In cardiology a number of various diagnostic approaches are established in order to measure and to characterize the autonomous cardiovascular function. Cardiological applications are high risk stratification after survived sudden cardiac death, therapy optimization, but for a short time control and optimization algorithms for pacemakers and intraoperative and intensive care monitoring.

The presentation shows a number of new cardiovascular measurement technologies, particularly contactless ones, to measure suitable biosignals in daily life. Additionally, established and new algorithmical approaches are presented. These methods might be suitable to analyze ergometrical or mental stress, trauma and sudden events. The introduced approaches demonstrate an innovative approach to extend the diagnostic information out of the clinic.
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