**HuGCDN2014 database**

The HuGCDN2014 database was provided by the sleep unit of the Dr. Negrín University Hospital (Canary Islands, Spain). It is made up of 77 single-lead ECG recordings, digitized at 200 Hz. The labeling process was performed by an expert based on the simultaneous polysomnography, indicating the presence or absence of apnea in each minute. The database is divided into two groups: 1º) CONTROL: Forty healthy subjects with an AHI lower than 5 (30 men and 10 women). 2º) APNEA: Thirty-seven OSA patients with an AHI higher than 25 (30 men and 7 women). The learning set (L) consists of the first 20 recordings of control subjects and the first 18 OSA patients. The rest belong to the test set (T).

The single-lead ECG signal is divided into 5-minute frames, that are shifted in time in increments of 1 minute. The scoring for each segment is assigned to the minute located in the middle position. The RR interval series is constructed as a sequence of time differences between the successive heartbeats.