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Identification Modeling and Characteristics of Miniature Rotorcraft Transient Characteristics, Modelling and Stability Analysis of Microgrid **On Modeling the Spatiotemporal Processing Characteristics of the Retina Modeling and Simulation** Vibration Characteristics of the North Fork Dam Model **Modeling Future Development on the Design Characteristics of Maryland's Traditional Settlements Determination of Longitudinal Stability and Control Characteristics from Free-flight Model Tests with Results at Transonic Speeds for Three Airplane Configurations Experimental Vibration Characteristics of a 1/40-scale Dynamic Model of the Saturn V -- Launch-umbilical-tower Configuration** *Two-dimensional Aerodynamic Characteristics of Several Polygon-shaped Cross-sectional Models Applicable to Helicopter Fuselages* **Determination of Lateral Stability Characteristics from Free-flight Model Tests, with Experimental Results on the Effects of Wing Vertical Position and Dihedral at Transonic Speeds** *Static Longitudinal Aerodynamic Characteristics of Some Supersonic Decelerator Models at Mach Numbers of 2.30 and 4.63 Aerodynamic Characteristics of a Powered Semispan Tilting-shrouded-propeller VTOL Model in Hovering and Transition Flight Modeling and Analysis with*

Induction Generators, Third Edition **Water Quality Explaining the Cross-section of Stock Returns in Japan Traffic Flow Theory User Modeling and User Profiling in Adaptive Modeling and Computation in Engineering III** Stochastic Models in Operations Research *Computerized Decision Support Systems for Water Managers* **Modeling and Simulation of Computer Networks and Systems** *Linear Regression Prediction Models of Wafer Characteristics After Plasma Processing* **A Three-dimensional Method-of-characteristics Solute-Transport Model (MOC3D) Staff Paper** *Data Modeling and Design for Today's Architectures* **Statistical Models for Estimating Flow Characteristics of Michigan Streams** *Full-scale Investigation of the Aerodynamic Characteristics of a Model Employing a Sailwing Concept Low-speed Static Lateral Stability Characteristics of a Canard Model Having a 60© Triangular Wing and Horizontal Tail* Investigation of the Flight Characteristics of a Model of the HL-10 Manned Lifting Entry Vehicle Trip generation and attraction characteristics in small cities **Aerodynamic Characteristics in Pitch of a 1/7-scale Model of a Two- and Three-stage Rocket Configuration at Mach Numbers of 0.4 to 4.63 Investigation of the Low-subsonic Flight Characteristics of a Model of a Reentry Vehicle with a Thick Flat 75 Degree Swept Delta Wing and a Half-cone Fuselage** *Low-speed Characteristics of a Variable-sweep Supersonic Transport Model with a Blended Engine Fuselage and Engine-mounted Tails Transportation Research Record* **Transonic Longitudinal Aerodynamic Characteristics of a Fighter-type Airplane Model with a Low-aspect-ratio Unswept Wing and Tee-tail** Longitudinal and Lateral Stability Characteristics of Two

Four-jet Vtol Models in the Transition Speed Range *Wind-tunnel Investigation of Aerodynamic Characteristics of a 1/2-scale Model of an Ejection Seat with a Rigid-wing Recovery System Full Equations Utilities (FEQUTL) Model for the Approximation of Hydraulic Characteristics of Open Channels and Control Structures During Unsteady Flow* **Antenna Effects on the Aerodynamic Characteristics of a 0.410-scale Model of the Cajun Rocket at Mach Numbers from 2.30 to 4.63** Vibration Characteristics of Z-ring-stiffened 600 Conical Shell Models of a Planetary Entry Spacecraft

