



Multi-Objective Optimization of a Turbofan for an Advanced, Single-Aisle Transport

NASA Technical Reports Server (NTRS).  
Jeffrey J. Berton, Mark D. Guynn

DOWNLOAD



## Multi-Objective Optimization of a Turbofan for an Advanced, Single-Aisle Transport

By Jeffrey J. Berton

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 30 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. Considerable interest surrounds the design of the next generation of single-aisle commercial transports in the Boeing 737 and Airbus A320 class. Aircraft designers will depend on advanced, next-generation turbofan engines to power these airplanes. The focus of this study is to apply single- and multi-objective optimization algorithms to the conceptual design of ultrahigh bypass turbofan engines for this class of aircraft, using NASA's Subsonic Fixed Wing Project metrics as multidisciplinary objectives for optimization. The independent design variables investigated include three continuous variables: sea level static thrust, wing reference area, and aerodynamic design point fan pressure ratio, and four discrete variables: overall pressure ratio, fan drive system architecture (i. e. , direct- or gear-driven), bypass nozzle architecture (i. e. , fixed- or variable geometry), and the high- and low-pressure compressor work split. Ramp weight, fuel burn, noise, and emissions are the parameters treated as dependent objective functions. These optimized solutions provide insight to the ultrahigh bypass engine design process and provide information to NASA program management to help guide its technology development efforts. This item ships from La Vergne, TN. Paperback.



READ ONLINE

[ 7.29 MB ]

### Reviews

*Extremely helpful for all class of people. It is probably the most incredible ebook i actually have go through. I discovered this publication from my dad and i recommended this ebook to discover.*

-- Victoria Hickle PhD

*A very great ebook with perfect and lucid answers. It can be packed with wisdom and knowledge I found out this book from my dad and i encouraged this publication to learn.*

-- Elena McLaughlin

## Relevant Kindle Books

---



### **Games with Books : 28 of the Best Childrens Books and How to Use Them to Help Your Child Learn - From Preschool to Third Grade**

Book Condition: Brand New. Book Condition: Brand New.

---



### **Games with Books : Twenty-Eight of the Best Childrens Books and How to Use Them to Help Your Child Learn - from Preschool to Third Grade**

Book Condition: Brand New. Book Condition: Brand New.

---



### **Twelve Effective Ways to Help Your ADD/ADHD Child: Drug-Free Alternatives for.**

Book Condition: New. Ships From Canada. New. No dust jacket as issued. Glued binding. 264 p. Contains: Illustrations. Audience: General/trade. Book Info Consumer text of recommendations backed by scientific studies. Discusses diet, allergens, vitamins and minerals, and more. Softcover. About the Author...

---



### **Everything Ser The Everything Green Baby Book From Pregnancy to Babys First Year An Easy and Affordable Guide to Help Moms Care for Their Baby And for the Earth by Jenn Savedge 2009 Paperback**

Book Condition: Brand New. Book Condition: Brand New.

---



### **The Preschool Church Church School Lesson for Three to Five Year Olds by Eve Parker 1996 Paperback**

Book Condition: Brand New. Book Condition: Brand New.

---



### **The Day I Forgot to Pray**

Tate Publishing. Paperback. Book Condition: New. Paperback. 28 pages. Dimensions: 8.7in. x 5.8in. x 0.3in.Alexis is an ordinary five-year-old who likes to run and play in the sandbox. On her first day of Kindergarten, she makes her first school-aged friend, Elizabeth, and...