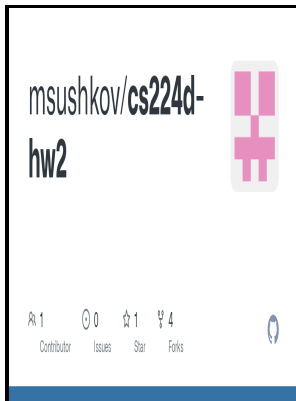


High-lift system aerodynamics - papers presented and discussions recorded at the 71st Fluid Dynamics Panel Meeting and at the Symposium held in Banff, Alberta, Canada, from 5th-8th October 1992.

AGARD - Review on High



Description: -

- High lift systemsHigh-lift system aerodynamics - papers presented and discussions recorded at the 71st Fluid Dynamics Panel Meeting and at the Symposium held in Banff, Alberta, Canada, from 5th-8th October 1992.

- AGARD conference proceedings -- 515High-lift system aerodynamics - papers presented and discussions recorded at the 71st Fluid Dynamics Panel Meeting and at the Symposium held in Banff, Alberta, Canada, from 5th-8th October 1992.

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Review on High

It is based on the coupling of two additional transport equations, one for the so-called laminar kinetic energy LKE and one for a turbulence indicator function, with the Wilcox k-omega model.

High Lift Aerodynamics Research Papers

They have been used to provide time-dependent inlet conditions for unsteady analyses. After a validation of the model for a flat-plate boundary layer, subjected to an adverse pressure gradient, the T106 and T2 cascades, recently tested at the von Karman Institute, are selected as test cases to assess the ability of the model to predict the flow around high-lift cascades in conditions representative of those in low-pressure turbines. A RANS solver is used to guide the redesign process.

Review on High

Details on the role of each model component will be presented and discussed. Generally speaking, low speed tests are usually carried out on airfoils with modified shape, in order to compensate for the effects of compressibility. A particular attention has been devoted to the treatment of crucial boundary conditions like the freestream turbulence intensity and the turbulent length scale.

High Lift Aerodynamics Research Papers

The analysis covers steady as well as unsteady cases characterized by different actuator frequencies. Such cascades T106A, T106C and T108 feature different loading distributions, different suction side diffusion factors, and they are characterized by suction side boundary layer separation

when operated in steady inflow. .

Review on High

These are designed in order to enable manipulation of the lifting force at various moments during flight takeoff, cruising and landing in such a way that the aircraft can increase or decrease the lift-to-drag ratio accordingly. The data evaluated were plots of distributions of C_p vs.

Review on High

A new production term is proposed, based on the mean shear and a laminar eddy-viscosity concept. A detailed comparison between measurements and computations, in terms of blade surface isentropic Mach number distributions and cascade lapse rates will be presented and discussed. Some specific features of wake-induced transition will also be discussed.

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