

COMPSTAT LECTURES

4

**lectures in
computational statistics**

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Edited by

J. M. Chambers, J. Gordesch, A. Klas, L. Lebart, and P. P. Sint



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Multidimensional Clustering Algorithms

Fionn Murtagh

Space Telescope – European Coordinating Facility

To my mother and father.

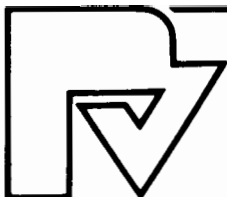
P R E F A C E

The objectives of this monograph are as follows: to collect together important recent algorithmic results in the area of cluster analysis; to indicate algorithms which may be of importance in parallel computing environments; to include (unlike other general texts on clustering) discussion of problems specific to the computing area such as pattern recognition and information storage and retrieval; and to clearly describe clustering algorithms which are of general, practical relevance.

Chapter 1 provides an introduction to this area. Little background knowledge is presupposed, with the exception of some familiarity with terminology and problems in the fields of graph theory and of algorithmics.

This monograph was written during my stay in 1984 as Visiting Scientist in the Information Analysis and Data Handling Division of the Joint Research Centre of the Commission of the European Communities at Ispra, Italy. My thanks go to Dr. Larisse for organizing this stay and to Dr. Colombo for much support. My gratitude also goes to Signora Giaretta whose efficient typing service considerably eased the burden of preparing this text.

Fionn Murtagh, Ispra, October 1984



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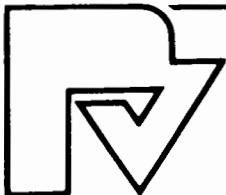
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In the present volume – *COMPSTAT 1984* – the editors have collected papers that they believe to give some new insight into the problems of computational statistics. It was a difficult task to select about 70 contributed papers from 301 submitted abstracts. The main criterion, as in preceding *COMPSTAT* conferences, was that the papers should show some novelty of their contents both in statistics and in computing.

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