

(c) means for storing a data processing routine, said data processing routine for analyzing said digitized electrophysiological signals, said routine comprised of a set of application parameters associated with biological data correlating with biological anomalies, said routine capable of processing said digitized electrophysiological signals into signals detecting and predicting the onset of said biological anomalies, wherein said routine comprises:

$$PD2i \sim \log C(n,r,nref^*) / \log r,$$

where ~ means scales as, C is the correlation integral for PD2i, in which n equals the data length, r equals the scaling range, and nref* equals a location of the reference vector for estimating the scaling region slope of log C/log r in a restricted small log-r range that is devoid of the effects of nonstationary data.

2. The system of claim 1, wherein said electrophysiological signals are ECG signals and said digitized electrophysiological signals are further reduced prior to processing to predict the onset of cardiac arrhythmias.

3. The system of claim 1, wherein said electrophysiological signals are ECG signals and said digitized electrophysiological signals are further reduced prior to processing to measure the severity of myocardial ischemia.

4. The system of claim 1, wherein said electrophysiological signals are EEG signals and said digitized electrophysiological signals are further reduced prior to processing to predict the onset of cerebral epileptic seizure.

5. A method of detecting and predicting biological anomalies, comprising the steps of:

- (a) inputting electrophysiological signals;
- (b) amplifying and digitizing said electrophysiological signals;
- (c) analyzing said digitized electrophysiological signals using a data processing routine comprised of a set of application parameters associated with biological data correlating with said biological anomalies, wherein said data processing routine for analyzing said digitized electrophysiological signals, comprises:

$$PD2i \sim \log C(n,r,nref^*) / \log r,$$

where ~ means scales as, C is the correlation integral for PD2i, in which n equals the data length, r equals the scaling range, and nref* equals a location of the reference vector for estimating the scaling region slope of log C/log r in a restricted small log-r range that is devoid of the effects of nonstationary data; and

(d) processing said digitized electrophysiological signals into signals detecting and predicting the onset of said biological anomalies.

6. The method of claim 5, wherein said electrophysiological signals are ECG signals and said digitized electrophysiological signals are further reduced prior to processing to predict the onset of cardiac arrhythmias.

7. The method of claim 5, wherein said electrophysiological signals are MEG signals and said digitized electrophysiological signals are further reduced prior to processing to predict the onset of cerebral epileptic seizure.

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