1. Record Nr. UNINA9910557613503321

Autore	Park Bum Soo
Titolo	Taxonomy and Ecology of Marine Algae
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (218 p.)
Soggetti	Biology, life sciences Research and information: general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The term "algae" refers to a large diversity of unrelated phylogenetic entities, ranging from picoplanktonic cells to macroalgal kelps. Marine algae are an important primary producer in the marine food chain, responsible for the high primary production of coastal areas, providing food resources in situ for many grazing species of gastropods, peracarid crustaceans, sea urchins or fish. Recent findings indicate that marine environments have rapidly changed due to global warming over the past several decades. This change has led to significant variations in marine algal ecology. For example, a long-term increase in ocean temperatures due to global warming has facilitated the intensification of harmful algal blooms, which adversely impact public health, aquatic organisms, and aquaculture industries. Thus, extensive studies have been conducted, but there is still a gap in our understanding of the variation in their ecology in accordance with future marine environmental changes. To fill this gap, studies on the taxonomy and ecology of marine algae are highly necessary. We have invited algologists to submit research articles that enable us to advance our understanding of the taxonomy and ecology of marine algae. Fourteen papers have been collected so far, which cover different aspects of the taxonomy and ecology of marine algae, including understudied species, interspecific comparisons, and new techniques.

2. Record Nr. UNINA9911006606603321

Autore	Etkin Bernard
Titolo	Dynamics of Atmospheric Flight
Pubbl/distr/stampa	Newburyport, : Dover Publications, 2012
ISBN	0-486-14165-9 1-62198-609-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (833 p.)
Collana	Dover Books on Aeronautical Engineering
Disciplina	629.132/3
Soggetti	Aerodynamics Stability of airplanes Flight Mechanical Engineering Engineering & Applied Sciences Aeronautics Engineering & Astronautics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Title Page; Copyright Page; Preface; Table of Contents; CHAPTER I - Introduction; TYPES OF PROBLEMS; THE TOOLS OF FLIGHT DYNAMICISTS; CHAPTER 2 - Analytical tools; 2.1 INTRODUCTION; 2.2 VECTOR/MATRIX ALGEBRA; 2.3 LAPLACE AND FOURIER TRANSFORMS; 2.4 APPLICATION TO DIFFERENTIAL EQUATIONS; 2.5 METHODS FOR THE INVERSE TRANSFORMATION; 2.6 RANDOM PROCESS THEORY; 2.7 MACHINE COMPUTATION; CHAPTER 3 - Systems Theory; 3.1 CONCEPTS AND TERMINOLOGY; 3.2 TRANSFER FUNCTIONS; 3.3 AUTONOMOUS LINEAR/INVARIANT SYSTEMS; 3.4 RESPONSE OF LINEAR/INVARIANT SYSTEMS; 3.5 TIME-VARYING AND NONLINEAR SYSTEMS CHAPTER 4 - Reference frames and transformations4.1 NOTATION; 4.2 DEFINITIONS OF REFERENCE FRAMES USED IN VEHICLE DYNAMICS; 4.3 DEFINITION OF THE ANGLES; 4.4 TRANSFORMATION OF A VECTOR; 4.5 THE L MATRIX IN TERMS OF ROTATION ANGLES; 4.6 TRANSFORMATION OF THE DERIVATIVE OF A VECTOR; 4.7 TRANSFORMATION OF A MATRIX; CHAPTER 5 - General equations of unsteady motion; 5.1 VELOCITY AND ACCELERATION IN AN ARBITRARILY MOVING FRAME; 5.2 ANGULAR VELOCITIES OF THE SEVERAL REFERENCE FRAMES; 5.3

POSITION, VELOCITY, AND ACCELERATION OF THE VEHICLE MASS CENTER; 5.4 EQUATIONS OF MOTION OF AN ARBITRARY SYSTEM
5.5 FORCE EQUATIONS IN WIND AXES5.6 FORCE AND MOMENT EQUATIONS IN BODY AXES (EULER'S EQUATIONS); 5.7 DISCUSSION OF THE SYSTEM OF EQUATIONS; 5.8 THE FLAT-EARTH APPROXIMATION; 5.9 STEADY STATES; 5.10 THE SMALL-DISTURBANCE THEORY; 5.11 EXACT LINEAR AERODYNAMICS AND THE TRANSFORMED EQUATIONS; 5.13 NONDIMENSIONAL EQUATIONS; 5.14 TRANSFORMS OF THE NONDIMENSIONAL EQUATIONS; 5.15 TRANSFORMATION OF AERODYNAMIC DERIVATIVES FROM ONE BODY-FIXED REFERENCE FRAME TO ANOTHER; CHAPTER 6 - Longitudinal aerodynamic characteristics-part 1; 6.1 THE BASIC LONGITUDINAL FORCES
6.2 PITCH STIFFNESS AND POSSIBLE CONFIGURATIONS FOR FLIGHT6.3 PITCH STIFFNESS OF A GENERAL CONFIGURATION; 6.4 LONGITUDINAL CONTROL; 6.5 CONTROL HINGE MOMENT; 6.6 INFLUENCE OF A FREE ELEVATOR ON LIFT AND MOMENT; 6.7 THE USE OF TABS; 6.8 CONTROL FORCE TO TRIM; 6.9 CONTROL FORCE GRADIENT; 6.10 MANEUVERABILITY-ELEVATOR ANGLE AND CONTROL FORCE PER g; CHAPTER 7 - Longitudinal aerodynamic characteristics-part 2; 7.1 BOB WEIGHTS AND SPRINGS; 7.2 INFLUENCE OF HIGH-LIFT DEVICES ON TRIM AND PITCH STIFFNESS; 7.3 INFLUENCE OF THE PROPULSIVE SYSTEM ON TRIM AND PITCH STIFFNESS
7.4 EFFECT OF STRUCTURAL FLEXIBILITY7.5 GROUND EFFECT; 7.6 C.G. LIMITS; 7.7 LONGITUDINAL AERODYNAMIC DERIVATIVES; 7.8 THE V DERIVATIVES; 7.9 THE q DERIVATIVES; 7.10 THE DERIVATIVES; 7.11 AERODYNAMIC TRANSFER FUNCTIONS; 7.12 THE z DERIVATIVES; 7.13 AEROELASTIC DERIVATIVES; 7.14 SUMMARY OF THE FORMULAE; CHAPTER 8 - Lateral aerodynamic characteristics; 8.1 YAW STIFFNESS (WEATHERCOCK STABILITY); 8.2 YAW CONTROL; 8.3 ROLL STIFFNESS; 8.4 ROLLING CONTROL; 8.5 THE DERIVATIVES; 8.6 THE p DERIVATIVES; 8.7 THE r DERIVATIVES; 8.8 SUMMARY OF THE FORMULAE; CHAPTER 9 - Stability of steady flight
9.1 LONGITUDINAL MODES

Sommario/riassunto

Geared toward upper-level undergrads, graduate students, and practicing engineers, this comprehensive treatment of the dynamics of atmospheric flight focuses especially on the stability and control of airplanes. An extensive set of numerical examples covers STOL airplanes, subsonic jet transports, hypersonic flight, stability augmentation, and wind and density gradients.The equations of motion receive a very full treatment, including the effects of the curvature and rotation of the Earth and distortional motion. Complete chapters are given to human pilots and handling qualities and to flight i