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Robust Minimum Dispersion Distortionless Response Beamforming
against Fast-moving Interferences

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Highlights

- The concept of Minimum Power is exploited to cancel the contributions of fast-moving interferences from the output of Minimum Dispersion Distortionless Response (MDDR), which improves the robustness of MDDR beamformer in complex environments.
- The proposed robust MDDR beamformer enables the deeper nulls for fixed interferences over those Minimum Variance-based beamforming approaches. This would highlight the proposed beamforming approach among those existing beamforming methods in engineering applications.
- Eigendecomposition is applied to relax the quadratic optimization problem to its counterpart with a linear constraint, which makes the development of an efficient algorithm available.
- Furthermore, the computational complexity is analysed.

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