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Testing The Heart Rate Coherence Function For Detecting And Identifying Atrial Fibrillation

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Today, one of the main directions in the diagnosis of the heart is the study of long-term registrations and analysis of statistical data of cardintervals (RR-intervals) and amplitudes of various sections of the ECG. However, the processing of a complete cardiogram in real time and its transfer for analysis using wireless communication lines is quite problematic due to the large data volume and high requirements for the processing power of the processing system.

The article proposed the method of using coherence functions for a sequence of RR intervals, which make it possible with high accuracy to determine the onset of atrial fibrillation. This type of heart disease is one of the potentially lethal and its occurs mostly hidden. However, atrial fibrillation increases the risk of stroke by 6-8 times. This method does not require the exchange of large amounts of data and can be used in wearable cardiomonitors devices.