

WIRED: Wearable Integrated Radar to Ensure Distancing

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The wide spread of the COVID-19 pandemic was mainly caused by infected patients. More specifically, asymptomatic patients spread the virus without even realizing that they are carriers. To that extent, maintaining social distancing is a fundamental parameter to control the spread of this virus and limit the number of infected people. In this research effort, a smart and safe electromagnetic based solution, which can be embedded within personal clothing, is proposed to minimize the spread of the virus. The proposed solution “WIRED: Wearable Integrated Radar to Ensure Distancing” relies on the use of phased array radar technology to control a safe distance between people in various public environments such as classrooms, study library spaces, open office spaces, malls. Such solution is envisioned to be adopted by relying on flexible wearable radio frequency (RF) electronics operating within the millimeter wave span of frequencies for a higher accuracy. The complete RF circuitry will be integrated within a circular belt that is worn by the users over or under their clothes.