(28)Signal Processing of ECG Using Matlab

1. **Preprocessing: Filtering & Segmentation**

The butterworth IIR filter and FIR type1 filters are applied on the ECG signal

1. **Feature Extraction**
2. **Classification & Classifier**
3. **Accuracy**
4. **Two Leads or One Lead ? In case of two leads .. how classification of two leads is merged to have final decision ?**

1.1. The ECG Leads Two electrodes placed over different areas of the heart and connected to the galvanometer will pick up the electrical currents resulting from the potential difference between them. For example, if under one electrode a wave of 1 mV and under the second electrode a wave of 0.2 mV occur at the same time, then the two electrodes will record the difference between them, Le. a wave of 0.8 mV. The resulting tracing of voltage difference at any two sites due to electrical activity of the heart is called a "LEAD" (Figs1.1 (a) - (d).)

1. **Classes**