CONDUCTIVE FABRIC BASED SYSTEM AND METHOD FOR SENSING OR MONITORING PHYSIOLOGIC PARAMETERS

Abstract

A conductive fabric based physiologic parameter sensing system includes at least two conductive fabric electrodes capacitively couplable to a portion of a subject's body, and which are coupled to a sensing interface unit. The sensing interface unit can selectively couple a conductive fabric electrode to an excitation source (e.g., a Wien bridge oscillator) configured to provide a time-varying subject-extrinsic electric field or signal in accordance with an active sensing configuration; or electrically isolate the conductive fabric electrodes from the excitation source in accordance with a passive sensing configuration. In an active sensing configuration, a given electrode (or electrodes) applies the subject-extrinsic signal to the portion of the subject's body, and another electrode (or electrodes) detects a response electric field corresponding to a manner in which the portion of the subject's body affects the applied field. In a passive sensing configuration, electrode pairs detect electric signals that are intrinsically generated by the portion of the subject's body. The system can analyze sampled data values, and generate corresponding physiologic parameter values, a physiologic parameter waveform, and/or subject status information, a notification, or an alert. The system can additionally present (e.g., display) or communicate (e.g., over a network) subject-related information, signals, or data corresponding to a fluid state, a breathing related parameter, a motion related parameter, and/or a cardiac parameter of the subject.