



# Efficient Online Learning via Randomized Rounding

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(Submitted on 13 Jun 2011 (v1), last revised 24 Nov 2011 (this version, v3))

Most online algorithms used in machine learning today are based on variants of mirror descent or follow-the-leader. In this paper, we present an online algorithm based on a completely different approach, which combines "random playout" and randomized rounding of loss subgradients. As an application of our approach, we provide the first computationally efficient online algorithm for collaborative filtering with trace-norm constrained matrices. As a second application, we solve an open question linking batch learning and transductive online learning.

Comments: Fixed some typos in the NIPS 2011 conference version

Subjects: **Learning (cs.LG)**; Machine Learning (stat.ML)

Cite as: **arXiv:1106.2429 [cs.LG]**  
(or **arXiv:1106.2429v3 [cs.LG]** for this version)

## Submission history

From: Ohad Shamir [[view email](#)]

[v1] Mon, 13 Jun 2011 12:30:05 GMT (15kb)

[v2] Tue, 18 Oct 2011 14:22:14 GMT (21kb)

[v3] Thu, 24 Nov 2011 05:11:33 GMT (21kb)

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