

THUMBNAIL  
NOT  
AVAILABLE



DOWNLOAD PDF

## Integral Twist Actuation of Helicopter Rotor Blades for Vibration Reduction

By National Aeronautics and Space Administration (NASA)

Biblioscholar Mrz 2013, 2013. Taschenbuch. Book Condition: Neu. 246x189x5 mm. This item is printed on demand - Print on Demand Neuware - Active integral twist control for vibration reduction of helicopter rotors during forward flight is investigated. The twist deformation is obtained using embedded anisotropic piezocomposite actuators. An analytical framework is developed to examine integrally-twisted blades and their aeroelastic response during different flight conditions: frequency domain analysis for hover, and time domain analysis for forward flight. Both stem from the same three-dimensional electroelastic beam formulation with geometrical-exactness, and are coupled with a finite-state dynamic inflow aerodynamics model. A prototype Active Twist Rotor blade was designed with this framework using Active Fiber Composites as the actuator. The ATR prototype blade was successfully tested under non-rotating conditions. Hover testing was conducted to evaluate structural integrity and dynamic response. In both conditions, a very good correlation was obtained against the analysis. Finally, a four-bladed ATR system is built and tested to demonstrate its concept in forward flight. This experiment was conducted at NASA Langley T~ansonic Dynamics Tunnel and represents the first-of-a-kind Mach-scaled fully-active-twist rotor system to undergo forward flight test. In parallel, the impact upon the fixed- and rotating-system loads is estimated by...



READ ONLINE

[ 5.14 MB ]

### Reviews

*This is the very best book i actually have read till now. It is loaded with knowledge and wisdom I am just easily could get a satisfaction of reading a created ebook.*

-- **Ena Huel**

*The best publication i ever study. It is really basic but unexpected situations within the fifty percent of your publication. Your lifestyle period is going to be enhance as soon as you total reading this article publication.*

-- **Ashton Kassulke**

## Related Kindle Books

---



### **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...

---



### **Tinga Tinga Tales: Why Lion Roars - Read it Yourself with Ladybird**

Paperback. Book Condition: New. Not Signed; This is a Tinga Tinga tale inspired by traditional stories from Africa. Lion is king of Tinga Tinga but he can't roar! Can his friend Flea help Lion to find his roar and behave more like...

---



### **Online Investigations: Snapchat (Paperback)**

Createspace, United States, 2015. Paperback. Book Condition: New. 229 x 152 mm. Language: English . Brand New Book \*\*\*\*\* Print on Demand \*\*\*\*\*. Snapchat messages. Are they really deleted? Snapchat is one of the most popular applications for sending self-destructing text messages....

---



### **The Java Tutorial (3rd Edition)**

Pearson Education, 2001. Softcover. Book Condition: Neu. Gebraucht - Sehr gut Unbenutzt. Schnelle Lieferung, Kartonverpackung. Abzugsfähige Rechnung. Bei Mehrfachbestellung werden die Versandkosten anteilig erstattet. - Praise for "The Java' Tutorial, Second Edition" includes: "This book stands above the rest because it has...

---



### **New KS2 English SAT Buster 10-Minute Tests: 2016 SATs & Beyond**

Paperback. Book Condition: New. Not Signed; This is Book 2 of CGP's SAT Buster 10-Minute Tests for KS2 Grammar, Punctuation & Spelling - it's a brilliant way to introduce English SATS preparation in bite-sized chunks. Each set of quick tests is packed...