



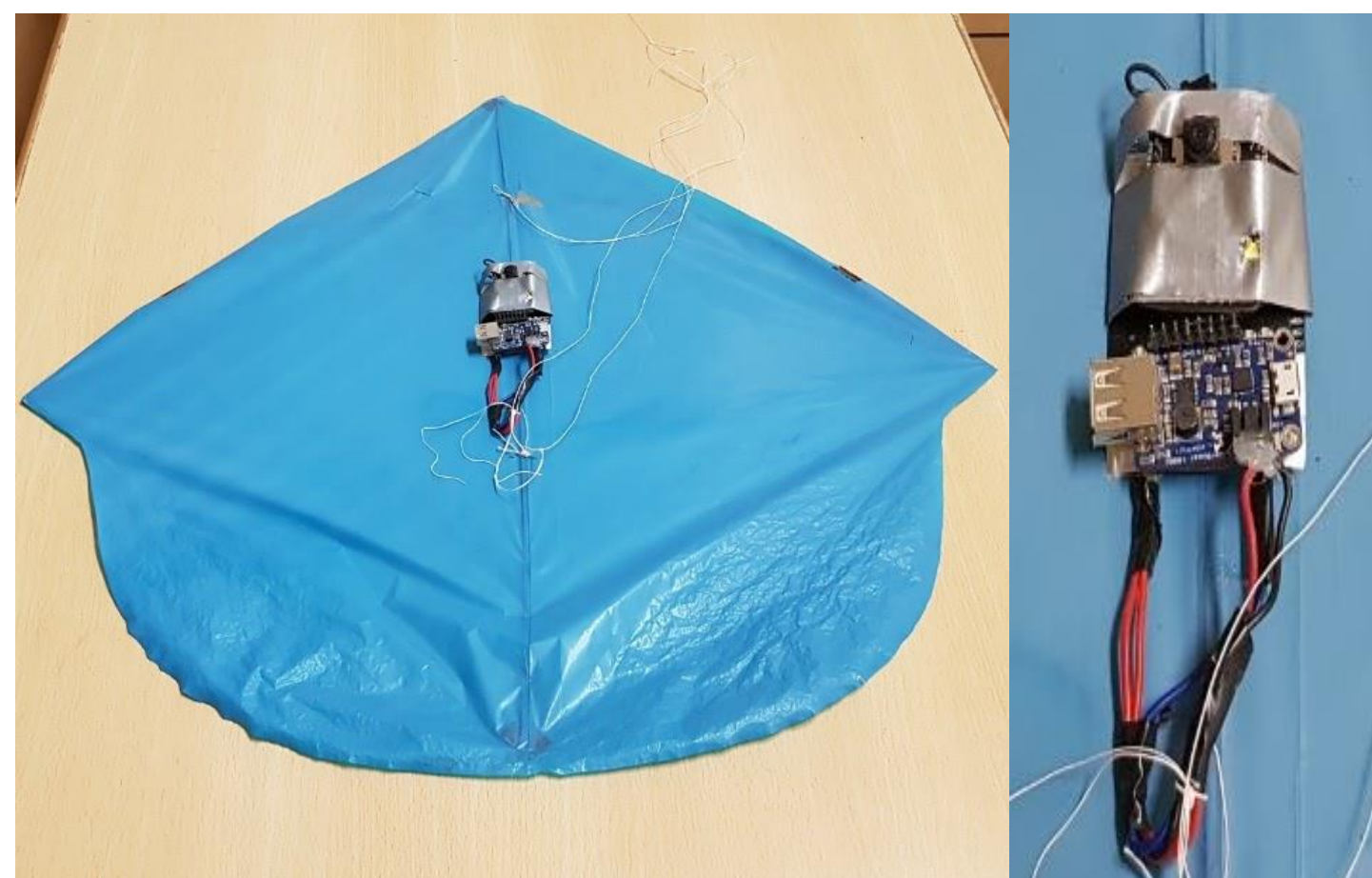
KiteCam – a novel approach to low-cost aerial surveillance

Introduction

- Aerial surveillance is one of the most powerful tools for any organization for combating issues ranging from border security to disaster relief planning.
- The present surveillance architecture relies heavily on UAVs which are energy taxing as well as limited in flight duration and prone to security issues.
- Another recently popular architecture is the Kite Aerial Photography which uses large kites to lift a heavy camera module hanging from the kite-thread.
- KiteCam is the proposed alternative that nullifies the energy and cost issues of drone as well as specificity and oscillation issues of KAP to provide a prolonged local aerial surveillance.

System Design

- The KiteCam setup consists of a kite, a small camera module, lightweight lithium polymer batteries and a power management module.
- The total setup weighs around 42 g and can be used on any common quality kite. The module is placed on kite at an optimum position to ensure maximum stability for the camera.



Captured Images



Publication

- A. Navnit, D. Devendra, A. Tiwari and A. M. Hussain, "KiteCam – a novel approach to low-cost aerial surveillance," 2020 IEEE SENSORS, Rotterdam, Netherlands, 2020, pp. 1-4.