Maximally Economic Sparse Arrays and Cantor Arrays

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Main Contributions
- New design for symmetric arrays with hole-free difference coarrays.
- The essentialness property and maximally economic sparse arrays.
- (Fractal) Cantor arrays: New definition, the difference coarray, and maximal economy.

Direction-of-Arrival Estimation

The Data Model

Symmetric Arrays
- Advantages: Simplified array design, implementation, and calibration, DOA estimators.

Theorem: New Design for Symmetric Arrays with Hole-Free D
(a) Minimum redundancy array, 9 elements
(b) The reversed version of (a), 9 elements
(c) The union of (a) and (b), 16 elements
(d) Remove 4 and 25 from (c), 14 elements

Array (1) is less expensive than array (c)

References