1. Record Nr. UNINA9910300113103321 Autore Hofer Eduard Titolo The Uncertainty Analysis of Model Results: A Practical Guide / / by **Eduard Hofer** Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2018 **ISBN** 3-319-76297-4 Edizione [1st ed. 2018.] 1 online resource (XV, 346 p. 129 illus., 107 illus. in color.) Descrizione fisica 519.5 Disciplina Soggetti **Statistics** Computer simulation Mathematical models **Econometrics Environmental sciences - Mathematics** Security systems Statistical Theory and Methods Computer Modelling Mathematical Modeling and Industrial Mathematics **Quantitative Economics** Mathematical Applications in Environmental Science Security Science and Technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto Preface -- Introduction and necessary distinctions -- Step 1: Search --Step 2: Quantify -- Step 3: Propagate -- Step 4: Estimate uncertainty --

Step 5: Rank uncertainties -- Step 6: Present the analysis and interpret its results -- Practical execution of the analysis -- Uncertainty analysis when separation of uncertainties is required -- Practical examples --

References -- Subject index.

Sommario/riassunto This book is a practical guide to the uncertainty analysis of computer

model applications. Used in many areas, such as engineering, ecology and economics, computer models are subject to various uncertainties at the level of model formulations, parameter values and input data.

Naturally, it would be advantageous to know the combined effect of these uncertainties on the model results as well as whether the state of knowledge should be improved in order to reduce the uncertainty of the results most effectively. The book supports decision-makers, model developers and users in their argumentation for an uncertainty analysis and assists them in the interpretation of the analysis results.