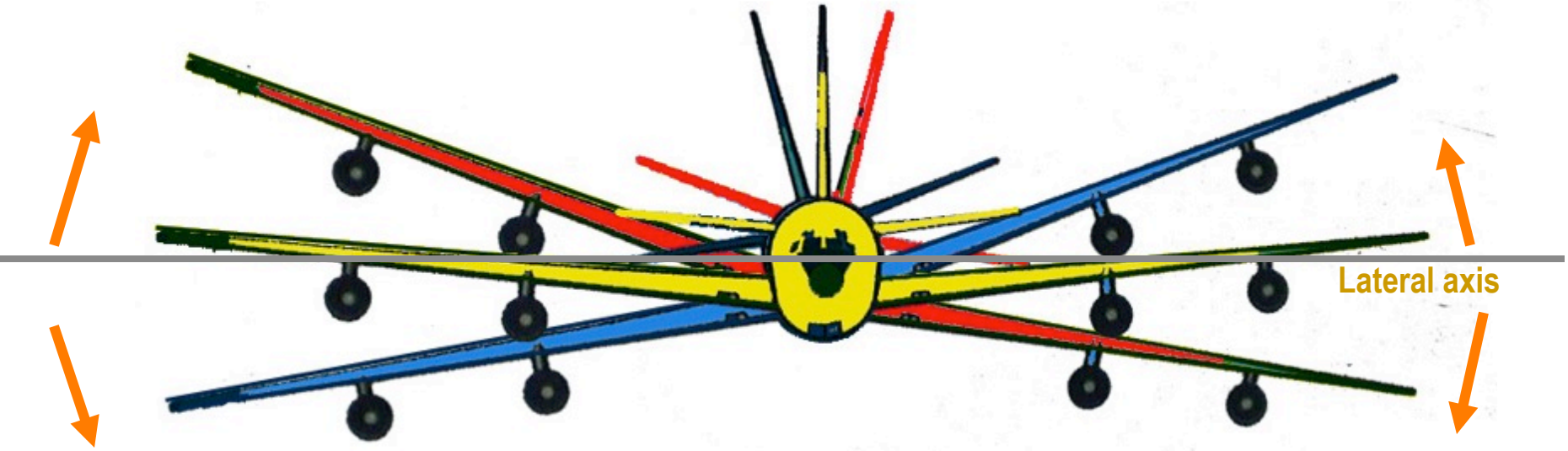
ROLLING- about longitudinal axis



ROLLING

- The clockwise and counterclockwise movement of an aircraft about it’s longitudinal axis is known as rolling.

- The rolling moment of an aircraft is achieved and controlled by the **ailerons**

ROLLING clockwise moment

- When the pilot moves the control wheel to the right, the right aileron moves upward and the left aileron moves downward
- As the air flows around the wings, the air pressure on the upper surface of the up going aileron decreases while the pressure on the lower surface increases.
- This pressure difference causes the right wing to move upwards while same opposite happens on the left wing which causes the left wing to move downwards.
- As a result the aircraft rolls to the right. (clockwise moment)

Prem Mahendranathan

ROLLING Counter-clockwise moment

- When the pilot moves the control wheel to the left, the left aileron moves upward and the right aileron moves downward
- As the air flows around the wings, the air pressure on the upper surface of the up going aileron decreases while the pressure on the lower surface increases.
- This pressure difference causes the left wing to move upwards while same opposite happens on the right wing which causes the right wing to move downwards.
- As a result the aircraft rolls to the left. (counter-clockwise moment)