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(57) Abstract :
The present disclosure introduces wearable belt system for remote patient monitoring using bio-impedance techniques 100, designed to enable remote and real-time physiological data acquisition using bio-impedance-based Electrical Impedance Tomography (EIT). The system comprises electrodes 102 to capture bio-impedance signals, securely housed in a wearable belt 104 that ensures optimal placement. A graphical user interface 106 provides real-time visualization of functional images, graphs, and system information, while internal storage 108 saves raw and processed data for daily and long-term monitoring. Wireless communication module 110 transmits real-time or stored data to external systems, and USB port 112 facilitates physical data transfer for offline analysis. A custom algorithm for morphological and functional analysis 114 processes the bio-impedance signals to generate meaningful insights. The system operates with a power supply 116, supporting portable and standalone functionality. Reference Fig 1

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