

Student Project

A MATLAB GUI for Interactive Film Color Adjusting and Processing



University of
Zurich ^{UZH}

Topic

In the framework of the research project **FilmColors**, funded by the European Research Council ERC with an Advanced Grant, the team from the Department of Film Studies develops new tools for the digitization of analog movies.

When digitizing a motion picture film, the images directly coming from a professional image scanner (raw images) have to be post-processed to adjust their colors. The proper color appearance of single frames can be acquired with a calibrated camera (reference images).

Assignment

The student should implement a **MATLAB GUI** that allows the user to navigate the file system and select the raw and the reference images. The GUI should also allow to select one or several ROIs for the two images.

The GUI should call an existing MATLAB API and display the resulting color corrected image as well as the residual difference from the reference image. In addition, the GUI displays the transformation curves (LUT) that can then be imported into a professional color grading software (Baselight, DaVinci Resolve etc.)

Requirements

Programming experience with MATLAB is not required, but would be beneficial.

Previous knowledge on color analysis or perception will be appreciated.

Student Project Type

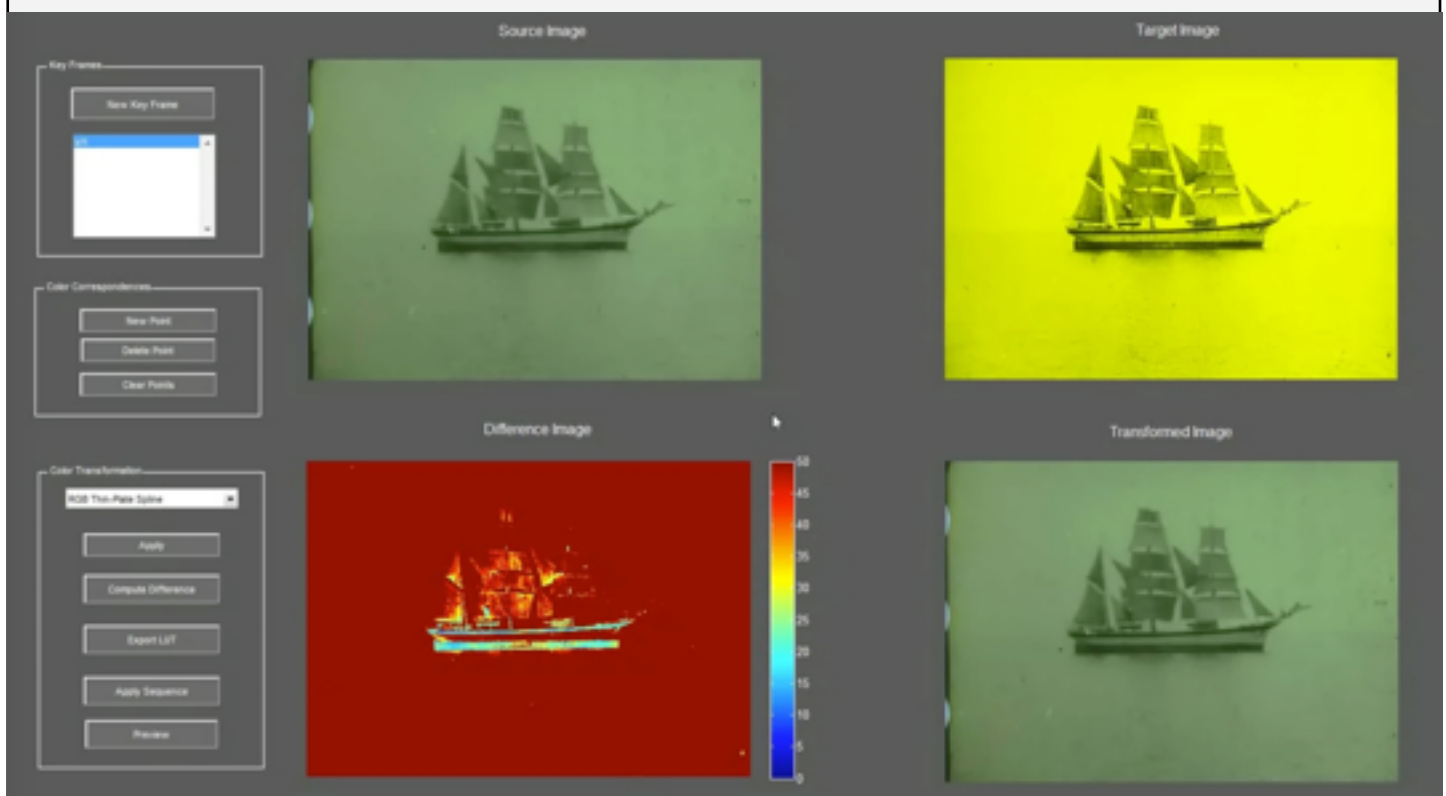
This is a **paid project** (details and extent to be discussed).

Supervision

- Rafael Ballester
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- Dr. Giorgio Trumpy
- Prof. Dr. Barbara Flückiger
- Prof. Dr. Renato Pajarola

Contact

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Predecessor: **RestoGUI**, developed by ETH Zurich and Disney Research Zurich in the Department of Film Studies in the previous research project **DIASTOR**