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| Nota di contenuto | The Role of Frederik Pieter Agterberg in the Development of Geomathematics -- Another Look at the Chemical Relationships in the Dissolved Phase of Complex River Systems -- A Critical Approach to Probability Laws in Geochemistry -- Investigation of the Structure of Geological Process Through Multivariate Statistical Analysis—The Creation of a Coal -- Master of the Obscure—Automated Geostatistical Classification in Presence of Complex Geophysical Processes -- The Rapid Retreat of Jakobshavns Isbræ, West Greenland: Field Observations of 2005 and Structural Analysis of its Evolution -- Spatiotemporal Continuity of Sequential Rain Suggested by 3-D Variogram -- Anisotropic Scaling Models of Rock Density and the Earth's Surface Gravity Field -- Non-linear Theory and Power-Law Models for Information Integration and Mineral Resources Quantitative |

Assessments -- Mineral Potential Modelling for the Greater Nahanni Ecosystem Using GIS Based Analytical Methods -- Map Scale Effects on Estimating the Number of Undiscovered Mineral Deposits -- Are Fractal Dimensions of the Spatial Distribution of Mineral Deposits Meaningful? -- African Neoproterozoic Mineral Deposits and Pan African Metallogenesis -- On Blind Tests and Spatial Prediction Models -- Strip Transect Sampling to Estimate Object Abundance in Homogeneous and Non-Homogeneous Poisson Fields: A Simulation Study of the Effects of Changing Transect Width and Number -- Increasing Resolution in Exploration Biostratigraphy – Part I -- Increasing Resolution in Exploration Biostratigraphy – Part II -- RASC/CASC: Example of Creative Application of Statistics in Geology -- Euclidean Distances and Singular Value Decomposition: Useful Tools for Geometric Morphometrics in Biology and Paleontology -- A Note on Seasonal Variation in Radiolarian Abundance -- Application of Markov Mean First-Passage Time Statistics to Sedimentary Successions: A Pennsylvanian Case-Study from the Illinois Basin -- The Beta Distribution for Categorical Variables at Different Support -- Enhancement of Seafloor Maps for Mecklenburg Bay, Baltic Sea, Using Proxy Variables -- Statistical Analysis of Physiographic and Structural Directional Data in the U.S. Midcontinent (Kansas) -- Cross-Wavelet Analysis: A Tool for Detection of Relationships Between Paleoclimate Proxy Records -- On Correlational Properties for Volcanic Earthquakes Associated with Asamayama (Japan), 1983–2005 -- Crosscorrelation of Sea Levels -- Diversion of Flooding Rivers to Residual Mining Open Pits -- A Christmas Parking Lot Problem.

Sommario/riassunto

Celebrating Frits Agterberg's half-century of publication activity in geomathematics, this volume's 28 timely papers, written by his friends and colleagues, treat a variety of subjects of current interest, many of them also studied by Frits, including: spatial analysis in mineral resource assessment, quantitative stratigraphy, nonlinear multifractal models, compositional data analysis, time series analysis, image analysis, and geostatistics. Professor Agterberg published his first paper as a graduate student in 1958 and has since produced (and continues to publish) a steady stream of research papers on a wide variety of subjects of interest to geomathematical practitioners. Most of the papers included here address methodology and feature practical case studies, so that the book likely has broad appeal to those interested in mathematical geosciences, both to academic researchers seeking a comprehensive overview and also to practitioners of geomathematical approaches in industry.
