1. **Record Nr.**   UNISA990003246580203316
   Autore   KUDRJAVCEV, L. D.
   Titolo   Direct and inverse imbedding theorems. Applications to the solution of elliptic equations by variational methods / L. D. Kudrjavcev
   Pubbl/distr/stampa   Providence : American Mathematical Society, copyr. 1974
   Descrizione fisica   IV, 206 p. : ill. ; 23 cm
   Collana   Translations of mathematical monographs ; 42
   Disciplina   515.353
   Soggetti   Equazioni differenziali parziali
   Collocazione   515 TMM (42)
   Lingua di pubblicazione   Inglese
   Formato   Materiale a stampa
   Livello bibliografico   Monografia

2. **Record Nr.**   UNINA9910830625803321
   Titolo   Sensitivity analysis in practice [[electronic resource]] : a guide to assessing scientific models / / Andrea Saltelli ... [et al.]
   Pubbl/distr/stampa   Hoboken, NJ, : Wiley, c2004
   ISBN   1-280-53978-X
       9786610539789
       0-470-87094-X
       0-470-87095-8
   Descrizione fisica   1 online resource (233 p.)
   Altri autori (Persone)   SaltelliA <1953-> (Andrea)
   Disciplina   003/.5
       511.8
   Soggetti   Sensitivity theory (Mathematics) - Simulation methods
   Lingua di pubblicazione   Inglese
   Formato   Materiale a stampa
   Livello bibliografico   Monografia
   Note generali   Description based upon print version of record.

Nota di bibliografia	Includes bibliographical references (p. [211]-216) and index.
Nota di contenuto	SENSITIVITY ANALYSIS IN PRACTICE; CONTENTS; PREFACE; 1 A WORKED EXAMPLE; 1.1 A simple model; 1.2 Modulus version of the simple model; 1.3 Six-factor version of the simple model; 1.4 The simple model 'by groups'; 1.5 The (less) simple correlated-input model; 1.6 Conclusions; 2 GLOBAL SENSITIVITY ANALYSIS FOR IMPORTANCE ASSESSMENT; 2.1 Examples at a glance; 2.2 What is sensitivity analysis?; 2.3 Properties of an ideal sensitivity analysis method; 2.4 Defensible settings for sensitivity analysis; 2.5 Caveats; 3 TEST CASES; 3.1 The jumping man. Applying variance-based methods 3.2 Handling the risk of a financial portfolio: the problem of hedging. Applying Monte Carlo filtering and variance-based methods3.3 A model of fish population dynamics. Applying the method of Morris; 3.4 The Level E model. Radionuclide migration in the geosphere. Applying variance-based methods and Monte Carlo filtering; 3.5 Two spheres. Applying variance based methods in estimation/calibration problems; 3.6 A chemical experiment. Applying variance based methods in estimation/calibration problems; 3.7 An analytical example. Applying the method of Morris; 4 THE SCREENING EXERCISE 4.1 Introduction4.2 The method of Morris; 4.3 Implementing the method; 4.4 Putting the method to work: an analytical example; 4.5 Putting the method to work: sensitivity analysis of a fish population model; 4.6 Conclusions; 5 METHODS BASED ON DECOMPOSING THE VARIANCE OF THE OUTPUT; 5.1 The settings; 5.2 Factors Prioritisation Setting; 5.3 First-order effects and interactions; 5.4 Application of S(i) to Setting 'Factors Prioritisation'; 5.5 More on variance decompositions; 5.6 Factors Fixing (FF) Setting; 5.7 Variance Cutting (VC) Setting; 5.8 Properties of the variance based methods 5.9 How to compute the sensitivity indices: the case of orthogonal input5.9.1 A digression on the Fourier Amplitude Sensitivity Test (FAST); 5.10 How to compute the sensitivity indices: the case of non-orthogonal input; 5.11 Putting the method to work: the Level E model; 5.11.1 Case of orthogonal input factors; 5.11.2 Case of correlated input factors; 5.12 Putting the method to work: the bungee jumping model; 5.13 Caveats; 6 SENSITIVITY ANALYSIS IN DIAGNOSTIC MODELLING: MONTE CARLO FILTERING AND REGIONALISED SENSITIVITY ANALYSIS, BAYESIAN UNCERTAINTY ESTIMATION AND GLOBAL SENSITIVITY ANALYSIS 6.1 Model calibration and Factors Mapping Setting6.2 Monte Carlo filtering and regionalised sensitivity analysis; 6.2.1 Caveats; 6.3 Putting MC filtering and RSA to work: the problem of hedging a financial portfolio; 6.4 Putting MC filtering and RSA to work: the Level E test case; 6.5 Bayesian uncertainty estimation and global sensitivity analysis; 6.5.1 Bayesian uncertainty estimation; 6.5.2 The GLUE case; 6.5.3 Using global sensitivity analysis in the Bayesian uncertainty estimation; 6.5.4 Implementation of the method; 6.6 Putting Bayesian analysis and global SA to work: two spheres 6.7 Putting Bayesian analysis and global SA to work: a chemical experiment
Sommario/riassunto	Sensitivity analysis should be considered a pre-requisite for statistical model building in any scientific discipline where modelling takes place. For a non-expert, choosing the method of analysis for their model is complex, and depends on a number of factors. This book guides the non-expert through their problem in order to enable them to choose and apply the most appropriate method. It offers a review of the state-of-the-art in sensitivity analysis, and is suitable for a wide range of practitioners. It is focussed on the use of SIMLAB - a widely distributed freely-available sensitivity anal