

1. Record Nr.	UNINA9910962117603321
Titolo	Applications of circulation control technologies / / edited by Ronald D. Joslin, Gregory S. Jones
Pubbl/distr/stampa	Reston, Va., : American Institute of Aeronautics and Astronautics, c2006
ISBN	1-60086-683-2 1-60086-464-3 1-61583-082-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (425 p.)
Collana	Progress in astronautics and aeronautics ; ; v. 214
Altri autori (Persone)	JoslinR. D <1963-> (Ronald Douglas) JonesGregory S
Disciplina	629.13
Soggetti	Aerodynamics Aerofoils
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	<p>""Cover""; ""Title""; ""Copyright""; ""Foreword""; ""Table of Contents""; ""Preface""; ""Advantages of Combining BLC Suction with Circulation Control High-Lift Generation""; ""Overview of Circulation Control Pneumatic Aerodynamics: Blown Force and Moment Augmentation and Modification as Applied Primarily to Fixed-Wing Aircraft""; ""Exploratory Investigations of Circulation Control Technology: Overview for Period 1987a€?2003 at NSWCCD""; ""Measurement and Analysis of Circulation Control Airfoils""; ""Some Circulation and Separation Control Experiments""</p> <p>""Noise Reduction Through Circulation Control""""Pneumatic Flap Performance for a Two-Dimensional Circulation Control Airfoil""; ""Trailing Edge Circulation Control of an Airfoil at Transonic Mach Numbers""; ""Experimental and Computational Investigation into the Use of the Coanda Effect on the Bell A821201 Airfoil""; ""Novel Flow Control Method for Airfoil Performance Enhancement Using Co-Flow Jet""; ""Experimental Development and Evaluation of Pneumatic Powered-Lift Super-STOL Aircraft""; ""Use of Circulation Control for Flight Control""</p>

""Pneumatic Aerodynamic Technology to Improve Performance and Control of Automotive Vehicles""""Aerodynamic Heat Exchanger: A Novel Approach to Radiator Design Using Circulation Control""; ""Investigation of Turbulent Coanda Wall Jets Using DNS and RANS""; ""RANS and Detached-Eddy Simulation of the NCCR Airfoil""; ""Full Reynolds-Stress Modeling of Circulation Control Airfoils""; ""Aspects of Numerical Simulation of Circulation Control Airfoils""; ""Role of Turbulence Modeling in Flow Prediction of Circulation Control Airfoils"" ""Simulation of Steady Circulation Control for the General Aviation Circulation Control (GACC) Wing""""Computational Study of a Circulation Control Airfoil Using FLUENT""; ""Computational Evaluation of Steady and Pulsed Jet Effects on a Circulation Control Airfoil""; ""Time-Accurate Simulations of Synthetic Jet-Based Flow Control for a Spinning Projectile""; ""Coanda Effect and Circulation Control for Nonaeronautical Applications""; ""Index""; ""Author Index""

Sommario/riassunto

Based on papers from the 2004 NASA/ONR Circulation Control Workshop, this collection is an invaluable, one-of-a-kind resource on the state-of-the-art in circulation control technologies and applications. Filling the information gap between 1986--when the last such symposium was held--and today, it summarizes the applications, experiments, computations, and theories related to circulation control, emphasizing fundamental physics, systems analysis, and applied research. The papers presented cover a wide variety of aerodynamic and hydrodynamic applications including naval vehicles, fixed-wing aviation, V/STOL platforms, propulsion systems, and ground vehicles. Anyone with interests in applied aerodynamics, fluid mechanics, and aircraft design will find this book of particular value, as will those seeking an up-to-date reference work on circulation control and its many applications.
