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- Presents a general introduction to numerical simulation in environment water
- Demonstrates interactions of numerical methods with information-processing techniques, achieving efficient numerical simulations for a wide range of applications in environment water

Numerical simulation models have become indispensable in hydro- and environmental sciences and engineering. This monograph presents a general introduction to numerical simulation in environment water, based on the solution of the equations for groundwater flow and transport processes, for multiphase and multicomponent flow and transport processes in the subsurface as well as for flow and transport processes in surface waters. It displays in detail the state of the art of discretization and stabilization methods (e.g. finite-difference, finite-element, and finite-volume methods), parallel methods, and adaptive methods as well as fast solvers, with particular focus on explaining the interactions of the different methods. The book gives a brief overview of various information-processing techniques and demonstrates the interactions of the numerical methods with the information-processing techniques, in order to achieve efficient numerical simulations for a wide range of applications in environment water.

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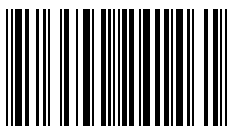
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