



# Closed Form Secrecy Capacity of MIMO Wiretap Channels with Two Transmit Antennas

Jiangyuan Li, Athina Petropulu

(Submitted on 27 Jul 2011)

A Gaussian multiple-input multiple-output (MIMO) wiretap channel model is considered. The input is a two-antenna transmitter, while the outputs are the legitimate receiver and an eavesdropper, both equipped with multiple antennas. All channels are assumed to be known. The problem of obtaining the optimal input covariance matrix that achieves secrecy capacity subject to a power constraint is addressed, and a closed-form expression for the secrecy capacity is obtained.

Comments: 1 figure

Subjects: **Information Theory (cs.IT)**

Cite as: **arXiv:1107.5541 [cs.IT]**

(or **arXiv:1107.5541v1 [cs.IT]** for this version)

## Submission history

From: Jiangyuan Li [[view email](#)]

[v1] Wed, 27 Jul 2011 17:09:39 GMT (61kb)

[Which authors of this paper are endorsers?](#)

Link back to: [arXiv](#), [form interface](#), [contact](#).

## Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

cs.IT

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[cs](#)

[math](#)

## References & Citations

- [NASA ADS](#)

## DBLP - CS Bibliography

[listing](#) | [bibtex](#)

[Jiangyuan Li](#)

[Athina P. Petropulu](#)

## Bookmark (what is this?)

