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S.Caizzzone, G. Marrocco

Sensing of Deformations Through Grids of Antennas

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This contribution explores the possibility to monitor structural deformations by means of grids of antennas. Deformations, occurring in engineering structures due to unexpected loading conditions and to ageing, may lead to potentially dangerous events. By engineering the electromagnetic interaction among the elements of a grid of UHF Radiofrequency Identification (RFID) tags, it is possible to extract various measureable indicators useful to track the local as well the overall deformation of the body on which the antennas are attached on, and hence to monitor the "health" of sensitive structures.

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Ключевые слова:

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