

Ekkehard Holzbecher

## Environmental Modeling

Using MATLAB, *Second Edition*

The book has two aims: to introduce basic concepts of environmental modeling and to facilitate the application of the concepts using modern numerical tools such as MATLAB. It is targeted at all natural scientists dealing with the environment: process and chemical engineers, physicists, chemists, biologists, biochemists, hydrogeologists, geochemists and ecologists. MATLAB was chosen as the major computer tool for modeling, firstly because it is unique in its capabilities, and secondly because it is available in most academic institutions, at all universities and at the research departments of many companies. In the 2<sup>nd</sup> edition many chapters include updated and extended material. In addition the MATLAB command index was updated and a new chapter on numerical methods was added.

**E. Holzbecher** obtained his diploma in mathematics at the University of Cologne after which he worked as a modeller on various tasks, such as safety assessment of waste repositories, on saltwater intrusion into coastal aquifers, on geothermal systems, on the interstitial between surface and sub-surface water, on riverbank filtration and artificial groundwater recharge, on landfill evaluation, on hydrothermics, on fuel cells and others. He was affiliated to Technical Univ. Berlin, to Kyoto University in Beppu, Japan, to Beer-Sheba University at Sede-Boker in Israel, to the Inst. of Freshwater Ecology and Inland Fisheries (IGB) in Berlin, to Humboldt Univ. Berlin and to the Weierstrass Institute of Applied Analysis and Stochastics (WIAS) in Berlin. Currently he is employed by Georg-August University Göttingen, where he is involved in various projects of applied and environmental geology.

The author obtained academic degrees in mathematics, in civil engineering and in hydrogeology. Besides teaching regular university classes at Freie Univ. Berlin and in Göttingen, he has held courses at Argonne National Laboratories, Chicago, in contract with the International Atomic Agency (IAEA), at Kyoto University (Japan) and participated in a knowledge transfer project with the Polish Geological Survey in Szczecin. He has published many papers on modeling in various journals. "Environmental Modeling" is his 4<sup>th</sup> book.

Environment

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