

RESEARCH STUDENT SEMINAR

Friday 18 October 2019
12:00 – 13:00

**SEERC Conference Room,
Proxenou Koromila Building**

“EFFICIENT CONTROL OF DRONES COMMUNICATIONS IN IOT”

By

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ABSTRACT

The Internet of Things (IoT) constitutes a breakthrough environment in the area of computing and networking nowadays, offering vast potential towards the improvement of diverse human activities. The core concept lies in the seamless integration of an assortment of objects that act as smart devices into existing networks, allowing the embedment of information from diverse communication systems in the environment. In a sense, the Internet of Things incites a vision of the Internet escaping the digital world, embracing reality and becoming an active part of everyday life. In the direction of this ever-growing vision of an Internet of Things, new classes of smart objects are finding their way inside the grand architecture. Unmanned Aerial Vehicles (UAVs), also referred to as drones, are expected to enter the grand scheme of the Internet of Things, as a special type of aerial device, leading to a significant number of IoT applications. The use of several drones organized in swarms, while forming aerial networks inside the Internet of Things, can offer novel solutions in various areas, such as agriculture, environment inspection, disaster detection, search and rescue operations, infrastructure maintenance, et al. Efficient communications in such networks pose many challenges and are considered a relatively understudied area. The key issues in such an endeavor include ensuring efficient interconnectivity, increasing power conservation, providing enhanced self-organising features, while offering the required Quality of Service (QoS) and ensuring network persistence. This research aspires to devise sophisticated networking techniques to address these challenges, with key focus in providing efficient routing mechanisms and deployment approaches in drone networks inside the IoT architecture and offering novel contributions in the form of robust communication protocols.

The seminar series is open to all members of *staff and students* of CITY and to any *externals* that wish to attend.