



# Research Letters in Communications

[About this Journal](#) [Submit a Manuscript](#) [Table of Contents](#)



## Journal Menu

- [Abstracting and Indexing](#)
- [Aims and Scope](#)
- [Article Processing Charges](#)
- [Articles in Press](#)
- [Author Guidelines](#)
- [Bibliographic Information](#)
- [Contact Information](#)
- [Conference Sponsorships](#)
- [Editorial Board](#)
- [Editorial Workflow](#)
- [Reviewers Acknowledgment](#)
- [Subscription Information](#)

[Call for Proposals for Special Issues](#)

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- [Abstract](#)
- [Full-Text PDF](#)
- [Linked References](#)
- [How to Cite this Article](#)

## Research Letter

### On the MMSE Criterion for Space-Time Coded Signaling in the Presence of Unknown Interference

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## Abstract

The primary goal of this letter is to provide comparative assessments to the two cases where different criteria are used in joint over antenna minimum mean squared error (JA-MMSE) spatial filtering for space-time coded systems in the presence of unknown interference. It is shown that additional constraints to preserve the space-time coded signal structure in JA-MMSE spatial filtering place floor in bit error rate (BER) performance, while imposing no additional constraint places no error floor.