# Babasola Oluwatosin

### PERSONAL DATA

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#### **EDUCATION**

OCT 2019 - PRESENT	PHD IN STATISTICAL APPLIED MATHEMATICS, University of Bath, UK.
OCT 2018 - SEPT 2019	MRES IN STATISTICAL APPLIED MATHEMATICS, University of Bath, UK.
Nov 2016 - Oct 2018	MSc in Financial Mathematics, Pan African University, Kenya.
Aug 2015 - Jun 2016	MSc IN MATHEMATICAL SCI, University of Cape Town /AIMS, South Africa.
SEPT 2014 - AUG 2015	MSc in Mathematics (Distinction), University of Ilorin, Nigeria.
Aug 2019 - Jul 2013	BSC IN MATHEMATICS (FIRST CLASS HONOUR), University of Ilorin, Nigeria.

### SCHOLARSHIPS AND GRANTS

OCTOBER 2022	University of Louisiana at Lafeyette (ICMA VIII) Travel Grant
AUGUST 2022	Ecological Society of America Opportunity Fund
MAY 2022	Dipartimenta di Eccellenza Grant, Italian Ministry of Education
SEPTEMBER 2022	9 <sup>TH</sup> Heidelberg Laureate Forum Foundation Grant
DECEMBER 2021	European Kovalevskaya Travel Grant
FEBRUARY 2021	V-KEMS Research Grant
SEPTEMBER 2018	EPSRC - CDT SAMBa Scholarship
NOVEMBER 2017	Africa -ai- Japan Project Innovation Fund
AUGUST 2016	African Union Commission Scholarship.
AUGUST 2015	AIMS-NEI Scholarship
JULY 2011	MTN Foundation Science and Technology Undergraduate Scholarship.

# WORK EXPERIENCE(S)

FEB 2023 - PRESENT	Mathematical Innovation Researcher (MIRI), INSTITUTE FOR MATHEMA-
	tical Innovation, Bath, UK.
FEB 2021 - MAR 2021	Research Assistant, Virtual Knowledge Exchange in Mathematical
	SCIENCES (VKEMS)
OCT 2020 - PRESENT	Teaching Assistant, King's College London, UK
OCT 2019 - PRESENT	Graduate Teaching Assistant, UNIVERSITY OF BATH, UK
JAN 2017 - DEC 2019	Data Scientist (Remote), Infinite Data Analyst Consultant Ltd

## VOLUNTEER(S)

Jun 2022 - Aug 2022	Mentor, Mfano Africa - Oxford Mathematics Mentorship
	PROGRAMME, University of Oxford, UK
Jan 2022 - Mar 2022	Tutor, Royal Institution/Bath Masterclass, UK.
Jun 2021 - Aug 2021	Mentor, Discover Bath Summer School, University of Bath, UK
Nov 2021 - Present	Faculty Doctoral Representative, University of Bath, UK.
OCT 2021 - PRESENT	Doctoral Ambassador, University of Bath, UK.
07 - 11 SEPT 2021	Exhibitor, Maths of Climate Change, British Science Festival, Chelmsford
SEPT 2019 - PRESENT	Disability Support worker, RANDSTAD, UK.
July 2019	I.T Support, 60th International Mathematical Olympiad

#### RESEARCH INTEREST

- $\circ \ \, \text{Climate Modelling} \quad \circ \ \, \text{Dynamical Systems} \quad \circ \ \, \text{Data Analysis} \quad \circ \ \, \text{Machine Learning}$
- o Infectious disease Modelling o Financial Technology o Numerical Analysis

#### **PUBLICATIONS**

- **O.L Babasola and Chris Budd** (2023). Mathematical analysis of a delay differential equation model for farm level cocoa yield. IMA Journal of Applied Mathematics (Under review).
- O.L Babasola, et al. (2023). Mathematical Modelling of the Spatial Distribution of a COVID-19 Outbreak with Vaccination Using Diffusion Equation. https://doi.org/10.3390/pathogens12010088.
- O.L Babasola, et al. (2022). Time-delayed modelling of the COVID-19 dynamics with a convex incidence rate. Journal of Informatics in Medicine Unlocked, 101124. https://doi.org/10.1016/j.imu.2022.101124.
- O.L Babasola, et al. (2022). D-Iterative Method for Solving a Delay Differential Equation and a Two-Point Second-Order Boundary Value Problems in Banach Spaces. Australian Journal of Mathematical Analysis and Applications 19(2). https://ajmaa.org/searchroot/files/pdf/v19n2/v19i2p6.pdf.

**Tosin Babasola, et al.** (2021). Reducing the Risk of Covid-19 Transmission on Trains. V-KEMS Study Group Report. vkemsuk.org/activities/Reducing the Risk of Covid-19 Transmission.

