

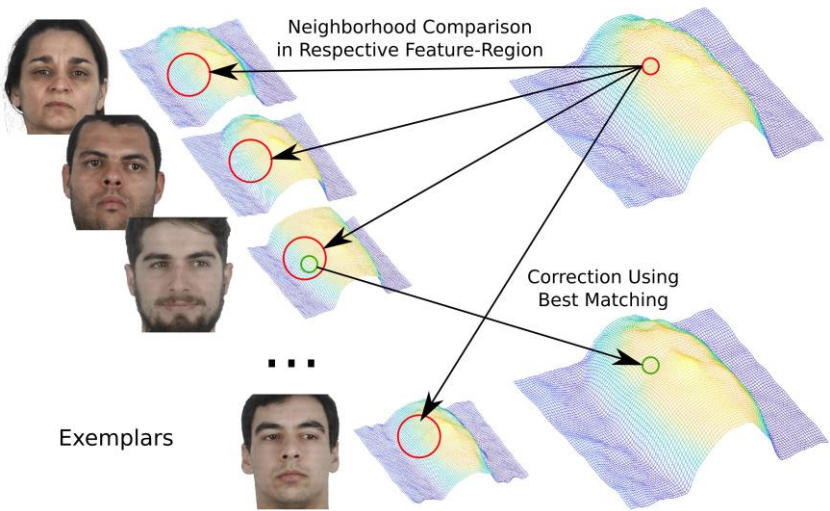
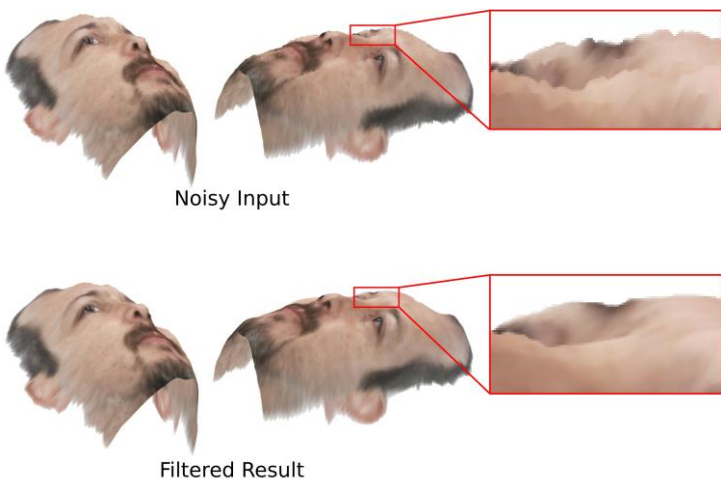
# EXEMPLAR BASED FILTERING OF 2.5D MESHES OF FACES

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## INTRODUCTION

We present an exemplar-based content-aware filtering for 2.5D meshes of faces that correct each point of a given mesh through local model-exemplar neighborhood comparison. We take advantage of prior knowledge of the models (faces) to improve this comparison.



## THE ALGORITHM

1. Detect facial feature points
2. Define the Facial Feature Point Region (FFPR)
3. For each point  $p$  in model
  - 3.1. Define the FFPR of  $p$
  - 3.2. Search the best matching of  $p$ : compare its neighborhoods with all others in its FFPR
  - 3.3. Replace the value of  $p$  by the best matching

## FACIAL DECOMPOSITION

The major characteristic of our filtering is to constraint the matching search to corresponding FFPR. The face shall meet three conditions:

- All faces must have feature points at correspondent places
- The union of regions must cover the whole face
- The area of each region must be inversely proportional to the average of expected noise.

