



# Achievable Secrecy Sum-Rate in a Fading MAC-WT with Power Control and without CSI of Eavesdropper

Shahid M. Shah, Vireshwar Kumar, Vinod Sharma

(Submitted on 26 Jul 2011 (v1), last revised 17 Oct 2011 (this version, v2))

We consider a two user fading Multiple Access Channel with a wire-tapper (MAC-WT) where the transmitter has the channel state information (CSI) to the intended receiver but not to the eavesdropper (eve). We provide an achievable secrecy sum-rate with optimal power control. We next provide a secrecy sum-rate with optimal power control and cooperative jamming (CJ). We then study an achievable secrecy sum rate by employing an ON/OFF power control scheme which is more easily computable. We also employ CJ over this power control scheme. Results show that CJ boosts the secrecy sum-rate significantly even if we do not know the CSI of the eve's channel. At high SNR, the secrecy sum-rate (with CJ) without CSI of the eve exceeds the secrecy sum-rate (without CJ) with full CSI of the eve.

Comments: 5 pages, 1 figure, Conference version

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

Cite as: **arXiv:1107.5123v2 [cs.IT]**

## Submission history

From: Shahid Shah [[view email](#)]

[v1] Tue, 26 Jul 2011 06:11:30 GMT (14kb)

[v2] Mon, 17 Oct 2011 09:11:44 GMT (15kb)

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