



The Big Boom of Automotive and Industrial Radar

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Deadline for manuscript
submissions:

closed (16 November 2023)

Message from the Guest Editor

As early as 1970, the first scientific papers regarding "nonlinear radar", also referred to as nonlinear junction detection, were published. In later years, the term harmonic radar (HR) became established. HR differs from standard radar in its inherent clutter rejection, at the cost of being a cooperative system. Active non-linear elements and tags can be used to negate the inherent higher path losses of HR. A large number of complex transmission paths can be measured over a large bandwidth with an HR and selectable tags, which enables lower-complexity pseudo-MIMO imaging and material control platforms than classical MIMO. Wearable HR tags could allow a much higher level of human safety in spaces shared with autonomous or classical vehicles, similar to optical retroreflectors.

This Special Issue is intended to spread the word about the exponentially increasing advances in HR technology. This includes, but is not limited to, TX chain linearity and filtering improvements, modelling and analysis of nonlinearities using mixed-frequency S-parameters or X-parameters, tag and antenna design, signal processing and HR-system architectures.





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Message from the Editor-in-Chief

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