IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

 $International\ Open-Access,\ Double-Blind,\ Peer-Reviewed,\ Refereed,\ Multidisciplinary\ Online\ Journal$

Volume 3, Issue 15, May 2023

RC Flying Bird – Drone Application

Dr. Sanjay L. Kurkute, Aniket Pandore, Alaknanda Ware, Krushna Bhot

Department of Electronics and Telecommunication Engineering.

Pravara Rural Engineering College, Loni, India

Abstract: The objective for this project is to design and implement an flying capable of short distance flight. It is a robot that flies in a manner similar to a bird by generating flapping wing motion. Flying bird (Drone) can be more efficient, cost effective and environmentally friendly in comparison to fixed-wing aircrafts. This flying has been developed by observation of both natural and man-made fliers, as well as previous academic projects. Goals for this project include being capable of maneuvering around and over obstacles by adjusting pitch, yaw, and roll, able to glide for five seconds under its own power, skillful at alternating between flapping and gliding with minimal disruption of flight pattern and being durable enough to withstand impacts with minimal to no damage.

Keywords: Component, Formatting, Style, Styling, Insert

REFERENCES

[1] Sibilski, K., "Dynamics of Micro-Air-Vehicle with Flapping Wings," Acta Polytechna, Vol. 44, No. 2, 2016, pp. 15–21. 6 Isogai, K. and Harino, Y., "Optimum Aeroelastic Design of a Flapping Wing," Journal of Aircraft, Vol. 44, No. 6, 2019, pp.

[2] Rashid, T., The Flight Dynamics of a Full-Scale Ornithopter, Master's thesis, University of Toronto, 2020.

[3] Grauer, J. and Hubbard, J., "Multibody Model of an Ornithopter," Journal of Guidance, Control, and Dynamics, Vol. 32, No. 5, Sep.-Oct. 2009, pp. 1675–1679. 9Bolender, M., "Rigid Multi-Body Equations-of-Motion for Flapping Wing MAVs using Kane's Equations," No. AIAA2009-6158, 2009.

[4] Dietl, J. and Garcia, E., "Stability in Ornithopter Longitudinal Flight Dynamics," Journal of Guidance, Control, and Dynamics, Vol. 31, No. 4, July-August 2008, pp. 1157–1162. 11DeLaurier, J., "An Aerodynamic Model for Flapping Wing flight," The Aeronautical Journal of the Royal Aeronautical Society, No. 1853, April 2020, pp. 125–130.

[5]Roget, B., Sitaraman, J., Harmon, R., Grauer, J., Hubbard, J., and Humbert, S., "Computational Study of Flexible Wing Ornithopter Flight," Journal of Aircraft, Vol. 46, No. 6, Dec 2019.

[6]https://www.ijsrd.com/articles/IJSRDV5I50598.pdf

[7]https://www.igi-global.com/dictionary/control-of-a-wing-type-flat-plate-for-an-ornithopter-autonomous-robot-with-differential-flatness/76719v

DOI: 10.48175/IJARSCT-10934

[8]Kestrel Ornithopter " www.randrmodelaircraft.com/kestrel.htm"

[9]http://en.Wikipedia.org/wiki/micro air vehicle

[10]www.nal.res.in/pdf/MAV.pdf

[11]https://patents.google.com/patent/CN105013190A/en

