FULL TEXT IN RUSSIAN
(http://ics.khstu.ru/media/2019/N60_03.pdf)

Informatika i sistemy upravleniya. – 2019. – No. 2(60). – P. 32-47.

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ALGORITHMS OF THE UNMANNED AERIAL VEHICLE SAFE TAKEOFF UNDER THE CONDITIONS OF CROSSWIND GUSTS

We consider alternative algorithms to ensure the safe take-off of an unmanned aerial vehicle of an aircraft type, and also evaluate their effectiveness by computer simulation. To increase the speed and compensate for wind gusts, a piecewise-constant setting action on the inclination angle of the trajectory was proposed, in which the take-off consists of two sections — acceleration at a small initial angle of inclination of the trajectory and subsequent climbing at high speed.
Keywords: unmanned aerial vehicle, takeoff safety, crosswind, maximum rate of climb.

DOI:10.22250/isu.2019.60.32-47

For citation:
Selvesyuk N.I., **Kananadze S.S., Lebedev G.N., Moskalev A.P.** ALGORITHMS OF THE UNMANNED AERIAL VEHICLE SAFE TAKEOFF UNDER THE CONDITIONS OF CROSSWIND GUSTS // Informatika i sistemy upravleniya. – 2019. – No. 2(60). – P. 32-47.