

图书基本信息

书名：<<描述岩土工程模型不确定性特征的贝叶斯方法>>

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内容概要

As any model is only an abstraction of the real world, model uncertainty always exists. Ingeotechnical engineering, the model uncertainty could be large. Lack of knowledge about modeluncertainty may lead to unrealistic predictions. When back analysis from observed performances,model uncertainty is often mixed with parameter uncertainty and observational uncertainty. Hence itis generally difficult to isolate and characterize model uncertainty. This book introduces the state-of-the-art theories and methodologies for geotechnical model uncertainty characterization based on theBayesian theory, including both rigorous solution and approximate but practical solutions, where theeffects of parameter uncertainty and observational uncertainty on model uncertainty characterizationare appropriately addressed. The theories and methodologies are illustrated in detail with variousgeotechnical problems. The book will be of general interest to readers in the profession andparticularly useful for those specializing in geotechnical inverse analysis and geotechnical reliability.

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