

Development of a ubiquitous healthcare monitoring system combined with non-conscious and ambulatory physiological measurements and its application to medical care

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The demand for ubiquitous healthcare monitoring has been increasingly raised for prevention of lifestyle-related diseases, acute life support or chronic therapies for inpatients and/or outpatients having chronic disorder and home medical care. From these view points, we developed a non-conscious healthcare monitoring system without any attachment of biological sensors and operations of devices, and an ambulatory postural changes and activities monitoring system. Furthermore in this study, in order to investigate those applicability to the ubiquitous healthcare monitoring, we have developed a new healthcare monitoring system combined with the non-conscious and the ambulatory measurements developed by us. In patients with chronic cardiovascular disease or stroke, the daily health conditions such as pulse, respiration, activities and so on, could be continuously measured in the hospital, the rehabilitation room and

subject's own home, using the present system. The results demonstrated that the system appears useful for the ubiquitous healthcare monitoring not only at medical facility, but also during daily living at home. c 2011 IEEE.

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