

# Printer Ballistics Through Texture Analysis of Characters

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# Outline

Introduction

References



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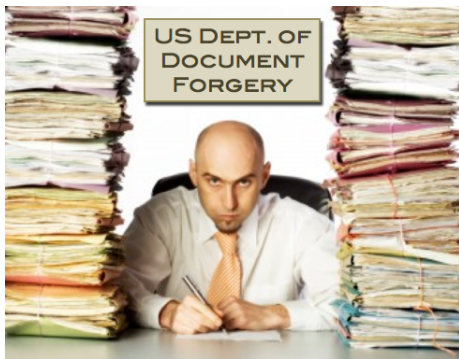
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## Motivation

- ▶ We (still) live in a "paper era"
- ▶ Documents forgery has become common
- ▶ There is a way to relate a document to a specific printer?



## Printer attribution

A way to do this is called "Printer Attribution"

## Methods

- ▶ Geometric distortion
- ▶ Texture analysis of characters



## Geometric distortion

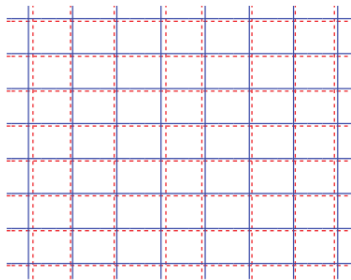


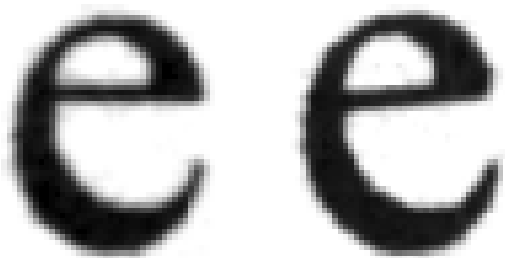
Figura 1: Geometric distortion <sup>1</sup>

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<sup>1</sup>Geometric Distortion Signatures for Printer Identification[1]



## Texture analysis of characters



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# Bibliography



Orhan Bulan, Junwen Mao, and Gaurav Sharma.  
Geometric distortion signatures for printer identification.  
*In Proceedings of the 2009 IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP '09*, pages 1401–1404, Washington, DC, USA, 2009. IEEE Computer Society.



# Thanks

**Thanks!**

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