

Abraham Orinda | Résumé

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📖 Research Interests

- Asymmetric Topology
- Homotopy Type Theory
- Functional analysis
- Order Theory and Theoretical Computer Science

🎓 Education

University of Cape Town (U.C.T)

Cape Town, South Africa

Certificate : **Master's Degree in Mathematical Sciences (Pure Mathematics Major), Distinction** 2019 – 2020

Research area: *Non-Hausdorff Topology– Asymptotic Complexity Analysis of Algorithms via Quasi-metric Spaces*([Thesis](#))

Technical University of Kenya

Nairobi, Kenya

Certificate: **Bachelor's Degree in Science (Mathematics), First Class Honors**

Aug 2014 – Dec 2018

Thesis: Nowhere Differentiability of the Weierstrass Function

📖 Key Skills

- Mathematical analysis and research.
- **Programming:** -
 - Statistical programming: Python, R and SAGEmath .
 - Database management system: MySQL (Intermediate)
- **Proficiency in the use of Statistical tools:-** Microsoft/Libre Office.
- **Interpersonal skills:** -
 - A great command in both written and spoken of English and Swahili.
 - A believer in the dignity of hard work.
 - A dedicated team player.
 - Ability to work with people of diverse backgrounds.
- **Performance:** - Attention to detail, eager to learn and an excellent time keeper.
- \LaTeX typesetting.

👤 Employment History

Adjunct Faculty, United States International University-Africa

Nairobi, Kenya

Responsibilities:

Jan 2022 – current

- Tutoring undergraduates students at the School of Science and Technology.

Tutorial Fellow, Technical University of Kenya

Nairobi, Kenya

Responsibilities:

Jul 2020 – current

- Tutoring undergraduates students at the Department of Pure and Applied Mathematics.
- Engagements in research activities at the department.
- Attending relevant conferences and seminars

Graduate Assistant, Technical University of Kenya

Nairobi, Kenya

Responsibilities:

- Tutoring undergraduates students at the Department of Pure and Applied Mathematics.
- Engagements in research activities at the department.
- Attending relevant conferences and seminars

Jul 2019 – July 2020

Achievements

- Trained undergraduate students in Algebra, Topology and Basic Mathematics and Statistics
- A member of the Algebraic Geometry study group (TUK/UoN)

Intern, Finley International Company Ltd

Nairobi, Kenya

Responsibilities:

- Data entry
- Data analysis
- Record keeping

Aug 2018 – Jan 2019

Tutor, Agoro Secondary School

Homabay, Kenya

Responsibilities :

- A Math and Science tutor.
- Teacher in charge of form one class.

2016 – 2017

Conferences and Seminars

Southern Africa Mathematical Sciences Association 2021 VIRTUAL CONFERENCE

University of Auburn

Participant

(Nov 22– Nov 24)

Mfano-Africa Oxford Mentorship Program

University of Oxford

Presenter, topic: *A gentle Introduction to Homotopy Type Theory*

(June 2021 – Aug 2021)

"Anomalies" with generalized metric spaces, the price paid for omitting the Hausdorff property.

TUK

Presenter.

(Jan 28, 2021)

Asymmetric Topology: A New Framework in Software Engineering

AIMS, South Africa

Thesis defense: *Non-Hausdorff Topologies and its applications in theoretical Computer Science*

(May 26, 2020)

The Abram Gannibal Project, online seminars on applied algebra and geometry

University of Oxford, UK

(May 2020 – Jul 2020)

International Mathematics Union (IMU) Executive Committee Engagement Day

Muizenberg, Western Cape

Notable speakers: Carlos E. Kenig, Andrei Okounkov, Shigefumi Mori, Günter Ziegler, Nalini Joshi

(24th Feb 2020)

Zermelo-Fraenkel Axioms: A Remedy to Inherent Paradoxes.

AIMS weekly seminars, South Africa

Presenter.

(Jan 24, 2020)

A seminar on Algebraic Geometry, Algebraic Geometry Group, University of Nairobi

Nairobi, Kenya

Speaker: Balazs Szendrői, University of Oxford

(Jun 2019)

Publications

Asymmetric Topology and its Applications in Areas of Computer Science, LAMBERT Academic Publishing, Germany

Book: A. Orinda, Y. Gaba, C. Agyingi, ISBN-13: 978-620-3-93037-5

(Jul 14, 2021)

Leadership

Chairperson, Mathematical Sciences Students' Association-TUK (MaSSA-TUK)

(2017–2018)

Class Representative, Students' Association of the Technical University of Kenya (SATUK)

(2014–2018)

Secretary, Constitutional Amendment Task-force, SATUK

(2016 – 2017)

Awards and Honors

Turkiye Burslari Scholarship, Full scholarship for PhD study at Hacettepe University

(Sept 2021)

Rescinded: language policy

Mfano Africa Oxford Mentorship Program, Oxford University (SU)

(June 2021– Aug 2021)

Certificate awarded

Student Leadership Development Award, Stellenbosch University (SU)

(Oct 2019– Oct 2019)

Certificate awarded

Mastercard/AIMS Scholarship, Full scholarship for Master's study at UCT

(2019–2020)

Value: USD 25,000

Memberships

Kenya Mathematical Society

(From Sep 30, 2021)

Mfano Africa A pre PhD mentorship scheme for African Mathematical students

(From Sep 16, 2020)

Mastercard Foundation Scholars

(From Jan 23, 2020)

African Institute for Mathematical Sciences (AIMS) Community

(From Aug 26, 2019)

Hobbies and Interests

- Travelling and hiking
- Reading articles and literature
- Sports; football, rugby

REFERENCES

Prof. Kobi Kremnitzer

Professor,
Mathematical Institute, University of Oxford ,
Wiles Road, Oxfordshire, United Kingdom

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Dr. Collins Amburo Agyingi

Senior Lecturer,
University of South Africa,
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Prof. Yae Ulrich Gaba

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Dr. Beth Kiratu

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