Zekhaya Benard Shozi
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Zekhaya Benard Shozi

Pure Mathematician

About Me I am a lecturer under the New Generation of Academics Programme (nGAP) at Sol Plaatje University. I am affiliated under the School of Natural and Applied Sciences–Department of Mathematical Sciences. I have strong work ethics and I am always willing to learn. My research interest is mainly in Graph Theory but I am generally interested in most areas of pure mathematics.

Education

2019 - 2021

- **Doctor of Philosophy (PhD)**,
  Mathematics,
  University of Johannesburg,
  Auckland Park,
  South Africa,
  Thesis Title: Characterizations of Graphs With Given Maximum Degree and Smallest Possible Matching Number,
  Supervisor: Prof. Micheal (Mike) Henning,
  Progress Status: Graduated

2017 - 2018

- **Master of Science (MSc)**,
  Mathematical Sciences,
  Stellenbosch University,
  Cape Town,
  South Africa,
  Thesis Title: The Metric Dimension of Cayley Graphs,
  Supervisor: Prof. Tomas Vetrik,
  Progress Status: Graduated

2016 - 2016

- **Bachelor of Science Honours (BSc Hons)**,
  Physics,
  University of Zululand,
  Empangeni,
  South Africa,
  Progress Status: Graduated

2013 - 2015

- **Bachelor of Science (BSc)**,
  Mathematics and Physics,
  University of Zululand,
  Empangeni,
  South Africa,
  Progress Status: Graduated

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Experience

2018 - Now

- **Lecturer**, *Mathematics*, Sol Plaatje University, Kimberley, South Africa
  Courses Presented:
  - 2018, First Year, Second Semester, Discrete Mathematics
  - 2019, Second Year, First Semester, Discrete Mathematics
  - 2020, Second Year, First Semester, Discrete Mathematics
  - 2020, Honours, Second Semester, Graph Theory
  - 2021, Second Year, First Semester, Discrete Mathematics
  - 2021, First Year, Second Semester, Pre-Calculus
  - 2022, Second Year, First Semester, Advanced Calculus
  - 2022, First Year, First Semester, Basic Mathematics
  - 2022, First Year, Second Semester, Pre-Calculus
  - 2022, Third Year, Second Semester, Complex Analysis

  Courses Moderated (Internally):
  - Calculus
  - Algebra
  - Linear Algebra
  - Mathematical Analysis
  - Abstract Algebra
  - Real Analysis
  - Discrete Mathematics

Research

Articles Published/Accepted:

- M. A. Henning, **Z. B. Shozi**, A characterization of graphs with maximum degree and smallest possible matching number: II, *Discrete Mathematics* 345 (3) (2022), 112731, 11 pp.

- M. A. Henning, **Z. B. Shozi**, A characterization of graphs with maximum degree and smallest possible matching number, *Discrete Mathematics* 344 (7) (2021), 112426, 9 pp.

- M. A. Henning, **Z. B. Shozi**, A characterization of the subcubic graphs achieving equality in the Haxell-Scott lower bound for matching number, *Journal of Graph Theory* 96 (4) (2020), 455 – 471.

Conference Presentations:

- A characterization of subcubic graphs with smallest possible matching number, *63th Annual Congress of the South African Mathematical Society*, University of Cape Town, Cape Town, South Africa, 02 December 2019.

Other Presentations:

- A characterization of graphs with given maximum degree and largest possible chromatic number, *Prof Baxen's Monthly Meeting with nGap Mentors, Mentees and Emerging Academics*, Sol Plaatje University, Kimberley, South Africa, 23 April 2021.

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- A characterization of graphs with given maximum degree and smallest possible matching number, *School of Mathematics, Statistics and Computer Science's Weekly Seminar Series*, University of KwaZulu-Natal, Durban, South Africa, 21 April 2021.

- A characterization of graphs with given maximum degree and smallest possible matching number, *Virtual Academic Symposium, Sol Plaatje University*, Kimberley, South Africa, 08 December 2020.

- Total domination in graphs and transversals in hypergraphs, *Prof Baxen's Monthly Meeting with nGap Mentors, Mentees and Emerging Academics*, Sol Plaatje University, Kimberley, South Africa, 16 September 2019.

- Total domination in graphs and transversals in hypergraphs, *School of Natural and Applied Sciences' Seminar Series*, Sol Plaatje University, Kimberley, South Africa, 21 August 2019.

- Neutron and Gamma Ray Spectroscopy, *Science Workshop*, Joint Institute for Nuclear Research, Dubna, Russia, 23 September 2016.

Languages

- IsiZulu - Native
- English - Intermediate
- IsiXhosa - Intermediate
- Setswana - Basic

Computer Skills

Operating Systems:

- Windows
- Linux

Office:

- Microsoft Office
- Libre Office

Programming Languages:

- Python
- SAGE
- R

Compilers:

- LaTeX
- TeX
- LyX

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References

Person	Prof. M. A. Henning
Occupation	Research Professor (Pure Mathematics)
Institution	University of Johannesburg
Contact Details	mahenning@uj.ac.za

Person	Dr. S. Nkonkobe
Occupation	Lecturer (Pure Mathematics)
Institution	Sol Plaatje University
Contact Details	sithembele.nkonkobe@spu.ac.za

Person	Dr. S. S. Mthethwa
Occupation	Lecturer (Pure Mathematics)
Institution	University of KwaZulu-Natal
Contact Details	mthethwas4@ukzn.ac.za