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Advanced Topics in Robotics

Automatic lasers for birds control

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❖ Description of the problem:

The aim of this project is to design an autonomous bird deterrent system that is effective in deterring birds from areas such as airports, farms and public buildings.

- Agriculture
- Aviation industry

❖ Common methods of scaring birds:

- ✓ Visual Deterrents
- ✓ Reflectors
- ✓ Radio-Controlled Aircraft
- ✓ Voice
- ✓ Chemical methods
- ✓ light



❖ Solution:

that was developed out of the Netherlands for controlling birds in airports.

It had been adapted to agriculture and used successful in blueberry farms in Europe and America.

How does the technology work?



❖ References:

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- [2] Elbers, Armin RW, and José L. Gonzales. "Efficacy of an automated laser for reducing wild bird visits to the free range area of a poultry farm." *Scientific Reports* 11.1 (2021): 12779.
- [3] Elbers, Armin, and Jose Gonzales. "Efficacy of using a laser device to reduce wild (water) birds visits to the free-range area of a layer farm situated in an avian influenza hotspot-region in the Netherlands." (2021).
- [4] Clarke, Timothy Lewis. "An autonomous bird deterrent system." (2004): 1-97.
- [5] Blackwell, Bradley F., Glen E. Bernhardt, and Richard A. Dolbeer. "Lasers as nonlethal avian repellents." *The Journal of Wildlife Management* (2002): 250-258.