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Statistics and Actuarial Science
Statistiek en Aktuariële Wetenskap

NITheCS
National Institute for
Theoretical and Computational Sciences

SEMINAR

Dr Susan Laurens
(Heineken Beverages)

Compositional biplots for log ratio analysis and visualisation of milk fatty acids

Date:
Friday, 25 April 2025

Time:
13h10-14h10 SAST

Venues:
- Room 2048, 2nd floor
  Van der Sterr Building,
  cnr Victoria & Bosman Streets
  Stellenbosch
- Online

WHO SHOULD ATTEND?
All are welcome.

ENQUIRIES:
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ABSTRACT:

Compositional Data Analysis (CoDA), also referred to as logratio analysis (LRA), is a statistical methodology concerned with the examination of ratios between variables following log transformation. The present study employs LRA to investigate a compositional dataset comprising 74 milk fatty acids (FAs), with the objective of elucidating the interrelationships among these variables. Transformations such as pairwise logratio (PLR), centred logratio (CLR), and additive logratio (ALR) are utilised to facilitate the visual representation of the data through compositional biplots. These biplots, constructed using CLR-transformed data, serve to enhance the interpretability of the associations between the various FAs. The visualisation of the milk FA data by compositional biplots offers valuable insights into their interactions and illustrates how different milk FAs contribute differently across various feeding regimes of the dairy cow.

Dr Susan Laurens is an Analytical Chemist at Heineken Beverages. She has a PhD in Chemistry from the University of Pretoria and a BSc (Hons) in Mathematical Statistics from the University of the Witwatersrand.

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