

Aitchison, John; Greenacre, Michael**Biplots of compositional data.** (English) Zbl 1111.62300

J. R. Stat. Soc., Ser. C, Appl. Stat. 51, No. 4, 375-392 (2002).

Summary: The singular value decomposition and its interpretation as a linear biplot have proved to be a powerful tool for analysing many forms of multivariate data. Here we adapt biplot methodology to the specific case of compositional data consisting of positive vectors each of which is constrained to have unit sum. These relative variation biplots have properties relating to the special features of compositional data: the study of ratios, subcompositions and models of compositional relationships. The methodology is applied to a data set consisting of six-part colour compositions in 22 abstract paintings, showing how the singular value decomposition can achieve an accurate biplot of the colour ratios and how possible models interrelating the colours can be diagnosed.

MSC:[62A09](#) Graphical methods in statistics[62H99](#) Multivariate analysisCited in **50** Documents**Full Text:** [DOI Link](#)