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Synthesis of Realistic Bistatic Range Profiles

Due to the increasing spread of small unmanned aircraft systems, a growing demand for radar based localization and identification of small objects is present. This contribution describes a framework for synthesis of realistic bistatic radar range profiles using measured fully polarimetric wideband radar cross-sections, taking into account geometry as well as measurement system aspects. The framework replaces expensive and time consuming field tests and enables the evaluation of radar systems and algorithms.

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