

## Fall 2025 SAMSA-Masamu CRN Virtual Colloquia Series

Talks will be held at 18:00 Central Africa Time. Zoom links will be sent via email.

<https://masamu.auburn.edu>

Date	Speaker	Institution	Country	Research Area	Title
July 8	Chris Wells	Auburn University	United States	Coding Theory	Small projective codes and equiangular lines
July 15	Nyambe Sinyange	National Public Health Institute	Zambia	Health Economics	Developing an Integrated Predictive Model for NCDs in Zambia Using DHIS2, Population Surveys, Machine Learning, and Geospatial Analytics
July 22	Alfred Musekwa	University of Pretoria	South Africa	Biostatistics	Prevalence and factors associated with HIV testing among adolescent girls and young women aged 15 to 24 years in Sub-Saharan Africa
July 29	Fortune Massamba	University of KwaZulu-Natal	South Africa	Algebra	On almost cosymplectic generalized $(k, \mu)'$ -spaces
August 5	Michael Brown	Auburn University	United States	Algebra	Ranks of matrix factorizations
August 12	Sure Mataramvura	University of Cape Town	South Africa	Finance	The two pot system in South Africa, A Stochastic Differential Game approach
August 19	Folashade Agosto	University of Kansas	United States	Math Bio	Leveraging mobility data to model drug overdose mortality in the United States during COVID-19 Pandemic
August 26	Eduard Campillo-Funollet	University of Lancaster	United Kingdom	Math Bio	Insect species identification from acoustic recordings
Sept. 2	Dave Goldsman	Georgia Tech	United States	Health Economics	Properties of Quadratic-Form Estimators for Stationary Processes Satisfying the Geometric Mapping Contraction Condition
Sept. 9	Pete Johnson	Auburn University	United States	Graph Theory	How is mathematics actually applied? Some examples from history
Sept. 16	Jean-Baptiste Gatsinzi	BIUST	Botswana	Algebra	Rational homotopy type of the projectivisation of the tangent bundle over complex projective spaces
Sept. 23	Faraimunashe Chirove	University of Johannesburg	South Africa	Math Bio	When the bad becomes good: Learning from Catastrophe
Sept. 30	Hans-Werner van Wyk	Auburn University	United States	Numerical Analysis	Leveraging Low-Complexity Parametrizations for Uncertainty Quantification of Dynamical Systems
Oct. 7	Samuel Manda	University of Pretoria	South Africa	Biostatistics	Multivariate Generalised Regression (GREG) Estimation in Small Area Estimation
Oct. 14	Christopher Strickland	University of Tennessee	United States	Math Bio	Mathematical modeling and analysis of opioid use disorder epidemiology
Oct. 21	Fadekemi Janet Osaye	Troy University	United States	Graph Theory	On the eccentric index of graphs with given segment sequences
Oct. 28	Tshikhudo Lukoto	University of Limpopo	South Africa	Functional Analysis	Perturbation Ideals and Fredholm Theory in Banach algebras
Nov. 4	Thomas Goetz	University of Koblenz	Germany	Math Bio	Including behavioral aspects into disease models