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Electrical and Computer Engineering

**Master Oral Defense**

Project Title: A Quadcopter based Auto-Cameraman

Presenter: Dilip Raj

Date and Time: 9th Dec 2020, 09:00 am

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Committee Chair: Dr. Xiaorong Zhang

Committee Member: Dr. Hao Jiang

**ABSTRACT**

A quadcopter is a multirotor helicopter that is lifted and propelled by four motors. They have been used in a wide variety of applications such as military and law enforcements, photography, drone delivery and other humanitarian operations. Journalism is another field where a self-driven drone can be used to reduce the manpower needed for reporting. A quadcopter drone with an onboard microprocessor can be used to perform all the functionalities of a cameraman. These drones can be used to report events such as floods, protests, and wars without any casualties. This project investigated the feasibility of using a quadcopter with an onboard processor, a camera, and a Wi-Fi module to transmit streamlined video from the drone to a server. An Arduino-based flight controller was developed, which communicates with a Raspberry Pi computer collecting and transmitting camera data.