adekunle, Xubiao Peng, Ebrima Gibbs, Andrei Roman, Beibei Zhao, Sarah Louadi, Johanne Kaplan, Neil R. Cashman. (2020). Epitope prediction for oligomer-selective antibodies in tau and $A\beta$. *Alzheimer's & Dementia*.
<http://dx.doi.org/10.1002/alz.045757>
 Co-Author
 Published,
 Refereed?: Yes, Open Access?: Yes
 Number of Contributors: 10
 Contribution Percentage: 11-20
2. Andrei Roman, Shawn Ching-Chung Hsueh, Johanne Kaplan, Ebrima Gibbs, Aina Adekunle, Steven S. Plotkin, Neil R. Cashman. (2020). Rationally designed antibodies selective for pathogenic tau aggregates. *Alzheimer's & Dementia*.
<http://dx.doi.org/10.1002/alz.045461>
 Co-Author
 Published,
 Refereed?: Yes, Open Access?: Yes
 Number of Contributors: 7
 Contribution Percentage: 11-20
3. Bahman Seifi, Adekunle Aina, Stefan Wallin. (2020). Structural fluctuations and mechanical stabilities of the metamorphic protein RfaH. *Proteins, Structure, Function, and Bioinformatics*.
<http://dx.doi.org/10.1002/prot.26014>
 Co-Author
 Published,
 Refereed?: Yes, Open Access?: Yes
 Number of Contributors: 3
 Contribution Percentage: 31-40

 Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC) - RGPIN-2016-05014
4. *Aina A, Wallin S. (2017). Multisequence algorithm for coarse-grained biomolecular simulations: Exploring the sequence-structure relationship of proteins. *The Journal of Chemical Physics*. 147(9): 095102- pp. 1-9.
 First Listed Author
 Published,
 Refereed?: Yes
 Number of Contributors: 2
 Editors: Aina A, Wallin S
 Contribution Percentage: 61-70
 Description of Contribution Role: Adekunle Aina, Memorial University: Candidate Stefan Wallin, Memorial University: Supervisor Candidate was the primary author and with supervisor contributed to the conception and design of the research project and drafted significant parts of the paper. Candidate performed all computer experiments and simulations. Candidate wrote the computer code for data analysis. Candidate and supervisor contributed to the analysis and interpretation of the research data. In particular, candidate analyzed the computational efficiency of the multisequence algorithm and produced some of the figures. Candidate and supervisor wrote and critically revised the manuscript. Candidate specifically wrote the "Results section" and proof read the whole manuscript. Candidate contributed approximately 65% to the planning, execution and preparation of the paper for publication.

 Funding Sources: Natural Sciences and Engineering Research Council of Canada (NSERC)

Thesis/Dissertation

1. Computational Study of the Biophysics of Protein Conformational Switching. (2018). Memorial University of Newfoundland. Master's Thesis.
Number of Pages: 94 Supervisor: Stefan Wallin
Contribution Percentage: 81-90
Description of Contribution Role: Candidate was the primary author and with supervisor contributed to the conception and design of the research project and drafted significant parts of the thesis. Candidate performed all computer experiments and simulations. Candidate wrote the computer code for data analysis. Candidate and supervisor contributed to the analysis and interpretation of the research data. In particular, candidate analyzed the computational efficiency of the multisequence algorithm and produced the figures. Candidate wrote and critically revised the thesis. Candidate proof read the whole thesis. Candidate contributed approximately 85% to the planning, execution and preparation of the thesis.
Funding Sources: Memorial University of Newfoundland; Natural Sciences and Engineering Research Council of Canada (NSERC)
2. Diurnal and Seasonal Variation of Total Electron Content over Mid-Latitude Ionosphere During High Solar Activity. (2014). University of Lagos. Bachelor's Honours.
Number of Pages: 56 Supervisor: Busola Olugbon
Contribution Percentage: 71-80
Description of Contribution Role: Candidate was the primary author and with supervisor contributed to the conception and design of the research project. Candidate wrote the computer code for data analysis. Candidate and supervisor contributed to the analysis and interpretation of the research data. Candidate wrote and critically revised the manuscript. Candidate contributed approximately 75% to the planning, execution and preparation of the project.

Intellectual Property

Patents

1. Assays and Compositions for Seriological Detection of Sars-Cov-2. United States. #63/027,332. 2020/05/01.
Patent Status: Pending
Inventors: Neil R Cashman, Steven S Plotkin, Ebrima Gibbs, Adekunle Aina, Ching-Chung Hsueh
Assays and Compositions for Seriological Detection of Sars-Cov-2