DR. RICHARD KENA BOADI

SNR LECTURER

DEPARTMENT OF MATHEMATICS

CURRICULUM VITAE

**Personal Information**

Date of Birth: 30-3-1976

Nationality: Ghanaian

Marital Status: Married

Religion: Christianity

Contact: Department of Mathematics, KNUST

[rkboadi.cos@knust.edu.gh](mailto:rkboadi.cos@knust.edu.gh)

0202958032

1. (a) ACADEMIC DEGREES EARNED WITH DATES

2004-2011: PhD Pure Mathematics

2002-2003: M.ASt (Mathematics)

1997-2001: B.Sc. (Mathematics) First Class Honours

1994-1996: General Certificate Examination (Advanced Level)

1989-1994: General Certificate Examination (Ordinary Level)

(b) INSTITUTIONS ATTENDED WITH DATES

2004-2011: Kwame Nkrumah University of Science and Technology, Kumasi

2002-2003: Cambridge University, United Kingdom

1997-2001: Kwame Nkrumah University of Science and Technology, Kumasi

1994-1996: Presby Boys Secondary School, Legon

1989-1994: Asamankese Secondary School, Asamankese

2) UNIVERSITY TEACHING AND RESEARCH EXPERIENCE WITH DATES

Academic Ranks held and Subjects Taught

(a) **August 2017 to date: Snr Lecturer**

**Courses Taught: Postgraduate Level**

1. Measure Theory and Integration (First Year MPhil Pure Mathematics)

**Courses Taught: Undergraduate Level**

1. **Further Topics in Abstract Algebra** (Final Year Mathematics)
2. **Differential Equations** (Second Year Engineering)
3. **Discrete Mathematics** (First Year Statistics/Actuarial)
4. **Real Analysis** (Second Year Mathematics)
5. **Introduction to Measure and Probability theory** (Final Year Statistics)
6. **Multivariate Calculus** (Second Year Engineering, IDL)
7. **Galois Theory (**Final Year Mathematics)
8. **Complex Analysis** (Third Year Mathematics)

(b) **May 2012-July 2017 : Lecturer**

**Courses Taught: Undergraduate Level**

1. **Mathematical Methods** (Second Year Statistics)
2. **Foundation for Mathematical Analysis** (Second Year Actuarial Science)
3. **Advanced Calculus** (Bridging Statistics, IDL)
4. **Further Topics in Abstract Algebra** (Final Year Mathematics)
5. **Algebra** (First Year Engineering)
6. **Calculus** (First Year Engineering)
7. **Discrete Mathematics for Computer Science** (First Year Computer Science)
8. **Introduction to Analysis** (Second Year Statistics)
9. **Introduction to Vector Analysis** (First Year Actuarial Science, IDL)
10. **Introduction to Measure and Probability theory** (Final Year Statistics)
11. **Multivariate Calculus** (Second Year Engineering, IDL)
12. **Mathematics** (Bridging Year, Building Technology, IDL)

**Courses Taught: Postgraduate Level**

1. Mathematical Methods for Physics (First Year MSc Physics)

(c) **August 2005** - May 2008: **Demonstrator**

**Tutorials**

1. Differential Manifolds (Final Year Mathematics)
2. Classical Fields (Third Year Mathematics)
3. Classical Fields II
4. Engineering Mathematics I: Algebra (First Year Engineering)

(d) **SUPERVISION OF STUDENT’S THESES**

**Supervision of B.Sc. (Mathematics/Actuarial/Statistics) Theses**

Undergraduate project works designed and supervised have been focused on practical application of mathematics in solving real life problems. These are as follows:

1. Osei-Bonsu B. O. & Sackitey P. (2014). Statistical Analysis of Road Accidents in Ashanti Region of Ghana using Poisson Regression.
2. Banda Z. K. A. et al. (2014). Time Series Analysis of Passenger Up-Lift by the Domestic Carriers in Ghana.
3. Kuma N. P. K. et al., (2014). Using Time Series to Analyse the Impact of National Health Insurance Scheme on Maternal Health Indicators.
4. Kyeame R. (2015). Using The Lee-Carter Model to Model The Mortality Rates in The Greater Accra Region of Ghana Using Accra Metropolis as a Case Study.
5. Asiedu J. & Asare Y. K. (2015). Statistical Analysis of Fatal Accidents in Ashanti Region using Poisson Regression.
6. Juwara L. (2015). Representation of Finite Groups.
7. Edusei K. O. & Nyendah I. (2015). Modular Forms: The Action of SL(2,Z) and its Classifications.
8. Kermah-Betu F. K. (2015). Banach Algebras.
9. Agyei I. & Frimpong Boateng S. (2015). Two Dimensional Hyperbolic Geometry.
10. Abdul-Jabbar S. et al., (2016). Time Series Analysis and Forecast of Airline Data.
11. Marley R. et al., (2016). Poincare Polyhedron Theorem.
12. Arthur N. et al., (2016). Pricing a Health Insurance Product for Staff and Students of KNUST.
13. Appiah K. E. & Ocran K. O. A. (2016). Predicting Corporate Executive Compensation Using Multiple Linear Regression. A Case Study of a Government Agency (CEPS).
14. Capio R. (2016). Time Series Analysis of Flight Delays in the Ashanti Region of Ghana.
15. Amenu J. L. & Gana B. N. (2016). Statistical Analysis of Stopping Distance of Vehicles in Ashanti Region Using Logistic Regression.
16. Atakora C & Anokye F. A. (2016). Health Insurance Premium for Residents of Bosomtwi-Pramso Community.
17. Appiah I. B. & Osei E. K. (2016). Fermat's Last Theorem.
18. Bernasko J, Mingle N. A., Osei-Wusu S. & Pinto S. (2017). Investigating the Effects of Inflation and Exchange Rate on the Ghana Stock Exchange Composite Index Using Multivariate Time Series.

