Abstract for Amaldi conference

WaveFier: A **prototype** for real time transient signals classifier

Elena Cuoco et al.

Most of the data collected by Gravitational Wave (GW) interferometers are essentially background noise containing many short transient signals, which has to be analyzed in a fast and efficient way to increase the detection confidence and to obtain information about likely noise sources.

For this reason, characterizing the noise transient signals (glitches) is an important task to reduce the impact of transient noise on the detectors.

We propose a prototype pipeline for the transient analysis of Virgo interferometer data. It is based on a wavelet decomposition of the signals for the detection of transient signals. The detected signals will be classified in real time using unsupervised and supervised methods. We tested the pipeline on real Virgo data.

In addition, we tested the pipeline on Kubernets environment, using Kafka technology for a stream to stream approach.