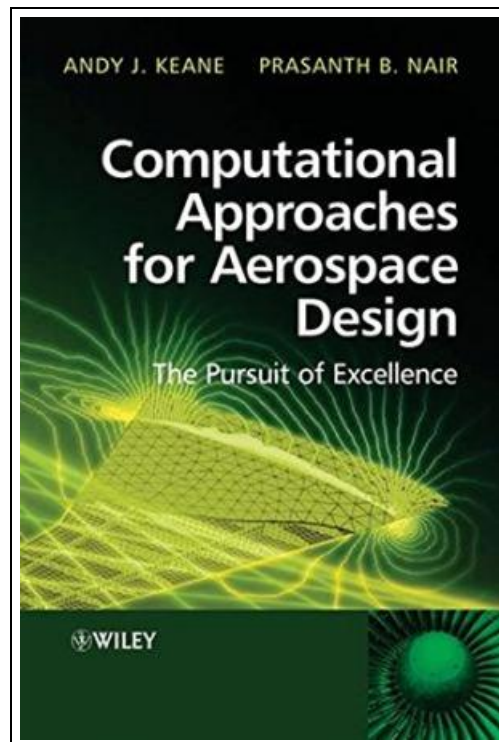# Computational Approaches for Aerospace Design: The Pursuit of Excellence

Filesize: 9.39 MB

Reviews

A must buy book if you need to adding benefit. I could possibly comprehended every little thing using this created e publication. I found out this book from my dad and i encouraged this pdf to understand.
(Georgianna Gerlach)

COMPUTATIONAL APPROACHES FOR AEROSPACE DESIGN: THE PURSUIT OF EXCELLENCE

Wiley, 2005. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: Foreword.Preface.Acknowledgments.I Preliminaries.1 Introduction.1.1 Objectives.1.2 Road Map -What is Covered and What is Not.1.3 An Historical Perspective on Aerospace Design.1.4 Traditional Manual Approaches to Design and Design Iteration, Design Teams.1.5 Advances in Modeling Techniques: Computational Engineering.1.6 Trade-offs in Aerospace System Design.1.7 Design Automation, Evolution and Innovation.1.8 Design Search and Optimization (DSO).1.9 The Take-up of Computational Methods.2 Design-oriented Analysis.2.1 Geometry Modeling and Design Parameterization.2.2 Computational Mesh Generation.2.3 Analysis and Design of Coupled Systems.3 Elements of Numerical Optimization.3.1 Single Variable Optimizers - Line Search.3.2 Multivariable Optimizers.3.3 Constrained Optimization.3.4 Metamodels and Response Surface Methods.3.5 Combined Approaches - Hybrid Searches, Metaheuristics.3.6 Multiobjective Optimization.3.7 Robustness.II Sensitivity Analysis and Approximation Concepts.4 Sensitivity Analysis.4.1 Finite-difference Methods.4.2 Complex Variable Approach.4.3 Direct Methods.4.4 Adjoint Methods.4.5 Semianalytical Methods.4.6 Automatic Differentiation.4.7 Mesh Sensitivities for Complex Geometries.4.8 Sensitivity of Optima to Problem Parameters.4.9 Sensitivity Analysis of Coupled Systems.4.10 Comparison of Sensitivity Analysis Techniques.5 General Approximation Concepts and Surrogates.5.1 Local Approximations.5.2 Multipoint Approximations.5.3 Black-box Modeling: a Statistical Perspective.5.4 Generalized Linear Models.5.5 Sparse Approximation Techniques.5.6 Gaussian Process Interpolation and Regression.5.7 Data Parallel Modeling.5.8 Design of Experiments (DoE).5.9 Visualization and Screening.5.10 Black-box Surrogate Modeling in Practice.6 Physics-based Approximations.6.1 Surrogate Modeling using Variable-fidelity Models.6.2 An Introduction to Reduced Basis Methods.6.3 Reduced Basis Methods for Linear Static Reanalysis.6.4 Reduced Basis Methods for Reanalysis of Eigenvalue Problems.6.5 Reduced Basis Methods for Nonlinear Problems.III Frameworks for Design Space Exploration.7 Managing Surrogate Models in Optimization.7.1 Trust-region Methods.7.2 The Space Mapping Approach.7.3 Surrogate-assisted Optimization using Global Models.7.4 Managing Surrogate Models in Evolutionary Algorithms.7.5 Concluding Remarks.8 Design in the Presence of Uncertainty.8.1 Uncertainty Modeling and Representation.8.2 Uncertainty Propagation.8.3 Taguchi Methods.8.4 The Welch-Sacks Method.8.5 Design for Six.8.6 Decision-theoretic Formulations.8.7 Reliability-based Optimization.8.8 Robust Design using Information-gap Theory.8.9 Evolutionary Algorithms for Robust Design.8.10 Concluding Remarks.9 Architectures for Multidisciplinary Optimization.9.1 Preliminaries.9.2...

- 📑 Read Computational Approaches for Aerospace Design: The Pursuit of Excellence Online
- 📄 Download PDF Computational Approaches for Aerospace Design: The Pursuit of Excellence

You May Also Like

TJ new concept of the Preschool Quality Education Engineering the daily learning book of: new happy learning young children (2-4 years old) in small classes (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...

Read Book »

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...

Read Book »

Childrens Educational Book Junior Vincent van Gogh A Kids Introduction to the Artist and his Paintings. Age 7 8 9 10 year-olds SMART READS for . - Expand Inspire Young Minds Volume 1

CreateSpace Independent Publishing Platform. Paperback. Book Condition: New. This item is printed on demand. Paperback. 26 pages. Dimensions: 9.8in. x 6.7in. x 0.2in.Van Gogh for Kids 9. 754. 99-PaperbackABOUT SMART READS for Kids. . ....

Read Book »

JA] early childhood parenting :1-4 Genuine Special(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 :2006-01-01 Pages: 179 Publisher: the China Pictorial Our book is all...

Read Book »

Edge] the collection stacks of children's literature: Chunhyang Qiuyun 1.2 --- Children's Literature 2004(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 Pages: 815 Publisher: the Chinese teenager Shop Books all book....

Read Book »