Creating Traffic Models is a challenging task because some of their interactions and system components are difficult to adequately express in a mathematical form. Traffic Flow Theory: Characteristics, Experimental Methods, and Numerical Techniques provide traffic engineers with the necessary methods and techniques for mathematically representing traffic flow. The book begins with a rigorous but easy to understand exposition of traffic flow characteristics including Intelligent Transportation Systems (ITS) and traffic sensing technologies. Includes worked out examples and cases to illustrate concepts, models, and theories Provides modeling and analytical procedures for supporting different aspects of traffic analyses for supporting different flow models Carefully explains the dynamics of traffic flow over time and space It is essential for user-adaptive systems to have information about the user. Without any user information an adaptive system is not able to adapt itself to the user's characteristics and preferences. The required information is stored and managed in form of user models. Thus, a user model represents the system's beliefs of the user. This work starts by giving the reader and overview of available and well-founded user modeling methods,

standards and existing systems. This theoretical excursion into the field of adaptive user modeling systems allows us to come up with a new approach based on a service-oriented architecture. Service-oriented architecture with its main advantages of modularity and flexibility is and ideal candidate to implement as user modeling system as these are exactly the two main characteristics which we are looking for in such a systems. The technical part of this work compares several service-oriented frameworks and finally describes a service-oriented implementation of a user modeling system. "An investigation of the aerodynamic characteristics of a powered semispan tilting-shrouded-propeller configuration has been conducted in the 17-foot test section of the Langley 300-MPH 7- by 10-foot tunnel. The wing had an aspect ratio of 2.67 (based on wing span of 60 inches), a taper ratio of 0.67, and an NACA 2418 airfoil section with a 15-inch-diameter shrouded propeller mounted on the tip. The test results show that large nose-up pitching moments are obtained at transitional speeds of about 40 knots and duct angle of about 70°. Decelerating flight procedures further increases in the nose-up moment. Ground proximity reduces the nose-up pitching moments. The large nose-up moments can be trimmed by use of duct-exit control vanes. The results show that unloading the duct (shroud) by flying at a wing angle of attack of 15° reduces the power required by about 30 percent at 50 knots. Duct-lip stall produces large increases in power required. The results in general show that full-scale aerodynamic simulation can be made with small-scale wind-tunnel models if duct-lip separation at low Reynolds numbers is avoided."--Summary. Identification Modeling and Characteristics of Miniature Rotorcraft introduces an approach to developing a simple and effective linear parameterized model of vehicle dynamics

using the CIFERâ identification tool created by the Army/NASA Rotorcraft Division. It also presents the first application of the advanced control system optimization tool CONDUITâ to systematically and efficiently tune control laws for a model-scale UAV helicopter against multiple and competing dynamic response criteria. Identification Modeling and Characteristics of Miniature Rotorcraft presents the detailed account of how the theory was developed, the experimentation performed, and how the results were used. This book will serve as a basic and illustrative guide for all students that are interested in developing autonomous flying helicopters. A wind-tunnel investigation has been conducted in the Langley full-scale tunnel to determine the static longitudinal and l a t e r a l characteristics of a model of an ejection seat equipped with a rigid-wing recovery system. Several wing and vertical-tail arrangements were tested as well as various configurations of the ejection seat alone, ranging from unfaired to completely faired s e a t s . An investigation has been made of the low-subsonic flight characteristics of a model of the HL-10 manned lifting entry vehicle. This model was tested with two different center fins and with the larger center fin in combination with fin tips. A wind-tunnel investigation was conducted to determine two-dimensional aerodynamic characteristics of nine polygon-shaped models applicable to helicopter fuselages. The models varied from 1/2 to 1/5 scale and were nominally triangular, diamond, and rectangular in shape. Side force and normal force were obtained at increments of angle of flow incidence from -45 deg to 90 deg. The data were compared with results from a baseline UH-60 tail-boom cross- sectional model. The results indicate that the overall shapes of the plots of normal force and side force were similar to the characteristic shape of the baseline data; however, there were important differences in magnitude. At a

