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Soggetti	Physical geography Software engineering Environmental sciences Management information systems Social sciences—Data processing Social sciences—Computer programs Earth System Sciences Software Engineering/Programming and Operating Systems Environmental Science and Engineering Software Management Computational Social Sciences
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Nota di contenuto	Introduction -- Statistics fundamentals -- Spatial analyses -- Simulations -- Meteorology -- Hydrology -- Hydrogeology -- Hydrochemistry -- Climate change -- Water resources engineering -- Renewable energy. .
Sommario/riassunto	This book is designed to provide easy means of problem solving based on the science philosophical and logical rules that lead to effective and reliable software at the service of professional earth system scientists through numerical scientific computation techniques. Through careful examination of software illuminated by brief scientific explanations given in the book the reader may develop his/her skills of computer program writing. Science aspects that are concerned with earth systems

need numerical computation procedures and algorithms of data collected from the field measurements or laboratory records. The same is also valid for data processing in social sciences and economics. Some of the data assessment and processing procedures are at the large scales and complex, and therefore, require effective and efficient computer programs. Data reduction and graphical display in addition to probabilistic and statistical calculations are among the general purposes of the book. Not only students' works but also projects of researchers at universities and tasks of experts in different companies depend on reliable software. Especially, potential users of MATLAB in earth systems need a guidance book that covers a variety of practically applicable software solutions.