

IceANS tool: Ice Accretion Numerical Simulation. Code Description

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Keywords: *Ice accretion, Numerical simulation*

The adverse effects of ice accretion in aerodynamic surfaces are widely known and thus, the aerospace industry is working on different approaches to predict the behaviour of the water-ice interface on these surfaces. In this context, the software IceANS (Ice Accretion Numerical Simulation) calculates the amount of water collected by a surface immersed in a fluid flow using a Lagrangian approach, that is, simulating the motion of a huge group of droplets and detecting the impact points in the surface. The nature of the problem favours the use of parallelization techniques which yield to more reliable collection distributions. Moreover, the results from these simulations will be used to determine the change in the shape of an airfoil due to ice accretion and its evolution in time.

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