flow incidence of 0 deg, larger values of normal force for the polygon models indicate an increase in fuselage down load of 1 to 2.5 percent of main-rotor thrust compared with the baseline value. Also, potential was indicated among some of the configurations to produce high fuselage side forces and yawing moments compared with the baseline model. Now in its Third Edition, Alternative Energy Systems: Design and Analysis with Induction Generators has been renamed Modeling and Analysis with Induction Generators to convey the book's primary objective—to present the fundamentals of and latest advances in the modeling and analysis of induction generators. New to the Third Edition Revised equations and mathematical modeling Addition of solved problems as well as suggested problems at the end of each chapter New modeling and simulation cases Mathematical modeling of the Magnus turbine to be used with induction generators Detailed comparison between the induction generators and their competitors Modeling and Analysis with Induction Generators, Third Edition aids in understanding the process of self-excitation, numerical analysis of stand-alone and multiple induction generators, requirements for optimized laboratory experimentation, application of modern vector control, optimization of power transference, use of doubly fed induction generators, computer-based simulations, and social and economic impacts. Vibration tests were conducted on a 1/24-scale model of the North Fork Dam, a double curvature arch dam, to determine natural frequencies, mode shapes, and damping ratios. The measured results were compared with results calculated using a linear elastic three-dimensional finite element method. The objective of the study was to evaluate the use of physical models and three-dimensional finite element methods for earthquake response predictions. Mode shapes, frequencies, and damping

ratios were determined from vibration tests of the model using two vibrators mounted on the crest of the dam and from tests with a vibrator mounted at the base of the dam on the downstream foundation. The modal analysis of the dam was performed using a three-dimensional finite element computer program, the Structural Analysis Program. The dam was modeled with 110 solid elements and 278 nodes and with the boundary totally fixed at the canyon walls. The reservoir was assumed to exert a static water pressure on the dam. This load, the mass of the vibrators, and an apparent mass based on an approximation by Westergaard to account for the mobilized water were included in the analysis. The Rayleigh-Ritz technique was used to determine mode shapes and frequencies. (Modified author abstract). Aerodynamic characteristics in pitch of scale model of two and three stage rocket configuration at Mach numbers of 0.4 to 4.63. The book focuses on the transient modelling, stability analysis and control of power electronic systems, since these systems face severe safe operation problems the during transient period. It discusses both theoretical analysis and practical applications, highlighting the transient characteristics of converters with different control strategies, and proposes transient modelling and model reduction methods. Furthermore, it classifies the transient stability problems of the system to help the readers gain an understanding of the basic theoretical methods for analysing the power electronic system, at the same time providing sufficient detail to enable engineers to design such systems. Comprehensively describing theoretical analyses, ranging from system modelling and stability analysis to transient control, the book is a valuable resource for researchers, engineers and graduate students in fields of transient modelling, stability analysis and control of power electronic systems. Modeling

and Simulation of Computer Networks and Systems: Methodologies and Applications introduces you to a broad array of modeling and simulation issues related to computer networks and systems. It focuses on the theories, tools, applications and uses of modeling and simulation in order to effectively optimize networks. It describes methodologies for modeling and simulation of new generations of wireless and mobiles networks and cloud and grid computing systems. Drawing upon years of practical experience and using numerous examples and illustrative applications recognized experts in both academia and industry, discuss: Important and emerging topics in computer networks and systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Methodologies, strategies and tools, and strategies needed to build computer networks and systems modeling and simulation from the bottom up Different network performance metrics including, mobility, congestion, quality of service, security and more... Modeling and Simulation of Computer Networks and Systems is a must have resource for network architects, engineers and researchers who want to gain insight into optimizing network performance through the use of modeling and simulation. Discusses important and emerging topics in computer networks and Systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Provides the necessary methodologies, strategies and tools needed to build computer networks and systems modeling and simulation from the bottom up Includes comprehensive review and evaluation of simulation tools and methodologies and different network performance

