



The American Statistician >

Volume 68, 2014 - [Issue 3](#)

12,008

Views

415

CrossRef citations to date

92

Altmetric

History Corner

Kurtosis as Peakedness, 1905–2014. *R.I.P.*

Peter H. Westfall

Pages 191–195 | Received 01 Jan 2014, Published online: 11 Aug 2014

🗨️ Cite this article

🔗 <https://doi.org/10.1080/00031305.2014.917055>



Sample our
Mathematics & Statistics
Journals



>> **Sign in here** to start your access
to the latest two volumes for 14 days

📄 Full Article

🖼️ Figures & data

📖 References

🗨️ Citations

📊 Metrics

📄 Reprints & Permissions

Read this article

🔗 Share

Abstract

The incorrect notion that kurtosis somehow measures “peakedness” (flatness, pointiness, or modality) of a distribution is remarkably persistent, despite attempts by statisticians to set the record straight. This article puts the notion to rest once and for all. Kurtosis tells you virtually nothing about the shape of the peak—its only unambiguous interpretation is in terms of tail extremity, that is, either existing outliers (for the sample kurtosis) or propensity to produce outliers (for the kurtosis of a probability distribution). To clarify this point, relevant literature is reviewed, counterexample distributions are given, and it is shown that the proportion of the kurtosis that is determined by the central $\mu \pm \sigma$ range is usually quite small.

Fourth moment

Inequality

Leptokurtic

Mesokurtic

Platykurtic.

People also read

Recommended articles

Cited by
415

Information for

- Authors
- R&D professionals
- Editors
- Librarians
- Societies

Opportunities

- Reprints and e-prints
- Advertising solutions
- Accelerated publication
- Corporate access solutions

Open access

- Overview
- Open journals
- Open Select
- Dove Medical Press
- F1000Research

Help and information

- Help and contact
- Newsroom
- All journals
- Books

Keep up to date

Register to receive personalised research and resources by email

 Sign me up

