

Improving the Unsteady Aerodynamic Performance of Transonic Turbines Using Neural Networks



Improving the Unsteady Aerodynamic Performance of Transonic Turbines using Neural Networks

NASA Technical Reports Server (NTRS)

Filesize: 3.85 MB

Reviews

A top quality publication as well as the font utilized was fascinating to read. It is among the most incredible pdf i actually have read through. I am easily could get a pleasure of looking at a created publication.

(Scot Howe)

IMPROVING THE UNSTEADY AERODYNAMIC PERFORMANCE OF TRANSONIC TURBINES USING NEURAL NETWORKS

[DOWNLOAD PDF](#)

To save **Improving the Unsteady Aerodynamic Performance of Transonic Turbines Using Neural Networks** PDF, please refer to the button listed below and download the document or have access to other information that are relevant to IMPROVING THE UNSTEADY AERODYNAMIC PERFORMANCE OF TRANSONIC TURBINES USING NEURAL NETWORKS book.

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 30 pages. Dimensions: 9.7in. x 7.4in. x 0.1in. A recently developed neural net-based aerodynamic design procedure is used in the redesign of a transonic turbine stage to improve its unsteady aerodynamic performance. The redesign procedure used incorporates the advantages of both traditional response surface methodology and neural networks by employing a strategy called parameter-based partitioning of the design space. Starting from the reference design, a sequence of response surfaces based on both neural networks and polynomial fits are constructed to traverse the design space in search of an optimal solution that exhibits improved unsteady performance. The procedure combines the power of neural networks and the economy of low-order polynomials (in terms of number of simulations required and network training requirements). A time-accurate, two-dimensional, Navier-Stokes solver is used to evaluate the various intermediate designs and provide inputs to the optimization procedure. The procedure yielded a modified design that improves the aerodynamic performance through small changes to the reference design geometry. These results demonstrate the capabilities of the neural net-based design procedure, and also show the advantages of including high-fidelity unsteady simulations that capture the relevant flow physics in the design optimization process. This item ships from La Vergne, TN. Paperback.



[Read Improving the Unsteady Aerodynamic Performance of Transonic Turbines Using Neural Networks Online](#)

[Download PDF Improving the Unsteady Aerodynamic Performance of Transonic Turbines Using Neural Networks](#)

[Download ePUB Improving the Unsteady Aerodynamic Performance of Transonic Turbines Using Neural Networks](#)

See Also



[PDF] **Animology: Animal Analogies**

Access the link under to download "Animology: Animal Analogies" PDF document.

[Download Document »](#)



[PDF] **The Whale Tells His Side of the Story Hey God, Ive Got Some Guy Named Jonah in My Stomach and I Think Im Gonna Throw Up**

Access the link under to download "The Whale Tells His Side of the Story Hey God, Ive Got Some Guy Named Jonah in My Stomach and I Think Im Gonna Throw Up" PDF document.

[Download Document »](#)



[PDF] **Good Night, Zombie Scary Tales**

Access the link under to download "Good Night, Zombie Scary Tales" PDF document.

[Download Document »](#)



[PDF] **God Loves You. Chester Blue**

Access the link under to download "God Loves You. Chester Blue" PDF document.

[Download Document »](#)



[PDF] **Yearbook Volume 15**

Access the link under to download "Yearbook Volume 15" PDF document.

[Download Document »](#)



[PDF] **Absolutely Lucy #4 Lucy on the Ball A Stepping Stone BookTM**

Access the link under to download "Absolutely Lucy #4 Lucy on the Ball A Stepping Stone BookTM" PDF document.

[Download Document »](#)



[PDF] Readers Clubhouse Set B Time to Open (Paperback)

Access the web link below to download "Readers Clubhouse Set B Time to Open (Paperback)" PDF document.

[Read PDF »](#)



[PDF] Children's Educational Book Junior Leonardo Da Vinci : An Introduction to the Art, Science and Inventions of This Great Genius Age 7 8 9 10 Year-Olds. [British English] (Paperback)

Access the web link below to download "Children's Educational Book Junior Leonardo Da Vinci : An Introduction to the Art, Science and Inventions of This Great Genius Age 7 8 9 10 Year-Olds. [British English] (Paperback)" PDF document.

[Read PDF »](#)



[PDF] Any Child Can Write (Paperback)

Access the web link below to download "Any Child Can Write (Paperback)" PDF document.

[Read PDF »](#)



[PDF] Dont Line Their Pockets With Gold Line Your Own A Small How To Book on Living Large

Access the web link below to download "Dont Line Their Pockets With Gold Line Your Own A Small How To Book on Living Large" PDF document.

[Read PDF »](#)



[PDF] The Pickthorn Chronicles

Access the web link below to download "The Pickthorn Chronicles" PDF document.

[Read PDF »](#)



[PDF] Silverlight 5 in Action

Access the web link below to download "Silverlight 5 in Action" PDF document.

[Read PDF »](#)