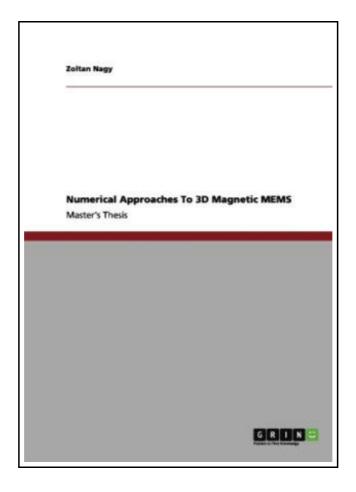
Numerical Approaches to 3D Magnetic Mems



Filesize: 4.14 MB

Reviews

It is an incredible ebook that we actually have ever study. This is certainly for all those who statte that there had not been a worthy of looking at. I am just pleased to inform you that this is the very best publication i have got go through during my individual daily life and can be he best ebook for possibly.

(Clarabelle Marvin)

NUMERICAL APPROACHES TO 3D MAGNETIC MEMS



GRIN Verlag. Paperback. Book Condition: New. Paperback. 88 pages. Dimensions: 8.3in. x 5.8in. x 0.2in.Masters Thesis from the year 2006 in the subject Engineering - Mechanical Engineering, grade: A, Swiss Federal Institute of Technology Zurich (Institute of Robotics and Intelligent Systems), language: English, abstract: The present work investigates the potential of the finite element method (FEM) in the design process of magnetic Micro-Electro-Mechanical-Systems (MEMS). The magnetic forces and torques acting on a magnetic body are of great importance in wireless actuating principles. Good models are required to allow for precise and predictable motion of the magnetic body. However, analytical results are only available for simple geometries and experiments are often time consuming and may have a certain number of uncertain parameters that may influence the results. Numerical methods, and in particular the finite element method, offer the possibility to study a magnetic body with known material properties in a well defined environment. Consequently, in this work, a method is proposed to calculate the net body torque on arbitrarily shaped bodies in a homogeneous magnetic field using the commercial finite element software Ansys. In addition, a procedure to de-termine the demagnetization factors of these bodies is given. The code is first validated by the known analytical results for an ellipsoid. As an application, the demagnetization factors, as well as the net magnetic torque on brick shaped bodies and the IRIS Microrobot are calculated. A method is proposed to predict the torque acting on the Microrobot analytically. However, experimental results are necessary to confirm this method. Furthermore, Ansys is used to model magneto-structural coupling that is, the motion and deformation of a magnetic body due to an external magnetic field. Two devices are presented (as case studies rather than as actual design concepts), the magnetic resonator and the magnetic scratch...

- POF
- Read Numerical Approaches to 3D Magnetic Mems Online
- Download PDF Numerical Approaches to 3D Magnetic Mems

Other eBooks



Estrellas Peregrinas Cuentos de Magia y Poder Spanish Edition

Pinata Books. Paperback. Book Condition: New. Paperback. 178 pages. Dimensions: 8.3in. x 5.4in. x 0.6in. First ever Spanish-language edition of the critically acclaimed collection of short stories for young adults by a master of Latino literature...

Save PDF »



Multiple Streams of Internet Income

Wiley. Hardcover. Book Condition: New. Hardcover. 279 pages. Dimensions: 9.3in. x 6.2in. x 1.2in.Praise for MULTIPLE STREAMS OF INTERNET INCOMEIf ever the world needed some help to succeed on the Internet, this is the moment....

Save PDF »



Reflections From the Powder Room on the Love Dare: A Topical Discussion by Women from Different Walks of Life

Destiny Image. Book Condition: New. 0768430593 BRAND NEW!! MULTIPLE COPIES AVAILABLE. NEW CONDITION!! 100% MONEY BACK GUARANTEE!! BUY WITH CONFIDENCE! WE SHIP DAILY!!EXPEDITED SHIPPING AVAILABLE. What's more fun than reading a book? Discussing it with...

Save PDF »



God Loves You. Chester Blue

Henry and George Press. Paperback. Book Condition: New. Ursula Andrejczuk (illustrator). Paperback. 140 pages. Dimensions: 8.0in. x 5.2in. x 0.3in.BEAUTIFUL NEW ILLUSTRATIONS BRING THE STORY TO LIFE!A charming book about a mysterious bear that shows...

Save PDF »



TJ new concept of the Preschool Quality Education Engineering the daily learning book of: new happy learning young children (3-5 years) Intermediate (3)(Chinese Edition)

paperback. Book Condition: New. Ship out in 2 business day, And Fast shipping, Free Tracking number will be provided after the shipment. Paperback. Pub Date :2005-09-01 Publisher: Chinese children before making Reading: All books are the...

Save PDF »