

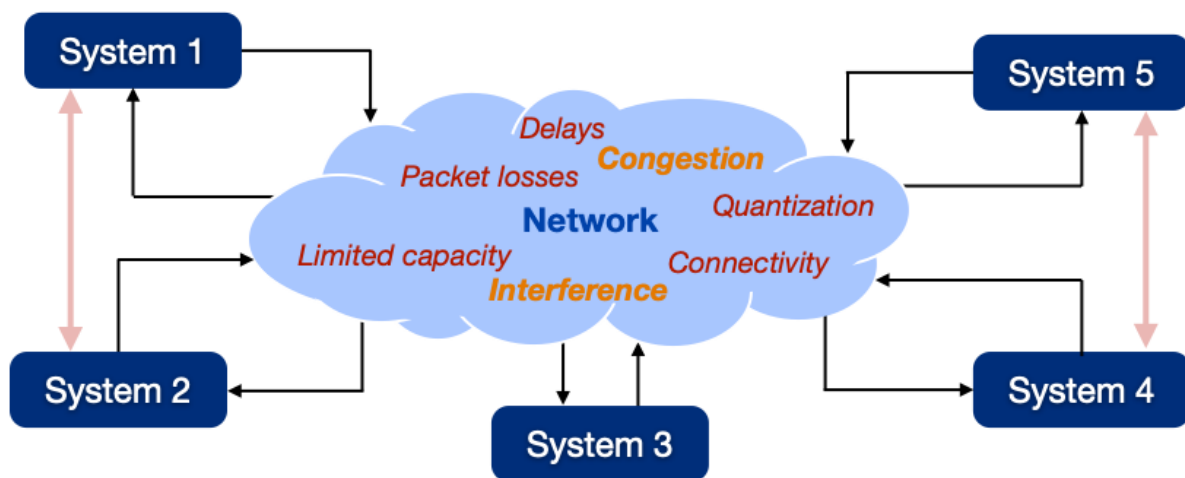
# Age of Information in Networked Control Systems

*Bachelor / Master thesis*

**Supervisor:** Prof Themistoklis Charalambous

## **Description:**

Timeliness of information is critical for accurate decision making in networked control systems. In this project, we will consider age of information (Aoi) in control systems, where independent control loops share a wireless network. More specifically, we will explore the relation between Aoi and stability of the loop. Alongside, deriving expressions for Aoi under practical considerations, more related to new trends as 5G/6G is also of interest.



**Keywords:** Age of Information, networked control systems, stability conditions.

## **Deliverables:**

- A thesis in which the current state-of-the-art is briefly described, some methods are implemented and compared, and possibly a new approach is proposed.

**Work type:** 20% literature review, 20% simulations, 60% theoretical analysis

**Tools:** MATLAB

## **References:**

[1] Juan P. Mena, Felipe Núñez, "Age of information in IoT-based networked control systems: A MAC perspective," *Automatica*, Volume 147, 2023.