metrics including mobility, congestion, quality of service, security and more Japanese stock returns are even more closely related to their book-to-market ratios than are their U.S. counterparts, and thus provide a good setting for testing whether the return premia associated with these characteristics arise because the characteristics are proxies for covariance with priced factors. Our tests, which replicate the Daniel and Titman (1997) tests on a Japanese sample, reject the Fama and French (1993) three-factor model but fails to reject the characteristic model. The demands of modeling and computation in engineering are rapidly growing as a multidisciplinary area with connections to engineering, mathematics and computer science. Modeling and Computation in Engineering III contains 45 technical papers from the 3rd International Conference on Modeling and Computation in Engineering (CMCE 2014, 28-29 June 2014, including 2014 Hydraulic Engineering and Environment Workshop, HEEW 2014). The conference serves as a major forum for researchers, engineers and manufacturers to share recent advances, discuss problems, and identify challenges associated with modeling technology, simulation technology and tools, computation methods and their engineering applications. The contributions showcase recent developments in the areas of civil engineering, hydraulic engineering, environmental engineering and systems engineering, and other related fields. The contributions in this book mainly focus on advanced theories and technology related to modeling and computation in civil engineering, hydraulic structures, hydropower and management, coastal reclamation and environmental assessment, flood control, irrigation and drainage, water resources and water treatment, environmental management and sustainability, waste management and environmental protection,

pollution and control, geology and geography, mechanics in engineering, numerical software and applications. Although these papers represent only modest advances toward modeling and computation problems in engineering, some of the technologies might be key factors in the success of future engineering advances. It is expected that this book will stimulate new ideas, methods and applications in ongoing engineering advances. Modeling and Computation in Engineering III will be invaluable to academics and professionals in civil engineering, hydraulic engineering and environmental engineering. Written for database novices and pros alike, this new book helps you strengthen your command of the underlying theory and practical techniques associated with data modeling and design -- and shows you how to better apply these concepts to today's newest database architectures. An investigation has been conducted in the Langley full-scale tunnel to determine the aerodynamic characteristics of a full-scale model employing a sailwing concept and having a wing aspect ratio of 11.5. The wing had a rigid leading-edge spar, rigid root and wing-tip ribs with a trailing-edge stretched between these ribs, and a fabric covering stretched between the leading and trailing edeges. The fabric of the sail maintained a smooth airfoil contour over the installed angle-of-attack range, but some rippling occurred at the trailing edge near the wing root as the wing stalled. The aerodynamic characteristics of the sailwing, in particular the maximum lift and maximum lift-drag ratio, compared favorably with those of conventional hard wings. A lateral-control device based on the wing-warp principle was effective at angles of attack below that for wing stall, but at angles near stall, the control effectiveness became low and nonlinear. This volume of a 2-volume set explores the central facts and ideas of stochastic processes, illustrating their use

in models based on applied and theoretical investigations. Explores stochastic processes, operating characteristics of stochastic systems, and stochastic optimization. Comprehensive in its scope, this graduate-level text emphasizes the practical importance, intellectual stimulation, and mathematical elegance of stochastic models. An experimental investigation of the vibration characteristics of a 60 deg conical shell model of a planetary entry vehicle is described and the results presented. Model configurations include the shell with or without one or two Z-ring stiffeners and with or without a simulated payload. Tests were conducted with the model clamped at the small diameter and with the model suspended at the simulated payload. Additionally, calculated results obtained from application of several analytical procedures reported in the literature are presented together with comparisons between experimental and calculated frequencies and meridional mode shapes. Generally, very good frequency agreement between experimental and calculated results was obtained for all model configurations. For small values of circumferential mode number, however, the frequency agreement decreased as the number of ring stiffeners increased. Overall agreement between experimental and calculated mode shapes was generally good. The calculated modes usually showed much larger curvatures in the vicinity of the rings than were observed in the experimentally measured mode shapes. Dual resonances associated with modal preference were noted for the shell without Z-ring stiffeners, whereas the addition of stiffeners produced resonances for which the model responded in two or more modes over different sections of the shell length.