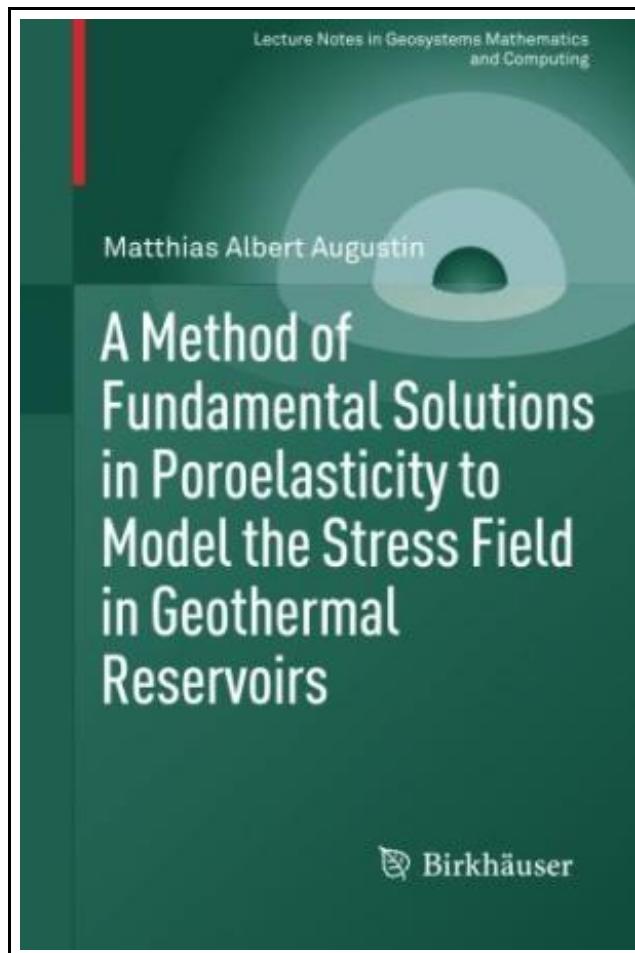


## A Method of Fundamental Solutions in Poroelasticity to Model the Stress Field in Geothermal Reservoirs



Filesize: 2.33 MB

### Reviews

*A whole new eBook with a brand new point of view. It is definitely simplistic but shocks in the 50 percent of the publication. I am just pleased to explain how this is the greatest ebook i have read during my very own daily life and could be the best ebook for possibly.  
(Mitchell Kuhn III)*

## A METHOD OF FUNDAMENTAL SOLUTIONS IN POREOELASTICITY TO MODEL THE STRESS FIELD IN GEOTHERMAL RESERVOIRS

[DOWNLOAD PDF](#)

Springer-Verlag GmbH Sep 2015, 2015. Taschenbuch. Book Condition: Neu. 233x154x17 mm. Neuware - This monograph focuses on the numerical methods needed in the context of developing a reliable simulation tool to promote the use of renewable energy. One very promising source of energy is the heat stored in the Earth's crust, which is harnessed by so-called geothermal facilities. Scientists from fields like geology, geo-engineering, geophysics and especially geomathematics are called upon to help make geothermics a reliable and safe energy production method. One of the challenges they face involves modeling the mechanical stresses at work in a reservoir. The aim of this thesis is to develop a numerical solution scheme by means of which the fluid pressure and rock stresses in a geothermal reservoir can be determined prior to well drilling and during production. For this purpose, the method should (i) include poroelastic effects, (ii) provide a means of including thermoelastic effects, (iii) be inexpensive in terms of memory and computational power, and (iv) be flexible with regard to the locations of data points. After introducing the basic equations and their relations to more familiar ones (the heat equation, Stokes equations, Cauchy-Navier equation), the 'method of fundamental solutions' and its potential value concerning our task are discussed. Based on the properties of the fundamental solutions, theoretical results are established and numerical examples of stress field simulations are presented to assess the method's performance. The first-ever 3D graphics calculated for these topics, which neither requiring meshing of the domain nor involving a time-stepping scheme, make this a pioneering volume. 235 pp. Englisch.



[Read A Method of Fundamental Solutions in Poroelasticity to Model the Stress Field in Geothermal Reservoirs Online](#)



[Download PDF A Method of Fundamental Solutions in Poroelasticity to Model the Stress Field in Geothermal Reservoirs](#)

## Other PDFs

---



### **Psychologisches Testverfahren**

Reference Series Books LLC Nov 2011, 2011. Taschenbuch. Book Condition: Neu. 249x191x7 mm. This item is printed on demand - Print on Demand Neuware - Quelle: Wikipedia. Seiten: 100. Kapitel: Myers-Briggs-Typindikator, Keirsey Temperament Sorter, DISG,...

[Download ePub »](#)

---



### **A Dog of Flanders: Unabridged; In Easy-to-Read Type (Dover Children's Thrift Classics)**

Dover Publications, 2011. Paperback. Book Condition: New. No Jacket. New paperback book copy of A Dog of Flanders by Ouida (Marie Louise de la Ramee). Unabridged in easy to read type. Dover Children's Thrift Classic....

[Download ePub »](#)

---



### **Programming in D**

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers...

[Download ePub »](#)

---



### **Things I Remember: Memories of Life During the Great Depression**

Createspace Independent Publishing Platform, United States, 2013. Paperback. Book Condition: New. 203 x 142 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*.Some Americans who were born and raised during the Great...

[Download ePub »](#)

---



### **Have You Locked the Castle Gate?**

Addison-Wesley Professional. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Is your computer safe Could an intruder sneak in and steal...

[Download ePub »](#)