

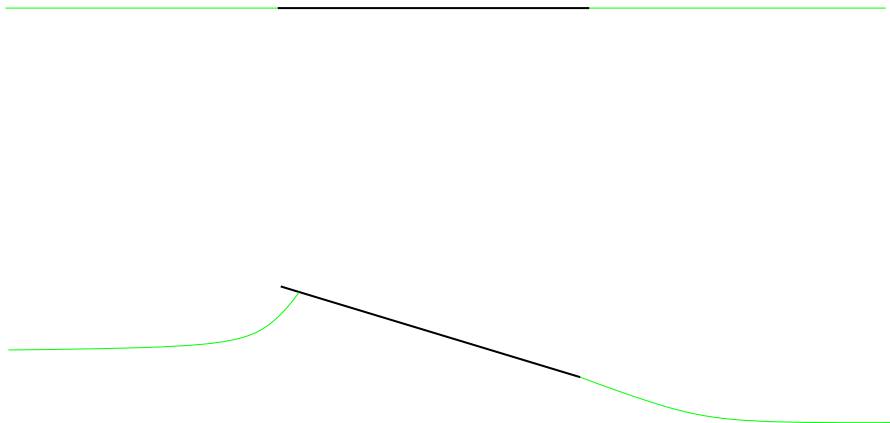
Class V: Introduction to Aerospace Engineering

M. G. Bharath and M. Ramakrishna,
Department of Aerospace Engineering,
Indian Institute of Technology Madras

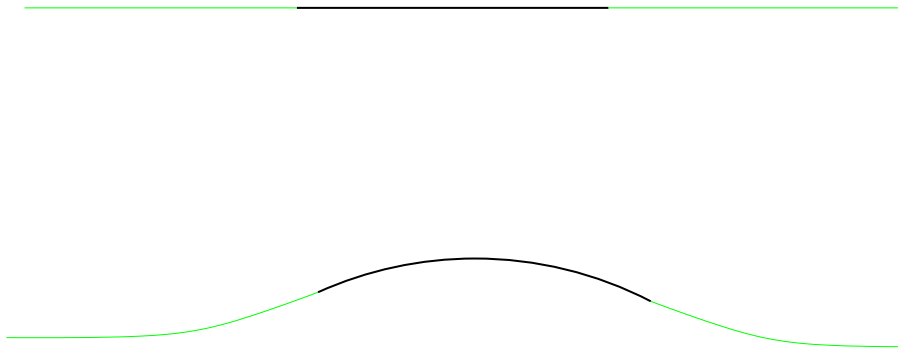
October 8, 2020



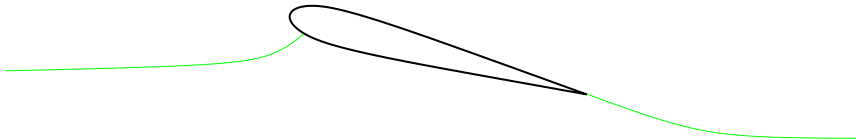
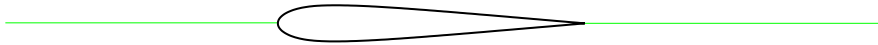
Flat Plate



