



# An Experimental Investigation on Periodic Forced Vibrations of a Bladed Disk

By Colin J. Duffield

Biblioscholar Okt 2012, 2012. Taschenbuch. Book Condition: Neu. 246x189x9 mm. This item is printed on demand - Print on Demand Neuware - Turbine engine blades are subject to extreme dynamic vibrational loads during normal operations. Harmonic forcing produced from periodic wakes created by fixed stators can excite blade resonant frequencies. Prolonged or repeated exposure to these forces can cause vibrationinduced fatigue, otherwise known as High Cycle Fatigue (HCF). HCF effects are magnified by small material, manufacturing and geometrical irregularities among the blades, called mistuning. Structural mistuning can result in some blades experiencing stresses much higher than would be encountered in a perfect structure. Blade amplitude increases of over 100% have been observed in blades with natural frequencies less than 2% off their nominal value. Premature blade failures, operational costs and engine servicing all increase due to the HCF problem. This study offered a novel approach to characterize mistuning effects on forced vibration behavior of bladed disks. A model fan reduced in dynamic scale from an operational jet engine fan and with weak inter-blade coupling was fabricated. 156 pp. Englisch.



READ ONLINE [ 5.24 MB ]

#### Reviews

This created pdf is excellent. We have read through and i also am sure that i am going to going to study yet again yet again in the future. You will not truly feel monotony at at any time of your time (that's what catalogues are for concerning should you check with me).

-- Myriam Bode

Completely one of the best publication I actually have ever study. I really could comprehended almost everything out of this written e publication. Your daily life span will likely be change as soon as you total reading this publication.

-- Prof. Adolph Wisoky

#### Other 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...



### Kindle Fire Tips And Tricks How To Unlock The True Power Inside Your Kindle

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 52 pages. Dimensions: 9.0in. x 6.0in. x 0.1in.Still finding it getting your way around your Kindle Fire Wish you had the answers to all your frequently asked...



#### 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...



#### By the Fire Volume 1

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 130 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.By the Fire is an exciting new Bi-Monthly publication featuring new works by Stewart Felkel. Inside these pages you will...



## Angels Among Us: 52 Humorous and Inspirational Short Stories: Lifes Outtakes - Year 7

Publishing Inspiration. Paperback. Book Condition: New. This item is printed on demand. Paperback. 132 pages. Dimensions: 9.0in. x 6.0in. x 0.3in.52 Humorous And Inspirational Short Stories!52 humorous and inspirational short stories from year 7 of Lifes Outtakes, a nationally syndicated column by...