

**Title:** Rollover V2X Soft Antenna for Vehicular Safety

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**Abstract:**

Vehicle-2-Everything (V2X) technology can make roads safer by allowing vehicles to communicate with each other. The goal of V2X is to reduce accidents where there is not a line-of-sight of the other vehicle, such as at intersections, in harsh driving conditions, and around curves. Considering that the antenna for V2X will be mounted on the roof, how then should a turned over vehicle communicate reliably with other vehicles if another antenna doesn't also exist on the bottom of the vehicle? We explore using soft-robotics for deploying a spare antenna from under the vehicle. Experiments show that when the antenna is in a roll-over environment that packet reception rate is low, compared to normal operation.