FACE LAB
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Bibliography
SCAN ME

FACIAL PHOTO-COMPARISON: A TOOL TO IDENTIFY VICTIMS OF DISASTERS

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Introduction

Mass disasters are events where a large number of unknown victims are involved.

IDENTIFICATION PROCEDURE

1. Collection of **AM** (ante-mortem) data about missing people from relatives: DNA, photos etc...
2. Collection of **PM** (post-mortem) data about victims such as DNA, photos, X-Rays
3. Choosing **methods** to verify if AM and PM match
4. **Identification** : match AM-PM confirmed

Primary methods	Secondary methods
DNA	Tattoos
Finger prints	Personal belongings
Dental Records	Photos

Primary methods are commonly used, but they can be **unsuccessful** when the AM DNA samples are hard to obtain, or the dental history is unavailable. These situations are common in disasters involving **low-income populations** and **migrants**. In these cases, identification is complex and alternative methods need to be used.

The **secondary methods** can be fundamental for identification

Lampedusa migrants shipwreak, 2013

Victims identified using secondary methods

In particular, **facial photographs** are the most abundant and accessible data to collect, and they could be used for **identification.** However, currently, **there is no study on identification using facial photographs!**

Objectives

- **Selection** of the AM and PM photographs from known autopsy cases at LABANOF (Lab of Forensic Anthropology and Odontology, Milan).
- **Analysis** of facial morphology, decomposition, image quality, light, head orientations in PM and AM images and how they can affect the correct match AM-PM .
- **Test** the framework produced in a **blind study** and calculate the error rate.

Aim

Define a step by step guide to perform the **qualitative morphological comparison** of the faces in photographs before and after death and **verify** its **applicability** and **error rate.**

Simply put: Are we able to identify the deceased based on the comparison of their face as it appears after death and before death?

What we propose

1. Analysis of facial **morphology of AM and PM** photographs. The morphology is the shape of our faces, including the nose, ears, chin and the location of moles or scars. In other words, **it is what makes our faces unique.**

2. **Comparison AM-PM :** is it the same person? Do they have the same facial anatomy? Is the decomposition affecting the comparison?

3. **Confirm** or **reject** the **identity :** Can I confirm that they are the same person?