Record Nr. UNINA9910366609003321 Titolo Advances in Effective Flow Separation Control for Aircraft Drag Reduction: Modeling, Simulations and Experimentations / / edited by Ning Qin, Jacques Periaux, Gabriel Bugeda Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 **ISBN** 3-030-29688-1 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (340 pages) Computational Methods in Applied Sciences, , 1871-3033; ; 52 Collana Disciplina 629.1323 Soggetti Aerospace engineering **Astronautics** Fluid mechanics **Physics** Mathematical optimization Aerospace Technology and Astronautics **Engineering Fluid Dynamics** Numerical and Computational Physics, Simulation Optimization Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia This book presents the results of a European-Chinese collaborative Sommario/riassunto research project, Manipulation of Reynolds Stress for Separation Control and Drag Reduction (MARS), including an analysis and discussion of the effects of a number of active flow control devices on the discrete dynamic components of the turbulent shear layers and Reynolds stress. From an application point of view, it provides a positive and necessary step to control individual structures that are larger in scale and lower in frequency compared to the richness of the temporal and spatial scales in turbulent separated flows.