

STUDENTŲ ĮTRAUKIMO Į MOKSLINĘ VEIKLĄ SKATININAMOJO KONKURSO TEMA

Temos pavadinimas: Research on the flight characteristics of UAV using a embedded sensors network.

Tikslas: To research the change in flight and structural mechanical behaviour of an in-service autonomous aircraft.

Trumpas temos vykdymo aprašymas (ne daugiau kaip 2000 ženklų):

In the active operation of UAV, the high number of flight cycles (take-offs and landings) changes the geometric dimensions of the aircraft.

This research aims at integrating sensors (e.g. MEMS accelerometers and gyroscopes) into critical components of the aircraft, which collect information about the forces exerted by the aircraft components during operation. After processing the collected data, the aim will be to find out:

1. Whether the aircraft components have stressed to critical overloads during operation;
2. Whether the aircraft can still be operated in the foreseeable future without technical intervention in the existing structures;
3. In the event of critical in-flight overloads, can the aircraft be reconfigured and continue to operate with new parameters and new flight characteristics.

Temą siūlantis mokslininkas/dėstytojas: Darius Rudinskas