**Beyond the statistics cookbook: The geometric approach to the analysis of experimental data.** STEVEN MARX, Sherwin-Williams Co, Breen Tech Ctr — The numerical results from a set of n experimental measurements may be expressed as a single point in n-dimensional Euclidean space. Finite-dimensional vector space methods can then be used to fit a statistical model to such a data set, as well as to assess the significance of the terms in the model. The outcome of the vector space analysis is precisely the same as the result obtained with the usual analysis using the interminable nested sum notation found in all statistics texts. However, working in this way, concepts such as degrees of freedom, mean squares, and correlation coefficients acquire a clear and simple geometric interpretation. The necessity for verification of model assumptions when presenting data analyses will be briefly discussed.

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