

## AN EMBEDDED WIRELESS SYSTEM FOR ESTIMATING THE EXPOSITION RISK IN FIRST EMERGENCY MANAGEMENT

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**Abstract:** In this paper we propose the design of a wearable embedded system<sup>1</sup> for wirelessly delimiting a hazardous area during emergency, alerting the rescue operators when entering in it and measuring the consequent exposition time. (The dangerous area is previously identified, e.g., through suitable instrumentation). The suggested approach, which is identically effective in indoor and outdoor environments, significantly extends existing solutions by not requiring any absolute position information for delimiting the hazardous area or fixed infrastructure as requested instead by GPS and UWB solutions. The proposed low-power system can be easily retrieved after use and ready to be deployed in a new environment.