

# Fitting Parallel Hyperplanes to Data, with Applications to Archaeology

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The problem of fitting quadric curves or surfaces to historical data arises in architectural archaeology, to reconstruct or infer forgotten methods of design, construction, and use of ancient ruins [1], [3], [4], [5]. Algorithms exist to fit curves and surfaces to data and draw inferences from the fitted parameters [2], [6]. Yet “historical” data consist of unique measurements — made or reported only once — with little information about their variability and their potential deviations from any putative model, which need not be Gaussian. Consequently, not much of a framework seems (to me) to be available to users for reaching any conclusion. For people in quest of open problems, this talk will show how such obstacles occur in very simple real cases.

## References

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## About the author

Yves Nievergelt completed his diploma in mathematics from the Swiss Federal Institute of Technology in Lausanne, Switzerland, in December of 1976, and his Ph.D. in several complex variables (under the guidance of James R. King) at the University of Washington in Seattle in 1984. Since 1985, he has been teaching — mostly complex analysis and numerical analysis — at Eastern Washington University near Spokane.