



3D Constitutive Modeling of Superelastic Shape Memory Alloys

By Masood Taheri Andani

LAP Lambert Academic Publishing Jan 2014, 2014. Taschenbuch. Book Condition: Neu. 220x150x4 mm. This item is printed on demand - Print on Demand Neuware - Within this work is the presentation of a general 3D model capable of capturing the multiaxial behavior of superelastic shape memory alloys (SMAs) under quasi-static isothermal or dynamic loading conditions. A semi-analytical framework is developed to numerically implement the model. An extended experimental study is conducted on NiTi thin walled tubes to investigate the performance of the model. The proposed approach is shown to be able to capture the non-Mises thermomechanical response of NiTi under complex tensiontorsion loading conditions. The effect of loading sequence and loading rate is also experimentaly studied. The main motivation of the present study is to develop a platform for analyzing and designing biomedical devices with SMA actuator under combined tension-torsion loading conditions. The torsional stiffness of NiTi is shown to be adjustable by applying an extra axial load. This will lead to developing desirable torque response in NiTi tubes and rods by varying the axial load. A possible application of this technique in the form of an assistive device is discussed. 68 pp. Englisch.



Reviews

Comprehensive information! Its this sort of excellent go through. It is packed with knowledge and wisdom You may like just how the author publish this book.

-- Mustafa McGlynn

Complete guideline! Its this kind of great read through. It is probably the most incredible pdf i actually have read through. Its been developed in an extremely straightforward way and it is simply soon after i finished reading this book through which actually modified me, affect the way i really believe.

-- Beryl Labadie I

You May Also Like



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, Eignungstest für das Medizinstudium, Adult Attachment Interview,...



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 who are new to computer programming. Although...



Kingfisher Readers: Romans (Level 3: Reading Alone with Some Help) (Unabridged)

Pan Macmillan. Paperback. Book Condition: new. BRAND NEW, Kingfisher Readers: Romans (Level 3: Reading Alone with Some Help) (Unabridged), Philip Steele, For the first time, Kingfisher brings its expertise in beautifully-designed, trusted non-fiction to the sphere of learning to read. This new...



Kingfisher Readers: Volcanoes (Level 3: Reading Alone with Some Help) (Unabridged)

Pan Macmillan. Paperback. Book Condition: new. BRAND NEW, Kingfisher Readers: Volcanoes (Level 3: Reading Alone with Some Help) (Unabridged), Claire Llewellyn, For the first time, Kingfisher brings its expertise in beautifully-designed, trusted non-fiction to the sphere of learning to read. This new...



Dom's Dragon - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, Dom's Dragon - Read it Yourself with Ladybird: Level 2, Mandy Ross, One day, Dom finds a little red egg and soon he is the owner of a friendly dragon called Glow! But...



Peppa Pig: Nature Trail - Read it Yourself with Ladybird: Level 2

Penguin Books Ltd. Paperback. Book Condition: new. BRAND NEW, Peppa Pig: Nature Trail - Read it Yourself with Ladybird: Level 2, Peppa Pig and her family are enjoying a nature walk when they get lost. Can Peppa, George, Mummy Pig and Daddy...