W.I.N.I.T.S. (Wireless Interconnected Non-Invasive Triage System)

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W.I.N.I.T.S targets the global issue of triage in mass casualty incidents. Currently, during hospital response, first responders have to manually assess patients by recording information on paper tags. Paramedics can only access outdated assessments made by responders via radio communication. Hospital team members are unprepared for the incoming casualties until they actually arrive. Current vital signs monitoring systems require the use of blood pressure cuffs and ECG leads, which aren't suitable for continuous vital signs monitoring of patients. Bulky sensors attached around patients' bodies reduce portability and accessibility of the system. W.I.N.I.T.S is a novel vital-signs monitoring system designed to increase the efficiency of hospital response to mass casualty incidents, by providing wirelessly accessible, real-time vital signs information to first-responders, paramedics and hospital team members. It is based off a novel, wearable biomedical finger sensor, W.I.N.I.T Sensor. This device can continuously and non-invasively measure cuffless blood pressure, heart rate, SpO2 (blood oxygen saturation), and body temperature of the patients. These vital signs are communicated to an online dashboard system. Vital signs are also available on the sensor OLED screens. The wirelessly accessible, continuous vital-signs data helps to prepare doctors and medical staff in hospitals, allowing patients to receive fast and efficient treatments. The applications of W.I.N.I.T.S extend beyond hospitals and disaster sites, increasing the feasibility of home health care for chronically ill patients. It can also provide an efficient way to keep track of the older persons in long-term care facilities and increase the efficiency of family doctor's waiting rooms.

Awards Won:

Second Award of $2,000