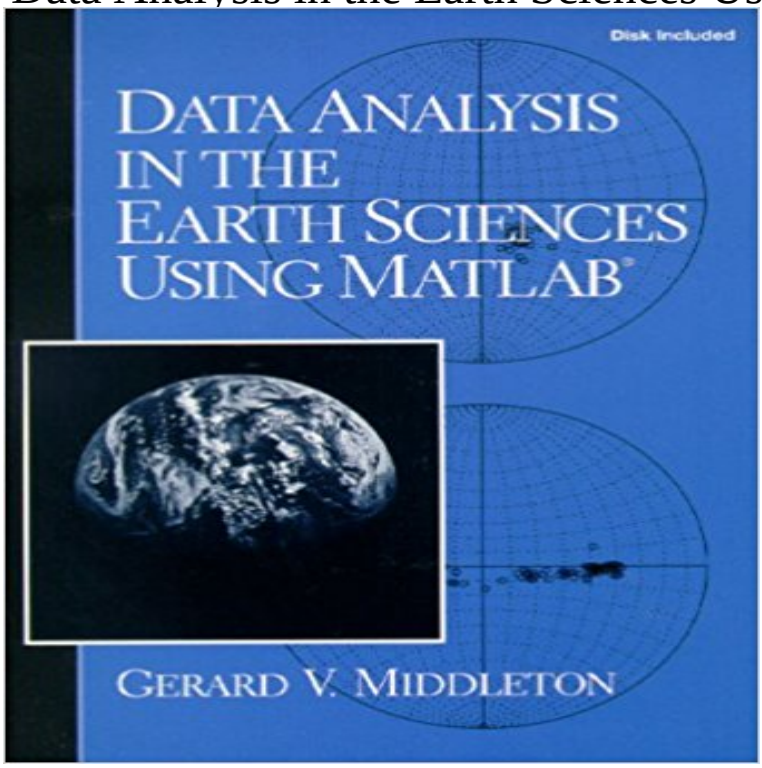
Data Analysis in the Earth Sciences Using MATLAB



This unique book introduces earth scientists to MATLAB and its use for displaying and analyzing typical data sets encountered in geology, geophysics, or geography. Includes many MATLAB scripts to implement displays of graph types rarely provided by spreadsheets or presentation graphics programs. These include triangular diagrams, rose diagrams, stereographic projections, histograms with fitted normal curves, cumulative curves (plotted on probability paper), trend surface and residual contour plots, semivariograms, and divider plots for the determination of fractal dimension. Appropriate for those interested in Data Analysis found in geology, geography, or geographics.

Data Analysis in the Earth Sciences Using MATLAB - MathWorks function v = contvec(zmin,zmax) % v = contvec(zmin,zmax) % computes a suitable vector of contour % intervals, given zmin and zmax zdif = zmax - zmin lzd **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function [dmat] = grtodat(dgr) % [dmat] = grtodat(dgr) % function to convert a data grid, dgr, consisting of nc cols % and nr rows of values of z, to a data matrix, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function D2 = edist(X) % D2 = edist(X) % calculates standardized Euclidean distances for the % N samples in the rows of the data matrix X % written by Gerry **Data Analysis in the Earth Sciences Using MATLAB -** This unique book introduces earth scientists to MATLAB and its use for displaying and analyzing typical data sets encountered in geology, geophysics, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** Script Snetplot % Plots points on a Schmidt net created by schmidt.m % Matrix of dips and azimuths is first loaded using matfile % linetype must be inside single **Data Analysis in the Earth Sciences Using MATLAB - MathWorks Data Analysis in Earth Sciences Using MATLAB:** function [B, P] = barth(X, k) % [B, P] = barth(X, k) % calculates a set of chemical rock (or mineral) % analysis to atoms per unit cell of 160 oxygen % atoms, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function xs = surrog(x) % xs = surrog(x) % Generates a surrogate time series having the % same variance spectrum as the original series x % The surrogate **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** From the Back Cover. This unique book introduces earth scientists to MATLAB and its use for displaying and analyzing typical data sets encountered in geology, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function [m,s] = silh(X) % [m,s] = silh(X) % plots the compositional data in X on a ternary % diagram, determines the mean, m, and root mean % square of **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function fu = flrnz(t,x) % fu = flrnz(t,x) % defines the Lorenz equations % t is time and x is a vector with % three components, fu is the vector % of their derivatives function tripts(X) % tripts(X) plots points on a triangular diagram % previously plotted by triplot. X is the data % matrix with N rows and 3 columns consisting of **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** script fontdemo.m h = text(0.1,0.9,This is the default font: Helvetica) axis off hold on h1 = text(0.1,0.8,This is Courier font text) set(h1,FontName, Courier) **Data Analysis in the Earth Sciences Using MATLAB -** function triline(X) % triline(X) plots lines on a triangular diagram % previously plotted by triplot. X is a data % matrix with N rows and 3 columns consisting of % x, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function xd = deseas(x, m) % xd = deseas(x, m) % Function to remove seasonal component from a % time

series x, by subtracting the mean seasonal % values. **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** if the data are 180 degree data they must be doubled before % using this function: after use theta must be halved. % theta is the mean vector direction in **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** script mplot3.m % sets up a figure so that it is % 3in high, and printed 2 in from left % and 3 in above bottom of paper % fonts are scaled to 10 points set(gcf, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function rp = pautoc(r, k, N) % rp = pautoc(r, k, N) % Calculates the partial autocorrelation for lags up to % lag k from an autocorrelation series r, calculated from **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** Data Analysis in the Earth Sciences Using MATLAB . MathWorks is the leading developer of mathematical computing software for engineers and scientists. **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** Gerard V. - Data Analysis in the Earth Sciences Using MATLAB jetzt kaufen. ISBN: 9780133935059, Fremdsprachige Bucher - Geologie. **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function X = matfile() % X = matfile() % the filename is input from the keyboard % after loading the matrix is assigned to X % Written by Gerry Middleton, **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** Data Analysis in the Earth Sciences Using MATLAB . MathWorks is the leading developer of mathematical computing software for engineers and scientists. **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function [m, S2, T] = lograt(X) % [m, S2, T] = lograt(X) % transforms the compositional data in X % (percentages for m variables on N specimens) % using **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** function triplot % triplot plots a triangular diagram % points on it are plotted by tripts % written by Gerry Middleton, 1995 xscale = 2/sqrt(3) x = [0 xscale/2 xscale **Data Analysis in the Earth Sciences Using MATLAB - MathWorks** Data Analysis in the Earth Sciences Using MATLAB . MathWorks is the leading developer of mathematical computing software for engineers and scientists.