

Title: Models for integer data

Abstract: Another contribution of Prof Kemp was on distributions defined in  $\mathbb{Z}$ , i.e including negative integers, and especially on discrete normal distribution. In this talk I plan to provide a thorough view on the existing work on statistical models defined in  $\mathbb{Z}$  and their applications. This implies distributions and their properties, including the Skellam distribution which has been the prominent member of this class. Such distributions have found several applications in medicine, sports and finance. I also plan to extend to time series models which has been a fruitful area of application mainly for financial purposes.

#### References

- Karlis, D., & Mamode Khan, N. (2023). Models for Integer Data. *Annual Review of Statistics and its Application*, 10, 297-323.
- Kemp, A. W. (1997). Characterizations of a discrete normal distribution. *Journal of Statistical Planning and Inference*, 63(2), 223-229.