- O.L. Babasola, P. Ngare and A. Owoloko (2018). Crank Nicolson Approach for the Valuation of the Barrier Options. International of Journal of Applied Mathematical Sciences, 11(1) 7-21. https://www.ripublication.com/jams18/jamsv11n1\_02.pdf.
- O.L. Babasola and I. Irakoze (2018). A collocation technique for numerical solution of integral equations with certain orthogonal basis function in Interval [0,1]. Open Access Library Journal, 4, e4050. http://dx.doi.org/10.4236/oalib.1104050.
- O.L. Babasola, I. Irakoze and A.A. Onoja (2018). Valuation of the European option within the Black-Scholes framework using Hermite Polynomials. Journal of Scientific and Engineering Research, 5(1):213-221.http://jsaer.com/download/vol-5-iss-1-2018/JSAER2018-05-01-213-221.pdf
- A.A. Onoja, **O.L. Babasola**, Edwin Moyo and Viona Ojiambo (2018). The Application of Queuing Analysis in modeling Optimal Service level. International Journal of Scientific and Engineering Research, 9(1): 184-194. https://doi.org/10.14299/ijser.2018.01.002
- A.A. Onoja, **O.L. Babasola** and Viona Ojiambo (2018). Application of Discriminant Analysis in the Classification of Food Security Status. International Journal of Scientific and Engineering Research, 9(2): 1474-1489. https://doi.org/10.14299/ijser.2018.02.010
- A.A. Onoja, **O.L. Babasola** and Viona Ojiambo (2018). Chi-Square Automatic Interaction Detection Modeling of the effects of Social Media Networks on Students' Academic Performance. Research & Reviews: Journal of Statistics and Mathematical Sciences, 4(2): 67-74. http://www.rroij.com/open-access/chisquare-automatic-interaction-detection-modelling

## CONFERENCES, TRAININGS AND WORKSHOPS

	Joint Mathematics Meetings (JMM). Boston, USA. ICMA-VIII, International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems. University of Louisiana,
_	Lafayette, USA.
04 - 05 Ост 2022	3 <sup>TH</sup> Annual Black Heroes of Mathematics Conference. Edinburgh, Scotland, UK.
18 - 24 SEPT 2022	9 <sup>TH</sup> Heidelberg Laureate Forum. Heidelberg Germany.
14 - 19 AUG 2022	Ecological Society of America and Canadian Society for Ecology and Evo-
14 19 1100 2022	lution Joint Meeting, Montreal Canada.
11 - 13 April 2022	British Applied Mathematics Colloquium, University of Loughborough, UK.
20 - 23 SEPT 2021	8 <sup>TH</sup> Heidelberg Laureate Forum. Heidelberg, Germany.
23 - 27 AUG 2021	11 <sup>TH</sup> Montreal Industrial Problem Solving Workshop, University of Mon-
2,7100 2021	treal, Canada.
13 - 15 JULY 2021	Virtual Study Group : Covid-19 safety in Large Events. UK.
23 - 27 MAY 2021	SIAM Conference on Applications of Dynamical Systems (DS21), US.
17 - 20 MAY 2021	ICMS and MAC-MIGS Modelling Camp 2021. United kingdom.
12- 16 April 2021	165 <sup>TH</sup> European Study Group with Industry. University of Durham, UK.
25 - 29 JAN 2021	13 <sup>TH</sup> SAMBa Integrative Think Tank (ITT 13) Data and Diagnosis. Bath, UK.
20 - 24 JULY 2020	162 <sup>ND</sup> European Study Group with Industry. University of Leeds, UK.
15 - 17 JULY 2020	UK Graduate Modelling Camp, University of Oxford. UK.
7 - 8 JULY 2020	Virtual SAMBA Conference on Industrial and Applied Mathematics.
21 - 23 JAN 2020	Geospatial Study Group with Industry with challenge problems from Nat-
	ural England and Highways England.
08 - 09 July 2019	Student led SAMBa Conference on Statistical Applied Mathematics with
	industrial partners.
10 - 14 June 2019	10 <sup>TH</sup> Integrative Think Tank problem solving with partners from AVL and
	Pepsico.

### **COMPUTER PROFICIENCY**

Scientific : MATLAB, Python, R
Operating system: Windows, Ubuntu
Typography : MTEX, Microsoft word

Others: Excel

## MEMBERSHIP(S)

2021 TILL DATE:	Member, European Mathematical Society (EMS)
2021 TILL DATE:	Member, Canadian Mathematical Society (CMS)
2021 TILL DATE:	Member, American Mathematical Society (AMS)
2021 TILL DATE:	Member, Ecological Society of America (ESA)
2021 TILL DATE:	Member, Institute of Electrical and Electronics Engineers (IEEE)
2020 TILL DATE:	Member, International Association of Engineers (IAENG)
2019 TILL DATE:	Associate Member, Institute of Mathematics and its Applications (AMIMA)
2018 TILL DATE:	Member, Society for Industrial and Applied Mathematics (SIAM)