


[DOWNLOAD](#)


Numerical Models in Groundwater Pollution

By Kovarik, Karel

Condition: New. Publisher/Verlag: Springer, Berlin | Mathematical models are powerful tools used in the prediction of pollutant movement. This book discusses the Finite Element Method (FEM) and Boundary Element Method (BEM), and takes a look at the advantages of these methods in groundwater hydrology. The combination of the BEM and the random-walk particle tracking method is also presented. The book includes computer programs, source code, and examples developed on the basis of the theoretical backgrounds of these methods. These Visual C++ programs are compatible with the Windows platform. | 1 Introduction.- 2 Basic Equations of Groundwater Flow.- 2.1 Basic Principles of Hydrodynamics.- 2.1.1 Eulerian and Lagrangian Formulations.- 2.1.2 Equilibrium of Forces in Fluid.- 2.1.3 Rate of Deformation.- 2.1.4 Navier-Stokes Equations.- 2.1.5 Potential Flow.- 2.2 Flow Through the Saturated Zone.- 2.2.1 Groundwater and Its Potential.- 2.2.2 Properties of Porous Media.- 2.2.3 The Darcy's Law.- 2.2.4 Basic Equations of Groundwater Flow.- 2.2.5 Inflows and Outflows.- 2.2.6 Two-Dimensional Case.- 2.2.7 Girinski Potential.- 2.2.8 Basic Boundary and Initial Conditions.- 2.3 Flow Through the Unsaturated Zone.- 2.3.1 Retention Curve.- 2.3.2 Governing Equations of the Unsaturated Flow.- 2.3.3 Boundary and Initial Conditions.- References.- 3 Basic Equations of Transport of Pollutants in Porous Media.- 3.1 Miscible Displacement.-...



[READ ONLINE](#)
[1.09 MB]

Reviews

Absolutely among the best publication I have at any time go through. It is definitely basic but shocks from the 50 % of the book. I discovered this book from my i and dad advised this publication to find out.

-- **Solon Pacocha**

A top quality pdf and also the font employed was intriguing to read. It is one of the most awesome publication we have read. I am delighted to tell you that here is the finest book we have go through in my personal life and can be he very best pdf for at any time.

-- **Webster Kub**