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Title	Geometry Parameterisation for Flow Control and Natural Laminar Flow
Abstract	<p>For an airliner in cruise, skin friction drag makes up the majority of the drag force which then directly contributes to fuel burn. CO₂ emissions can be reduced by reducing drag, and the most promising method is by promoting laminar flow. This project will investigate methods to allow designers to determine the geometry of the wing based upon parameters to promote laminar flow. Large Eddy Simulation will be used on simple straight swept wings to model the cross-flow instability transition. This will then lead to a set of rules so that the wing geometry can be designed to both a target pressure distribution and velocity profile. Implementation of laminar flow technology has many practical problems and the Research Engineer will, through working with designers at Airbus, also include consideration of systems engineering issues such as cost, volume, structure, anti-icing device and high lift device constraints.</p>