DESCRIPTION

The third edition of this long-selling introductory textbook and ready reference covers all pertinent topics, from basic statistics via modeling and databases right up to the latest regulatory issues.

The experienced and internationally recognized author, Matthias Otto, introduces the statistical-mathematical evaluation of chemical measurements, especially analytical ones, going on to provide a modern approach to signal processing, designing and optimizing experiments, pattern recognition and classification, as well as modeling simple and nonlinear relationships. Analytical databases are equally covered as are applications of multiway analysis, artificial intelligence, fuzzy theory, neural networks, and genetic algorithms. The new edition has 10% new content to cover such recent developments as orthogonal signal correction and new data exchange formats, tree based classification and regression, independent component analysis, ensemble methods and neuro-fuzzy systems. It still retains, however, the proven features from previous editions: worked examples, questions and problems, additional information and brief explanations in the margin.

ABOUT THE AUTHOR

Since 2016, Matthias Otto is Professor emeritus of Analytical Chemistry at the TU Bergakademie Freiberg in Germany. He was born in Dresden (Germany) and did all entire studies at the University of Leipzig. In 1984 he moved to Freiberg (Germany) as a lecturer and was appointed full Professor there in 1987. He has taught almost all aspects of Analytical Chemistry, mainly within
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author and editor of successful textbooks in analytical chemistry.

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