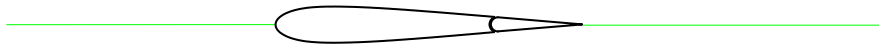
Cambered Plate



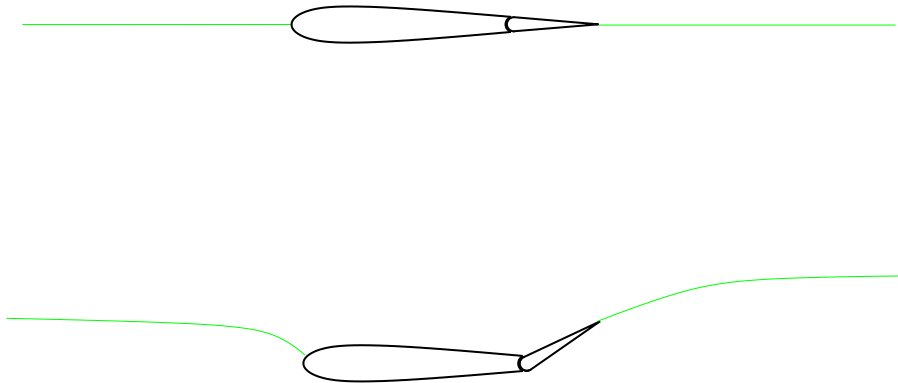
Symmetric Airfoil



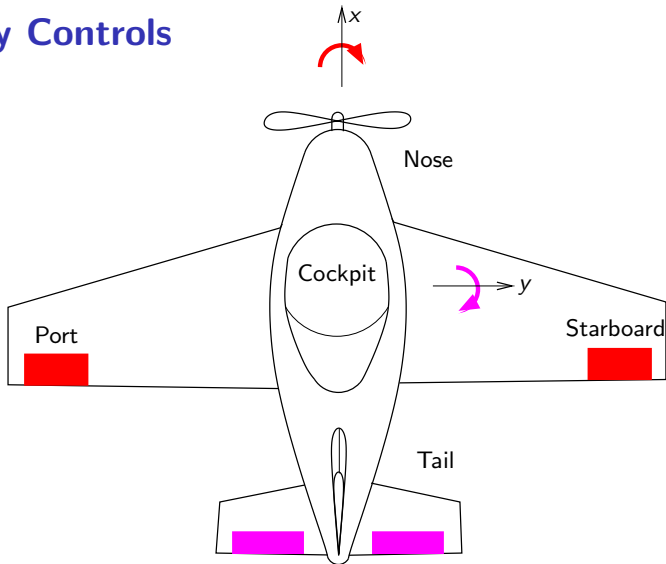
Control Surface Down - Wing Up



Control Surface Up - Wing Down



Primary Controls



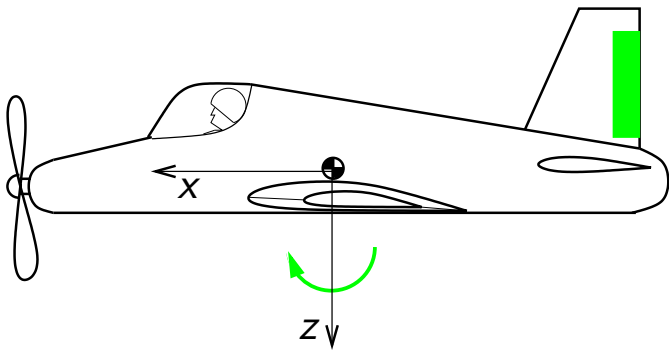
Ailerons - Roll about x

Elevators - Pitch about y

$y > 0$ - Starboard, $y < 0$ - Port

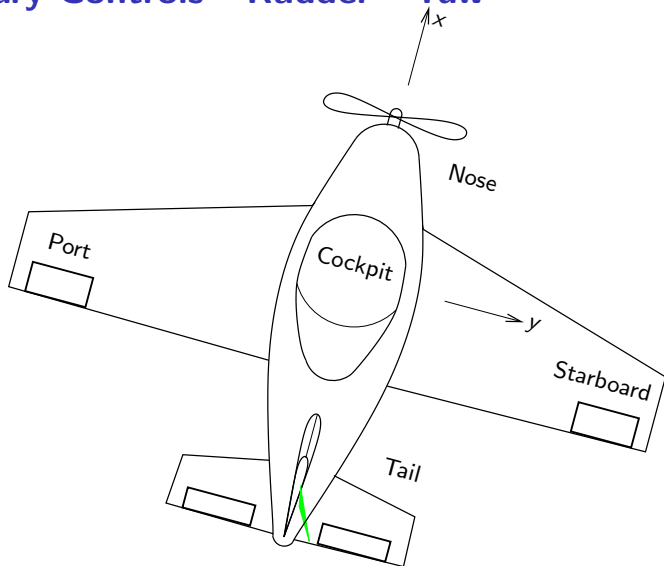
$x > 0$ - Forward, $x < 0$ - Aft

Primary Controls



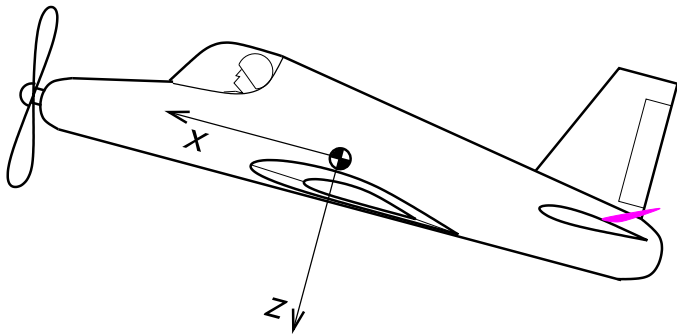
Rudder - Yaw about z

Primary Controls - Rudder - Yaw



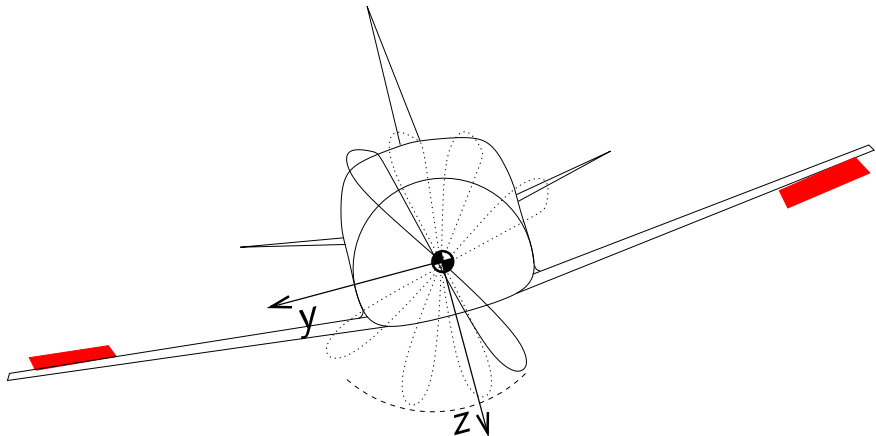
Rudder - Yaw about z

Primary Controls - Elevator - Pitch



Elevator - Pitch about y

Primary Controls - Aileron - Roll



Aileron - Roll about x