(e)  **Supervision of M.Sc./MPhil (Mathematics)**

Postgraduate project works designed and supervised as well as those still under supervision have been and are focused on practical application of mathematics in solving real life industrial and community problems. These are as follows:

1. Adageodzo, S. K. (2014). Application of Generalised Estimating Equation on Longitudinal Responses of Students Academic Performance: With Reference to Sunyani Senior High. (Completed).
2. Annor, D. Y. B. (2015). Traces in Complex Hyperbolic Geometry. (Completed).
3. Ansah, R. K. (2015). Review of The Birch and Swinnerton-Dyer Conjecture. (Completed).
4. Afari-Kissi, A. (2015). Logistic Regression Analysis of Factors Associated with Hypertension Prevalence: Case Study Komfo Anokye Teaching Hospital (KATH) Kumasi, Ghana.(Completed).
5. Amissah-Edmund, S. (2015). Location of Water Treatment Plant Using the AHP, Promethee and Topsis Methodology in the Gyeme River at Obuasi. (Completed)
6. Amoako K. (2015). Gender Difference on the Risk of Mother to Child Transmission of HIV-1 During Postpartum Period in Ghana. Case Study: Korle-Bu Teaching Hospital. (Completed).
7. Adu-Gyamfi W. K. (2017). Review of the Proof of Mordell's Theorem on Elliptic Curves over Rational Field. (Ongoing).
8. Odametey A. (2017). Lie Algebra and The Representation of SU(2,C).
9. Agyei, I. (2017 to date). Cone Metrics on the Sphere.
10. Owusu-Ansah, S. (2018 to date). On the rank of Eliptic curves and the Birch and Swinnerton-Dyer Conjecture.

(f)  **Supervision of PhD (Pure Mathematics)**

1) Addo, D. A. (2017 to date) The Theory of Differential Geometry in Quantum Mechanics.

2) Adu-Gyamfi W. K. (2018 to date). Towards the Proof of the Birch and Swinnerton-Dyer Conjecture.

(3) **List of Publications**

1. **Boadi R. K** and Parker J. R.(2015). Mostow’s lattices and cone metrics on the sphere: Advanced Geometry;15(1):27-53 De Gruyter
2. Dickson Y. B. Annor , **Richard K. Boadi** (2016). Traces in SL(3, C ) and SU (2, 1) Groups. International Journal of Pure Mathematical Sciences, ISSN: 2297-6205, Vol. 17, pp 19-29, doi:10.18052/www.scipress.com/IJPMS.17.19, SciPress Ltd., Switzerland.
3. Dickson Y. B. Annor, Kwasi B. Gyamfi and **Richard K. Boadi** (2016). Inverse Eigenvalue Problem for a class of Singular Hermitian Matrices. Theoretical Mathematics & Applications, vol.6, no.2. 2016, 89-97.ISSN: 1792-9687 (print), 1792-9709 (online) Scienpress Ltd.
4. R. K. Ansah, **R. K. Boadi**, W. Obeng-Denteh, A. Y. Omari-Sasu (2016). Review of The Birch and Swinnerton-Dyer Conjecture. American Journal of Mathematics and Statistics, p-ISSN: 2162-948X,e-ISSN: 2162-8475; 6(4): 182 189,doi:10.5923/j.ajms.20160604.07
5. Prince Amponsah Kwabi , William Obeng Denteh , **Richard Kena Boadi** , Yao Elikem Ayekple (2016). On the dynamics of the Tent function-Phase diagrams. \textit{Journal of Advanced Studies in Topology 7:4 (2016), 261–270
6. A.Y. Omari-Sasu, Adjei Mensah Isaac , **R. K. Boadi** (2016). Statistical Models for Count Data with Applications to Road Accidents in Ghana. International Journal of Statistics and Applications 2016, 6(3): 123-137 DOI: 10.5923/j.statistics.20160603.05.
7. Yarhands Dissou Arthur, Francis Tabi Oduro, **Richard Kena Boadi** (2014).Statistical Analysis of Ghanaian Students Attitude and Interest towards Learning Mathematics. International Journal of Education and Research Vol. 2 No. 6 June 2014.
8. Owusu I. K., **Boadi R. K**., Afari-Kissi A., Adu-Boakye Y.(2015). Logistics Regression Analysis of Risk Factors Associated with Hypertension in Kumasi Metropolis, Ghana. Open Science Journal of Clinical Medicine; 3(6): 205-211 November 2, 2015 (<http://www.openscienceonline.com/journal/osjcm>).
9. Akoto Yaw Omari-Sasu , Nana Kena Frempong, Maxwell Akwasi Boateng & **Richard** **Kena Boadi** (2015). Modeling Stock Market Volatility Using GARCH Approach on the Ghana Stock Exchange. International Journal of Business and Management; Vol. 10, No. 11 ISSN 1833-3850 E-ISSN 1833-8119
10. Shaibu Osman, A. Y. Omari-Sasu, **R. K. Boadi** (2016). Logit Model for the Determinants of Drug Driving in Ghana. International Journal of Statistics and Applications 2016, 6(6): 339-346 DOI: 10.5923/j.statistics.20160606.01